A Lecture

ON

SYRINGAL HÆMORRHAGE INTO THE SPINAL CORD.

livered at the National Hospital for the Paralysed and Epileptic on Feb. 8th, 1903,

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ENTLEMEN,—The human frame is the most complex and orate structure known to us. It is not surprising, there-, that its development should sometimes fail to achieve pletion or that this failure should occur in the most orate of all its parts, the central nervous system. Defec- development is found most frequently in the spinal and it is to one effect of this imperfection that I ask attention to-day. The precise defect we are concerned is that which entails the presence of peculiar cavities in cord. Such cavities have been ascribed in some cases to r causes. To this I will refer presently, but it is ain that they are often, and perhaps generally, the lt of a local arrest of the process of development.

on know that the spinal cord is at one stage an elongated of embryonal tissue, having a medial furrow the sides which ultimately close. You know that the closure may to occur in part and that even the closure of the bony al may not take place, with "spina bifida" as the result know—I hope I am not presuming on too much know-ge—that the defect in the bony canal may be slight or absent and yet it may be definite in the spinal cord. may also know that there may be defective development hin the parts that do coalesce. Embryonal tissue persists re its development into nerve structure fails to occur often there is an actual cavity in this tissue. Thus we have cavities where closure has failed to occur with or hout adjacent embryonal tissue or we may have cavities re embryonal tissue has broken down. Those are the ntial facts of what is called "syringomyelia." There be a cavity in the middle line usually continuous with central canal, where should be the posterior medial raphe. s is obviously due to imperfect closure. Or there may a cavity adjacent to the posterior horn, often one on h side, but unequal in extent. These may be continuous h the central canal on one side or on both.

hese lateral fissures in the posterior column are espe-ly important from a pathological point of view. In the cess of normal development a portion of embryonal ue becomes isolated, and remains unchanged, as the tinous caput cornu posterioris. The lateral cavities arently result from an abnormality or imperfection in this cess. All the developmental cavities occur in the posterior central regions of the cord—a fact that is intelligible o this region is the last to attain structural completeness. such cavities, when dilated, may compress and damage anterior horns, with muscular atrophy as the result, and the lateral columns of the cord, causing spastic paralysis he legs It has been maintained of late that similar ties in the spinal cord sometimes result from preceding orrhage, and Schultze[1] has suggested that their origin be minute hæmorrhages in the grey matter caused by ult birth. This is a possible cause, although not yet ed. But their precise origin d[illegible] not concern us now their presence and not their cause with which we have .

e developmental nature of these cavities is often ested by the fact I have mentioned—that they are ered by undeveloped embryonal tissue. It forms a ding layer, sometimes encroached on by erosion when d has long distended the cavity, sometimes consider- increased by a process of growth. Such residual e is prone to increase and its growth is occasionally so considerable as to constitute what is called "gliomatosis"—i.e., a glioma which can be traced to exuberant morbid development of such residual tissue. The word "gliosis" has been applied to it when it does not form a distinct tumour. The normal neuroglia is the remains of this embryonal tissue and gliomata elsewhere have been thought to arise from spots of such residual tissue. It is certain that glioma of the pons—that infiltrating growth which causes great enlargement before it interferes with function—is sometimes connected by tracts of similar tissue with gliosis around a congenital cavity in the cervical spinal cord. That is a pregnant fact. It supports the hypothesis that such tumours may have their origin in residual undeveloped embryonal tissue. It shows us also that these developmental defects may extend up from the cord to the mesencephalon although seldom as actual cavities. We shall presently see the importance of this fact. The symptoms produced by this variable state arise, as I have said, in consequence of the distension of the cavities or the growth of the adjacent tissue. Indeed, some may be due to the absence of the nerve tissue which has not formed. The former generally come on after adult life is reached, but those which are due to simple defect exist from birth. You know the common characteristics of those of the first class, pain, analgesia without anæsthesia, and muscular wasting when the anterior grey substance is damaged. But the symptoms vary in different cases, just as do the cavities, and they are sometimes such as would not suggest their cause Indeed, such cavities are sometimes found when no symptoms can be heard of and we should therefore be prepared for the fact that the symptoms may often be slight and not characteristic. With unsuggestive symptoms we can hardly suspect this cause unless there is the additional evidence of imperfect development afforded by defective closure of the spinal bones, called "spina bifida occulta" Such imperfect closure of the bony canal, with no external tumour, affords ground for suspecting a like state of imperfection in the spinal cord.

Let me tell you of a case in which this evidence was most suggestive A man, 35 years of age, had suffered much pain in the arms for eight years. He was a professional musician. Use of the arms in playing relieved the pain for a time but then increased it and induced also a feeling of powerlessness. When I saw him the pain extended down the inner side of each arm and was especially great in the upper part. Objectively nothing abnormal could be found There were no tenderness and no deficient sensibility of any kind. The only thing discovered was that the right trapezius was a little smaller than the left and presented distinctly less excitability and contraction to both faradism and voltaism in all its parts The case had baffled the medical men who had seen it; by one it was regarded as myelitis The key to what I believe was its nature was this fact. At the bottom of the dorsal spine was a peculiar cicatrix, something like the umbilicus but with furrows running from it a short distance to right and left. On this were a few large hairs, a very suspicious indication. The first two lumbar spines could not be felt; they were apparently absent. The scar had been there as long as the patient could remember and he had been told that it was present at birth. If so it seemed to be a case in which an external spina bifida had sloughed away in utero. At any rate it was clearly a case of spina bifida occulta. This involved a high probability, almost certainty, of a defective spinal cord in that region and we know how often this is associated with imperfect development higher up, with a fissure or fissures. The fact made syringomyelia the probable cause of the pain and we could thus understand why no treatment had had any influence on his suffering. If the assumed nature of the case is correct it is an illustration of the various and dubious symptoms which may be produced by such congenital disease.

But it is not with these cases, with trifling symptoms, that I am specially concerned to-day. I wish to direct your these cavities
f the greatest
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special, perhaps characteristic, symptoms. I have seen several cases in which the peculiar character of the symptoms can be best understood by ascribing them to a hæmorrhage into such a cavity as we have considered. In some other symptoms made this probable.

First, however, let me give to you a fact which proves that this is not a purely hypothetical pathology. I show you sections from a spinal cord in which such syringal hæmorrhage had occurred. A series of the sections are figured in my "Manual of Diseases of the Nervous System" (Vol. I.). A cavity passed from the position of the central canal backwards and outwards along the left posterior horn and extended from the cervical region to the lower part of the cord. Through part of the dorsal region there was a similar smaller cavity on the right side. That on the left was distended with blood throughout. Hæmorrhage into it had apparently commenced in the cervical region for here the cord was so broken up by the extravasation that only a layer of nerve tissue remained outside the blood. It is probable that the blood had escaped into the cavity in this part and had gravitated downwards. After distending the whole cavity the resistance caused the blood to work its way into the spinal cord at the seat of the primary hæmorrhage and to cause death, partly by the local destruction it wrought and partly by the adjacent inflammation it excited, which ascended the cervical cord until all the muscles for breathing were rendered powerless.

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[1] eitschrift für Nervenkrankheiten, 1903. See also A. Westphal, v für Psychiatrie, 1903.

The case occurred here 25 years ago and the notes are imperfect, but they show certain important facts. The patient was a man, 48 years of age, and, as far as could be learned, he had had no preceding symptoms to suggest the existence of these cavities. The onset was acute but not instantaneous. One evening at his work he found his legs "giving way" but managed to walk home. On the next morning he could not stand and in the course of the day he ceased to be able to move the legs. He did not lose all power of contracting the muscles; this, indeed, persisted even to the end of life, nearly five weeks after the onset. Such an acute development of symptoms suggests myelitis and so do the facts that the man was not temperate and had lately been much exposed to cold and wet. But there were other symptoms which indicated more than inflammation. During the first night he had most painful tingling between the knees and the ankles and this was followed by acute pain in the spine and pain behind the knees. Even when admitted to the hospital three weeks later any movement of the body caused pain in the spine "as if a knife were driven down it"—pain that made him shriek, attended with less sharp pain in the legs as if they were being broken across. Such pain does not occur in simple myelitis; it is a characteristic of hæmorrhage. When admitted, three weeks after the onset, he had lessened sensibility to touch over the legs, but that to pain and to heat was increased, a strange condition hardly known in myelitis. There was flaccid palsy with loss of all reflex action. Weakness of the arms developed during the fourth week of the disease and became complete at the shoulders and elbows, while some movement of the fingers continued to the end. With this loss movement of the thorax failed on the left side (that of the syringal hæmorrhage) earlier than on the right, and was followed by paralysis of the diaphragm and difficulty in swallowing. During the last days of life occasional contraction of the sterno-mastoid and extra-respiratory muscles effected some slight breathing, insufficient to maintain life. He died on the thirty-third day from the onset. Almost to the last he could feebly contract most of the muscles of his legs and the muscles of the hands.

I have told you the lesion that was found: extravasation into a cavity beside the left posterior horn, extending from the cervical region downwards. From the chief seat of hæmorrhage in the lower cervical region, where the blood had passed into the substance of the cord, a little had escaped into the membranes. There was no hæmorrhage upwards within the cord, but there were signs of ascending myelitis, and to this secondary inflammation we must ascribe the later fatal ascending paralysis. The precise relation of the symptoms to the morbid process is not easy to discern, but some important points are distinct. One fact which the case illustrates is that the onset of the symptoms of syringal hæmorrhage may be less sudden than those of hæmorrhage usually are. If the blood escapes into a cavity of considerable vertical extent, there is not much erosion of the cord at the seat of the hæmorrhage until the cavity is filled. In this case it is probable that such erosion did not occur until after the hæmorrhage into the cavity had ceased and that a renewal of hæmorrhage was excited by the removal of the patient to the hospital and this invaded the substance of the cord at the place of least resistance. In the second place the effect of such hæmorrhage on the functions of the cord may be less absolute and less consistent than those produced by a simple tion into its substance. Thirdly, the case shows effect of such a lesion may be increased by myelitis, a slower subsequent process, the danger of should always be remembered.

I have mentioned that the opinion has been by some authorities who have given much attention subject, that many cavities regarded as congenital such, but are the result of hæmorrhage. But the have related shows what care is necessary in concluding a circumscribed space, occupied by blood through a able extent of the cord, was produced by the found in it. It might have been thought that in the hæmorrhage had forced its way down the cord caused the cavity it occupied, were it not for the definite the cavity possessed and were it not for the fissure adj to the right posterior horn which extended through the dorsal region. It was not continuous with the o contained no blood. But it was symmetrical and this makes their congenital nature highly probable—ce believe. Were it not for this second fissure it would been easy to think that the other was actually the fatal hæmorrhage.

We can understand that hæmorrhage may easily into these pre-existing cavities. They are i position and in size and therefore in their vessels. The adjacent gliomatous tissue, the embryonal tissue which surrounds them, seems to be broken down by the fluid they contain. Adjacent are imperfectly supported and may easily give way. over, the gliomatous growth which occurs is vascular may be a source of hæmorrhage. In a case described by Dr. Alexander Bruce[2] fatal hæmorrhage occurred into a gliomatous tumour in the cord co cavities. The tumour was apparently due to local residual tissue, but it was so vascular as to deserve the "angio-glioma." The extent of the resulting extrava will depend upon the size of the vessel and, if the escapes into a cavity, on the size and vertical extent of Lastly, the symptoms produced will vary according force with which the blood flows out and to the se effect of the hæmorrhage. It is important to rememb hæmorrhage may produce its manifestations by de of tissue, by pressure, by slower erosion of the ad structures, or also by secondary inflammation, such as a results from a traumatic process. Thus some effects o condition may not coincide with the primary extravasa but may be developed as this increases or they may slowly follow it.

Let me now mention to you the symptoms of two which are, I think, only to be explained by assuming hæmorrhage occurred into such a pre-existing cavity. perhaps, significant that the diagnosis has to be a inference and not of demonstration. It signifies that rhage confined to such cavities is a less fatal lesion hæmorrhage into the substance of the cord. As we seen from the case I have mentioned the latter may secondary effect; hæmorrhage into a cavity may beyond it, may work into the substance of the as in the case I have mentioned, with far effects than if the extravasation is limited to cavity, as we may assume it was in the cases w have to describe. They differ widely in their but they agree in two features: in the prominen sensory loss and in its peculiar seat and limitation, first case presents a distribution of motor palsy w scarcely possible to explain except on the supposition I advanced. In considering the symptoms remember cavities occur chiefly in the posterior region; hence understand the degree of sensory impairment. Rem also, that a cavity along the posterior cornu, if di blood, may compress the lateral column, and if it forward to the central region it may compress the horn. Remember, lastly, that such hæmorrhage is slowly absorbed; ultimately the extravasation bulk as the disintegrated blood is removed and symptoms due to compression and not to laceration may ultimately pass away to an extent would not be expected from their initial degree would scarcely be thought possible from the long during which their severity is maintained. This seems the lesson of the first case and if it can be trusted it ortant it is to recognise the morbid process It tify hope when otherwise there would be only

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[2] Scottish Medical and Surgical Journal, August, 1902.

1 —A member of our own profession, 40 years after a good deal of worry and a hard day's very cold weather, felt at night a momentary stab in the right side of the head, followed by a peculiar giddiness, objective vertigo, in the dark Although I see nothing he felt as if everything before him sing from one side to the other Then he fell At three o'clock in the morning he woke up to find arm powerless He pinched it and discovered that it insensitive On the next morning it was found to be ly paralysed, and so ned The co I saw e months later Even at first there was no weakness ace or of the leg Sudden paralysis of the left arm, by sudden pain in the right side of the head and s, naturally suggested a cerebral lesion, and it was by the medical men who saw him that there had ombosis of a cortical vessel on the right side of the Such sudden palsy always indicates a vascular upture or closure But there was no heart disease to a source for embolism and cerebral hæmorrhage at of age without renal disease was most unlikely

mptoms, when closely scrutinised, were incompatible sease of the brain The points of distinction are ive A cerebral lesion never causes *complete* paralysis arm without any affection of the face or leg The es are in such contiguity that absolute destruction centre for the arm or the path for the arm cannot ithout such implication of the adjacent regions for and leg as to cause impairment of their function, at for a time Moreover, in cerebral paralysis of the muscles of the shoulder girdle are never completely d In this case the affection of these muscles was ible There was complete loss of power of the s, of the sterno mastoid, and of the pectoralis on the Movement of the head to one side may be at first ed from brain disease but complete paralysis of the uscles never occurs The sterno mastoid is weakened to the paralysed arm not on the same tom, the peculiar palsy of the neck at the condition was due to a lesion of hal cord The affection of sensibility confirmed a striking way There was complete loss of ity in the forearm below the elbow and it was diminished on the outer part of the upper arm ghtly on the inner side The greater loss extended e shoulder and the side of the neck almost to the the jaw and behind almost to the occipital bone, uddenly It also passed down over the level of the angle of the scapula and edge of the ribs everywhere stopping middle line On the face head, and abdomen sensa s normal Such a distribution could not result from l disease From this cause the loss which extended neck would certainly have passed on to the face and d also from the thorax to the abdomen. Thus this early indicated a lesion of the spinal cord The tiveness of the pain in the *right side of the head* was d by the fact that he had been liable to such pain for ears Transient vertigo has little localising signifi and, as we shall see it could be otherwise explained

mystery of a spinal lesion so severe and yet so in effect, damaging the left side of the cord vely and yet not interfering with the right side, have been very great but for another symptom suggested an explanation for its occurrence and also limitation He had a congenital defect of certain ents of the eyes They were habitually directed to not be moved at all to the right of the leed, the left eye was habitually directed y to the outer canthus, and could not be t even up to the mid position, nor could it be moved ds beyond its habitual position Yet it could be moved ly downwards and outwards It could not be moved ls and with this was associated a little drooping of the The right eye could be moved inwards upwards, and ards well, but not outwards at all Thus there was enital absence of movement of both eyes to the right most all movement of the left eye Such a con- life long means a congenital defect of structure upper part of the pons on the left side We know that such defects in the pons may be associated with similar defects in the spinal cord and that in the cord these take the form of syringomyelic cavities or fissures, usually as I have said, with an adjacent layer of gliomatous tissue and often with separate tracts of such tissue Thus, the condition of the eyes revealed the probability of a state of the cord such as might have determined both the occurrence and the limitation of the disease, a congenital cavity into which hæmorrhage had occurred A congenital asssociated defect in the pons would fully explain the peculiar vertigo, since a sudden hæmorrhage into the cord might cause disturbance of function in that part (closely related to the maintenance of equilibrium) especially if the two conditions were structurally connected Three months later the loss of sensation had lessened in degree, it still extended over the same regions, although at the margins it passed more gradually into the normal state The paralysis remained as before, although he could just contract the trapezius and sterno mastoid he could not contract the pectoralis All the muscles had wasted, but only in a moderate degree, and, as at first, there was merely a diminution in electrical irritability, just the same to faradism and to voltaism We can understand this if the anterior grey matter was compressed by the hæmorrhage but not destroyed It would be so compressed if a cavity beside the posterior horn extended forwards to the neighbourhood of the central canal The wrist-jerk was increased and there was some excess of knee jerk, but without weakness of the leg

I have not seen the patient since, but I have lately learned that after two years the power gradually began to return, and that he has since regained fair power over all parts of the arm I am glad to say that absolute confirmation of the diagnosis is still lacking, for he is otherwise in excellent health But there has not been wanting some evidence of the accuracy of the diagnosis You, perhaps know that the peculiar joint disease met with in tabes, with enlargement of the ends of the bones, is also met with in syringomyelia This patient, after the attack of paralysis, had increasing trouble at the hip joint He believed that at two years of age the joint had been dislocated and the displacement reduced, but such an accident would manifestly not explain grave and increasing trouble after mid life Mr C J Symonds took him into Guy's Hospital and operated He found the head of the femur enlarged to twice its normal size and sawed it off The edges of the acetabulum were thickened to twice the normal The patient made a good recovery and has since acquired a most useful new joint The condition presented so close a resemblance to this special arthropathy as to constitute some corroboration of the diagnosis of syringomyelia, in spite of the absence of any change in sensation in the leg As I have said, the great cause of tabes (syphilis) could be quite excluded But another peculiar symptom occurred which may be taken for what it is worth It is said that "phlebitis —i e, venous thrombosis—is more common in the subjects of syringomyelia than in others Whatever may be the value of the assertion this patient had a clot in some veins of the leg on two occasions first soon after the attack of paralysis and again after the operation All things considered, I think we have reason to believe that there occurred in this case hæmorrhage into a syringal cavity and that the evidence is as strong as we can expect to meet with short of pathological proof

Case 2 —In sion is such as to It is that of a mar esis From this the the sisters themsel ome other congenital diseases, notably in pseudo hypertrophic paralysis At the age of 16 years he gave himself a sudden shock by jumping over a box, he felt no immediate effect, but the next morning had lost power and sensation in the legs He slowly recovered fair power of movement but considerable defect of sensibility remained and was still present when I saw him 20 years after the onset During the intervening time he had some attacks of transient swelling of the knee joints, thought to be due to hæmorrhage into them, diathesis Some defect the only motor years from legs intermittent at first, but lately more constant had a troublesome ulcer on one toe which was and when healed was prone to sections from a spinal cord in which such syringal hæmorrhage had occurred. A series of the sections are figured in my "Manual of Diseases of the Nervous System" (Vol. I.). A cavity passed from the position of the central canal backwards and outwards along the left posterior horn and extended from the cervical region to the lower part of the cord. Through part of the dorsal region there was a similar smaller cavity on the right side. That on the left was distended with blood throughout. Hæmorrhage into it had apparently commenced in the cervical region for here the cord was so broken up by the extravasation that only a layer of nerve tissue remained outside the blood. It is probable that the blood had escaped into the cavity in this part and had gravitated downwards. After distending the whole cavity the resistance caused the blood to work its way into the spinal cord at the seat of the primary hæmorrhage and to cause death, partly by the local destruction it wrought and partly by the adjacent inflammation it excited, which ascended the cervical cord until all the muscles for breathing were rendered powerless.

The case occurred here 25 years ago and the notes are imperfect, but they show certain important facts. The patient was a man, 48 years of age, and, as far as could be learned, he had had no preceding symptoms to suggest the existence of these cavities. The onset was acute but not instantaneous. One evening at his work *he found his legs "giving way"* but managed to walk home. On the next morning he could not *stand and in the course of the day he* ceased to be able to move the legs. He did not lose all power of *contracting the muscles; this, indeed, persisted even to the end of life, nearly five weeks after the onset.* Such an acute development of symptoms suggests myelitis *and so do the facts* that the man was not temperate and had lately been much exposed to cold *and wet. But there* were other symptoms which indicated *more than inflammation. During the first night he had most* painful tingling between the *knees* and the ankles and this *was followed by acute pain in the spine* and pain behind the knees. *Even when admitted to the hospital three weeks* [illegible]r *any movement of the body caused* pain in the spine "as [illegible]knife were *driven down it*"—pain that made him shriek, [illegible]tended *with less sharp* pain in the legs *as if they* were being broken across. Such *pain does* not occur in simple myelitis; *it is a characteristic of hæmorrhage.* When admitted, three weeks after *the onset*, he had lessened sensibility to touch over the *legs, but that* to pain and to heat was increased, a *strange condition* hardly known in myelitis. There was *flaccid* palsy with loss of all reflex action. Weakness of the arms developed during the fourth week of the *disease and* became complete at the shoulders and elbows, *while some* movement of the fingers continued to the end. *With this loss* movement of the thorax failed on the left side (*that* of the syringal hæmorrhage) earlier *than on the right*, and was followed by paralysis of *the diaphragm* and difficulty in swallowing. During the last days of life occasional contraction of the terno-mastoid *and extra-respiratory* muscles effected some light breathing, *insufficient* to maintain life. He died on he thirty-*third day* from the onset. Almost to the last he ould feebly contract most of the muscles of his legs and he muscles of the hands.

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[2] Scottish Medical and Surgical Journal, August, 1902.

d. The object to be kept in view is to pro- cessation of the escape of blood and for this nce is too slight to be neglected and the effect ation for good or ill is too often overlooked. hæmorrhage, whenever it can be endured, the prone of the body should be maintained and if this is le the patient must be kept on the side. If hæmor- curs into the leg the limb is not allowed to hang d if it is even suspected in the spinal cord this ot be the lowest part of the body, as it is when the ies on the back. Indeed, I think that in some cases the sitting posture with the legs depending would likely to promote cessation of the hæmorrhage if ect stillness can be maintained. But remember the ice of posture in all acute affections. If you only ay this lesson you will not have listened in vain, for that you are sure to need in your future work. You er meet with a case presenting such symptoms as syringal hæmorrhage, but you are sure to meet with acute disease of the spinal cord. You will be able stand them better and to deal with them more wisely study of such cases as I have described. You gain real knowledge of any kind that has not far pplications than is at first apparent or may not help n and where you least expect.

An Introductory Address

ON

RELATIONSHIP OF THE MILITARY EDICAL SERVICE TO THE CIVIL PROFESSION.

livered at St. Mary's Hospital on Oct. 1st, 1903,

V. WARREN LOW, M.D., B.S. LOND.,
F.R.C.S. ENG.,

TO OUT PATIENTS AT THE ST. MARY'S AND GREAT NORTHERN
RAL HOSPITALS; JOINT LECTURER IN PRACTICAL SURGERY
AT ST. MARY'S HOSPITAL MEDICAL SCHOOL.

LEMEN,—In these days of image breaking some old possess a curious vitality, and there are few, I that illustrate better the saying that "threatened ve long" than the delivery of introductory addresses opening of our medical winter sessions. Every brings forth its prophecies that lectures, and arly opening lectures, are doomed, and every succeed- r produces its autumnal crop of introductory es; and I have no doubt that if ever Macaulay's alander leaves his vantage ground of London Bridge tures over the disrupted wood-pavement as far as gton he will find evidence of a recently delivered address. The process of evolution has been slow. lly, when lectures played a more important part in cational system than they do at present, intending s would attend the initial lecture of a teacher's course r practically to test his quality. I[illegible] s best and often his discourse decide[illegible] he student attached himself. I say [illegible] ays the school of anatomy was not [illegible]itions [illegible]ly l to the hospital for clinical teaching becom[illegible]ng would then usually set forth the [illegible] urer intended to touc[illegible] vould be added, as th[illegible] ed, a few remarks on [illegible] uestion of the day. [illegible] es were almost purely [illegible] ves, and one cannot [illegible] nearly [illegible], delivered lding a certain chair [illegible] address every October. Much of almost the same [illegible] ssibly, one of the most obvious nged since then. P[illegible]g to the multiplicity of medical has been that owin[illegible]n and provincial, we do not both metropolita[illegible] coming so large a number of e opportunity of we[illegible] the educational year as did at the opening of [illegible]issio[illegible] t one October evening in decessors. We read th[illegible] century Sir Astley Cooper y "twenties" of the last delivered his opening lecture before a class of 400 students; and the chronicler goes on to say: "We never before witnessed so genteel a surgical class; the sight was most pleasing, for they all appeared gentlemen of cultivated manners and good education."[1] Nowadays, the quality goes without saying, but the quantity, alas! is lacking, and he would be a happy dean to day who could contemplate 400 students facing an introductory lecturer. As time went on and a press appeared, giving publicity to medical matters, the delivery of the same address more than once became a matter of some embarrassment and such subjects were usually chosen as the importance of the science of medicine, its value when compared with other professions, and a general outline of its history, till the shades of Æsculapius, Hippocrates, Galen, Celsus, and a host of others must have suffered agonies of apprehension towards the end of September as to what enormities would be attributed to them on the fatal "first" by some bold and imaginative lecturer. Unfortunately, history makes itself but slowly and will only vary within certain limits, so that, driven from this field, the October orator in his desperation resorted to addresses on medical education or on some abstract subject, leaving to his successors an ever-widening range of choice, till I believe a lecture on the subject of Differential Tariffs would not be out of place for an October address.

The subject on which I have ventured to address you this afternoon is one which I believe to be of some considerable importance to us all here and one which the profession and the country at large will have to face seriously in the immediate future; and, therefore, any remarks tending to rouse discussion on this question and to elicit the opinion of those capable of judging deserve careful consideration, even if the views now expressed do not meet with general approval. My subject is, "The Relationship of the Military Medical Service to the Civil Profession," especially dealing with the organisation of the latter in time of war. The Empire has just passed through a war of a magnitude such as it has not experienced for nearly 50 years and within the last three months some of the lessons of that war have been crystallised in an essentially English manner and delivered to us in blue paper covers the result of the labours of a learned commission. There is much food for reflection in these bulky volumes and there is much that especially concerns us as members of the medical profession. Without touching a host of details on which there is much to say and which will doubtless lead to controversy in the future, the salient fact remains that we were not prepared in times of peace in the matter of military medical *personnel* and equipment for a war of the magnitude of that in South Africa, nor do I think that in the present temper of the nation we should be very much better prepared were the same to occur in the near future. As a Secretary of State wrote as far back as 1859, after a similar blue-book had been issued on the subject of the medical arrangements of the Crimean war, "England had always been jealous of standing armies. In their long struggle for freedom the people have found how important it is that they, as well as the Sovereign, should have a hand on the hilt of the Sword of State. But armies once feared by the people on account of their [illegible] account of their pockets. [illegible] we do not like taxes."[2] We do n[illegible] edical unpreparedness That, I [illegible] cause of our want of before t[illegible] it was not the fault of any department, [illegible] e nation. Economy was the motif, and, [illegible] nitarian department of the army felt it most acutely. Those who had the distribution of the mo[illegible] felt, as one witness expressed it, that everything except the trained fighting man could be purchased in the open market on the day; and that is practically what was done; and, as is usually the case, there followed on a period of injudicious parsimony a perfect saturnalia of lavish extravagance.

[illegible] campaign did not break do[illegible] would have us believe, the[illegible] e was much that was obviously defective and might have been remedied, but that they stopped short of an absolute debacle was due to the superhuman exertions of the Royal Army Medical Corps, both officers and men, and to the Anglo [illegible] adaptability of some thousands of civilian medical [illegible], and orderlies who were sent out in lavish profusion, but who, it must be remembered, were absolutely uninstructed in what their duties would be and in the special features of their work. However, out of this evil has come a certain measure of good. We have acquired at this fearful cost very many valuable lessons and there are also certain other definite gains. By this time the man in the street is aware that England has been brought into closer union with her colonies; but another union has taken place, and one that touches more nearly our own profession. We civilian medical men who served in South Africa realise that we have at last been brought into a closer contact with our colleagues in the military medical service.

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[1] THE LANCET, Oct. 5th, 1823, p

[2] The Right Hon. Sidney Herbert, M.P., [illegible]ew, January, 1859.

The absence of militarism in England has had a peculiarly isolating effect on the soldier. The average Englishman until lately knew little about the army. He knew nothing of its habits, its traditions, or its history. He scarcely knew one regiment from another unless he happened to have a near relative a soldier. They were generically all soldiers to him and he was singularly incurious as to anything further. This isolation, in a less degree, affected the army medical officer. Once he had obtained his commission he practically disappeared from the sight of his civilian contemporaries. In the old days he lived with his regiment and formed new ties and new friendships, necessarily military. The exigencies of foreign service and distant stations kept him out of touch with his old hospital and he seldom had the companionship of members of his own profession or the opportunities of listening to, or joining in, the technical discussions of a medical society. As a result he felt himself to a certain extent cut off from his civilian colleagues and he practised his profession in his own way, only conferring with his military *confrères*, till there grew up an idea among both civilian and military medical men that in some mysterious way the practice of medicine, surgery, or hygiene in the army differed from that in vogue in the world at large, and that the soldier, both individually and in the aggregate, differed in his metabolism and the products thereof from the civilian. It is not difficult to understand how this isolation originated when we remember our national characteristics and the history of our Army Medical Service.

It would serve no useful purpose to go back further than he regimental surgeon, who is practically coeval with the ormation of regiments, though it is interesting to learn that n the reign of Edward II. there was a chirurgeon with very 1900 men, whose pay was 4*d.* a day in addition to hich he had the privilege of shaving the soldiers.[3] But the ory of the Army Medical Service practically dates from regimental surgeon; he held the Sovereign's commission hich, in the early days, he bought in the same way as did his regimental colleagues and he was as much an integral part of the regiment as was the colonel. Later, somewhere n the early half of the eighteenth century, he received an assistant—the surgeon's mate—but the latter was only a warrant officer and did not receive a commission until 1796 when he was styled an assistant surgeon. The regimental surgeon was responsible apparently to his military superiors for the medical care of his regiment and besides his pay of 6*s.* a day he had an allowance proportioned to the strength of the corps for medicines, hire of hospitals, and the medical expenses of detachments and recruiting parties. On expeditions and elsewhere groups of regiments apparently formed hospitals which were under the administration of the regimental surgeons; that these hospitals were sometimes very effective is instanced by a report on the hospitals established in the Low Countries in 1748 for the troops under the Duke of Cumberland. These hospitals were said to be a model of medical administration. "The patients had separate and clean beds, frequent changes of linen, and were attended by well trained female nurses, while hospi[illegible] keepers and clerks acting under the surgeons furnished [illegible] requisite with promptness and regularity."[4] A lengthy [illegible] respondence took place between the Duke of Cumberland and he home authorities with reference to the expenditure incurred in maintaining this establishment and the official mind had certainly not then grasped the fact that the nation had incurred a certain responsibility towards the sick and wounded soldier.

These apparently effective arrangements are in marked contrast with those of the ill-fated Walcheren expedition over 60 years afterwards when in less than eight weeks, within 100 miles of England, out of 40,000 men 7000 from fever and over 14,000 were wrecked in health for remainder of their lives. Although the medical ments of this expedition were of the crudest des[illegible] and totally inadequate the responsibility of this mortality rests rather with those answerable for the [illegible] than with those on whom the medical arrangements devol[illegible] A well-known stanza aptly summarises the history of whole campaign:—

> "The Earl of Chatham, with his sword half drawn,
> Stood waiting for Sir Richard Strachan;
> Sir Richard, longing to be at 'em,
> Stood waiting for the Earl of Chatham."

The earliest trace of a distinct administrative organi[illegible] is said to date from 1756, when Lord Barrington, as [illegible] for War, was directed to establish a hospital board for administration of the medical service of the army, [illegible] intended to take the field, "in order that under its di[illegible] this part of the military service (including medicines, [illegible] stores, and other requisite provision for the sick) might carried into execution with ability, regularity, and despatch. Mark you! "with ability, regularity, and despatch"; was the mandate 150 years ago.

It was by a member of this board that John Hunter appointed in 1760 as a staff-surgeon to the expedition Belleisle and again in Portugal in 1763. In 1790 succeeded Mr. Adair as surgeon-general and [illegible] general of regimental infirmaries. Later, a physician-g[illegible] was appointed and the inspector-general of [illegible] infirmaries was made a separate office. There were established a dual system and a dual control, the [illegible] board under the surgeon-general being responsible for appointment of staff-surgeons and physicians and [illegible] mates to the army and also for the proper equipment maintenance of what were known as general h[illegible] while, to a certain extent, independent of this control, the system of regimental surgeons and regimental h[illegible] That this gave rise to acrimonious disputes chiefly as to bestowal of patronage one has only to read the [illegible] ence of the time to ascertain. By a Royal Warrant, 1798, the surgeon-general's duties were extended comprised the election of all staff-surgeons, regim[illegible] surgeons, and assistants, and the formation of medical staff of every expedition which left the [illegible] At the same time the board was dissolved and three officers comprising it acted separately, each distinct duties and patronage assigned to him and being held responsible for his own acts. A Mr. [illegible] Keates, a surgeon at St George's Hospital, succeeded Hunter as surgeon-general and his conduct during his [illegible] of office was somewhat severely animadverted upon [illegible] Commission of Military Inquiry held in 1807. This inq[illegible] and the really very able defence of Mr. Keates, pu[illegible] under the title of "Observations on the Fifth Report [illegible] Commissioners of Military Inquiry," 1809, is a most [illegible] source of information to anyone who is interested in military medical history of this period. A most int[illegible] personage, whose existence is brought into [illegible] prominence by this commission, is a gentleman styled apothecary-general who, though not a medical man, a Royal patent to supply the army with drugs and [illegible] ments. His emoluments were 10*s.* a day and he also [illegible] the right to make a legitimate profit on the goods [illegible] The commission estimated this profit at something 30 and 40 per cent. on the capital invested, but apothecary-general's estimate was the more modest 13 or 14 per cent.; in either case, when we consider bills amounted in part to [illegible] to between £60,000 and £70,000 per year office [illegible] appears to have possessed very solid a[illegible] tages. [illegible] certainly only 10, probably as the result of the findings of commission. In 18[illegible] the posts of surgeon-general and ph[illegible] general were abolished and a director-general of [illegible] was appointed, with two principal inspectors of [illegible] assist him, and with a few unimportant changes this [illegible]ment lasted until the time of the Crimean War.

It will thus be seen that in the earlier history of the Medical Service the highest administrative posts were [illegible] to civilians and that the regimental surgeons' chance[illegible] promotion were few and precarious. Sweeping [illegible] were made in 1858 as a result of a commission, of Mr. Sidney Herbert, afterwards Secretary of State for [illegible] was a member. With the more recent changes, again result of the report of a Royal Commission, you are [illegible] niliar The status and pay of the Royal Army Medical officer have been improved, opportunities for study- and, what is of even greater import- ages of their career officers may be in civil hospitals It is to advances direction that we must look in the future for improve- in the Army Medical Service and it will be by these that the civil and military branches of our profession e brought into closer union But the establishment is oo small, even in peace, and in war, I am told, it would o the addition of about 500 medical officers before three corps could take the field with their proper medical *nel* It is obvious that no Chancellor of the Exchequer ever agree to such an increase except in a national gency, nor is there necessity for such an establishment t to meet the requirements of a great campaign

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[3] Fonblanque: The Administration and Organisation of the British Army, p. 32.

[4] Fonblanque, p. 38.

[5] Clode's Military Forces of the Crown, vol. ii., p. 463.

he true lesson of the war, in our opinion, is that no ry system will be satisfactory which does not contain s of expansion outside the limit of the regular forces of rown, whatever that limit may be "* These words of the issioners, intended to cover the whole military system, with peculiar force to its medical service. Unlike any branch of the service the medical department possesses erve for war of *personnel* already trained in every pro- nal requirement There was, I believe, never any real lty in obtaining civil medical aid during the late war civilian surgeons were sent out by the War Office and oes not include numbers locally engaged in South Africa staffs of the various civil hospitals and the excellent al units sent with

untrained as regards that amount of which is bound to fall to the lot ith an army in the field The result hat in a great number of instances there was a division oour, the purely professional work falling to the civilian, on the regular officer devolved the drudgery of admini- on In the future I understand that much of the admini ve detail will be rendered less cumbersome and more, t, will be handed over to some other than a Royal Army al Corps officer, but of what is left, though of neces n the higher ranks it must remain with the regular , in the lower it should, I think, be more evenly dis ed between the active and reserve members of the e This should be done, if for no other reason, in to obviate the comparisons between members of the profession that were freely made by laymen in South

feature of the late war was improvisation We have the authority of the commission that this ailment ed the strategy, the organisation, and the equipment ghout the whole service, while it was obvious to one interested that this was the main obstacle to t success of what I may term the mobilisation of the al reserves Almost any system of organisation, had isted in 1899, would have produced a body of ns selected with more judgment than could possibly ercised in the wild rush that took place at the com- ement of the campaign Almost any system would secured men who would have been to a certain extent sant of what was required of them beyond their purely ical work and who, in many cases possibly, would known something of those with whom they were ned to serve, with the result that a fewer number would been required and so considerable expense saved to tate, while the work of the remainder would have more even, more effective, and would have been rmed more in harmony with the traditions of their gues in the regular service It thus becomes almost a of anyone who by some chance has had opportunities dying this matter to assist in formulating a scheme would tend to prevent the recurrence of the unprepared- hat existed in 1899 This must be my excuse for bring- e matter before you this afternoon In the search for a scheme of organisation one naturally turns to the m of other nations There is a prevailing belief every able bodied German has in his possession a on which are inscribed his exact orders with regard ndezvous and equipment in the event of mobilisation her this be so or not the initial difficulty in comparing the military institutions of continental nations with those of England is the system of universal service On the continent there is not that distinction between the military and civilian branches of the profession which exists here Practically every civilian medical man has once been in the army and would merely revert to his former position in the event of war, while in times of peace both work side by side in the large state hospitals In Russia a large part of the civilian practice is in the hands of the military medical officers and their military hospitals would appear to play almost the same rôle that our large voluntary hospitals do in this country Any proposed scheme therefore, must be elaborated with special reference to the peculiarities of our voluntary system of military service and must also keep in view the fact that the civilian in England is absolutely unacquainted with military organisation and even the minimal amount of administrative detail that is essential in the daily routine of military life

There are, I think, certain main principles which should be observed in formulating any scheme Firstly, that any organisation of the civil medical profession for war must have as its framework the Royal Army Medical Corps If the simile did not lend itself to misinterpretation I would like to suggest that the civilians should form the soft parts of a body of which the Royal Army Medical Corps would be the skeleton It has been suggested that the various medical schools should each organise a medical unit ready to take the field but I feel convinced that military units organised and administered by civilians entirely are neither economical nor really effective, and without in any way wishing to depreciate the work done by the civilian hospitals in South Africa I cannot but think that in future the care of the sick and wounded would be more economically provided for by one really effective administration than by the irregular efforts of private enterprise, however well intentioned, and I would suggest, though it is possibly outside the scope of my subject, that the efforts of the charitable should be rather directed towards the provision of such luxuries and comforts or aids to convalescence as a State service could scarcely be expected to provide In this we could not do better than borrow the German plan of appointing a commissioner whose duty it would be to organise such efforts in order to prevent waste and overlapping The second principle is that any civilian absorbed into the Royal Army Medical Corps for the purposes of a war should be, as far as possible, indistinguishable from the regular members of the corps This is not the time to discuss the question of army rank for medical men We must accept the system as we find it and since the Royal Army Medical Corps officer has rank, so must the reservist, if we wish to avoid some of the anomalies of the late campaign Thirdly, in a profession such as ours, in which the environment of the individual—especially of the young individual—is constantly changing we ought not to extend the period of liability for service for longer than a year at a time This principle of an annual register I consider very important Fourthly, there must be some graduation of the civilians selected In the late war there were only two grades—consultants and civil surgeons, as they were called There were nine of the former and, as I have said, over 1000 of the latter In the last class were all degrees of excellence and the reverse—the brilliant student and possibly from the same school, his friend the chronic, the youth just qualified, and men, some of whom had from 10 to 15 years' experience behind them All were equal, all were asked to perform similar tasks, and there was seldom any selection exercised of men for work for which they appeared especially adapted It is wonderful that such a want of system should have obtained even a semblance of success This graduation should, I think, be based as far as possible on professional standing and attainments Lastly, it is important that each medical reserve officer, as we may call him, should know, within reasonable limits, the unit to which he would be attached on mobilisation He would then have some idea of the circumstances in which he would serve, and in many cases, as I shall show later, he would have had some opportunity of forming the acquaintance of those with whom, in the event of a campaign he would be associated The system of army corps lends itself particularly well to this arrangement and there seems no reason why each reserve officer should not be attached to a certain army corps, and in many cases to a particular unit, and not be merely one of a list of names at the War Office for general service

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eport of the Royal Commission on the War in South Africa, 1903

These, then, are the main principles. 1. Organisation with the Royal Army Medical Corps as a framework. 2. For the medical reserve officer temporary rank equivalent to that of the regular Royal Army Medical Corps officer. 3. An annual register. 4 Graduation according to professional standing. 5. Appointment to definite army corps and if possible to units.

Three grades of professional standing suggest themselves. *A.* The class to which the civil surgeons in the late war mainly belonged, that is to say, men within the first two or three years of their qualification. In this case preference as far as possible would be given to those who had held *resident appointments* in any hospital, and of these between 300 and 400 would be required for three army corps, though the actual number called out in any campaign would naturally depend on its nature and duration. *B.* Members of the junior honorary staff, either medical or surgical, of the metropolitan and provincial hospitals. Certainly in another war we should have to realise the importance of the trained physician. In South Africa we had far too few, but in the stationary and base hospitals a few more men of the class to which the assistant physicians of our London and provincial hospitals belong would have been of the greatest value. With regard to his colleague, the assistant surgeon, his place would be in what in foreign armies are termed the field ambulances. In these days of specialism, however much we may regret the fact, it would appear difficult for a man to become a skilled operator unless he has devoted a considerable proportion of his time to the practice of surgery to the partial exclusion of other branches of his work. Professor A. Ogston, in his evidence before the commission, very clearly brings out this point. "Our operations nowadays," he says, "are pieces of very high art, which a man acquires by daily training. He comes to use his fingers like a conjuror uses his and does things with his hands that have become a habit with him to do, but which at first are a little difficult and require technical skill. If a man has not that daily practice he may know the theory most perfectly, he may be a most able and intelligent man, and yet he will not do such good technical work as the perhaps less able man who has had this practice."[7] The exigencies of general practice and the varied nature of the Royal Army Medical Corps officers' work prevent many men from acquiring this skill; but there are in the Royal Army Medical Corps skilled operators who have had opportunities of extensive practice in such big hospitals [illegible] Woolwich and Netley and in some of the larger [illegible] of India. It is to supplement, and not to [illegible], men like these that I would call up Class "B." [illegible] would consist of a few of the heads of the profession, both medical and surgical, and with them I would include at least one eminent pathologist. These gentlemen would be attached to the large base hospitals as presenting to them the greatest spheres of usefulness and they would also be present for general advisory purposes.

The experience of the South African war has taught us that there is little difficulty in procuring men *during a campaign* and I think, therefore, that a comparatively small inducement would keep the register of each class full during times of peace, while the justification of the extra expenditure involved would be the enormous saving of money effected by instituting an organised plan for a hasty improvisation at the outset of a war. Bearing this in mind, I would suggest the following details.

Class A.—During their year of service in the medical reserve, the members of this class would undergo a month's training, if possible, in the field. For this they would receive £1 per day. In the event of mobilisation each would be attached to a unit in a certain army corps, with the pay, allowances, and temporary rank of a lieutenant of the Royal Army Medical Corps. In the event of their re-enlisting for a third period of service they would on mobilisation receive the pay and rank of a captain of the Royal Army Medical Corps. I do not think that we could expect to keep this class on the register for more than four or five years from qualification, as they would then have settled down into practices which it would be difficult for them to leave.

Class B.—It is with this class that the greatest difficulty arises, as they have all fixed positions and responsibilities from which it is difficult for them to escape for any lengthy period. However, recent experience has shown us that in a national crisis either a feeling of patriotism or a spirit of adventure took many such to South Africa, while institutions like our hospitals exhibited considerable public spirit in keeping their appointments open for them during their absence. About 50 of these would be required for three army corps, with their equivalent base hospitals and lines of communication; and as this number would be distributed over England, Ireland, and Scotland, it could not be said to deplete the staff of any one hospital. A small retaining fee would have to be paid to the members of this class and, bearing in mind how occupied is their time, I would make the question of training optional. In many instances members of Class B would already have received training in Class A. On mobilisation each would proceed to a definite unit, with the style of a major of the Royal Army Medical Corps and with the pay and allowances of the senior members of that rank. The period of liability to service would again be a yearly one, but as an inducement to re-enlistment and to training I would suggest that, after three periods of enlistment with training, the officer would, on mobilisation, take the rank and pay of a lieutenant-colonel.

Class C.—For this class no adequate recompense could be made during times of peace for a lien on their services. But it would necessarily be a limited class and would, I think, be considered a position of some honour. In the event of mobilisation each would take the pay and rank of a surgeon-general. I have said nothing of the Royal Army Medical Corps Militia and Volunteers, as I consider these belong to their own services and would probably themselves require a system of expansion such as I have outlined for the regular army. In the event of militia or volunteers proceeding abroad for active service they would take their own regimental medical officers and bearer companies, but would probably rely on the regular service for the remainder of their medical requirements. The question of a medical service for home defence would be, no doubt, simplified by the fact that there would be in the event of invasion compulsory service for all of us.

Gentlemen, such is the rough outline of a scheme for organisation of the civil medical profession in time of war. I feel that it possesses many imperfections, but as a foundation on which some workable scheme might be based I believe it to be sound. I do not flatter myself that it is not open to criticism. I can hear the cynic ask, "Why pay every year for what we can obtain for very little more when the occasion arises with always the possibility that such an occasion may never arise?" This has ever been the attitude of Englishmen and that it has been a false economy one has only to read the reports of Royal Commissions from their earliest inception to learn. And, gentlemen, I believe I have your sympathy when I say that it is not merely a question of economy and that at least we owe it to our sick and wounded countrymen that the medical service in time of war should be carefully organised and as effective as it is possible to render it.

Gentlemen, it is my pleasing duty this afternoon to offer a hearty welcome to those of you to whom this is the opening session of your professional career. I would that my welcome embraced a larger number. It is said that an old surgeon, remarkable for his bluntness of speech as for his eminence as a teacher, exclaimed one 1st of October on facing his crowded class, "Egad! What will become of you all?" I cannot but think that if the old gentleman were to appear now at the opening of the winter session of any of our medical schools his exclamation would be, "What has become of you all?" But the situation has, at least, this consolation for you, that you are not joining an overcrowded profession. It is not, however, only into the ranks of our profession that I welcome you to day; it is more particularly to this medical school of St. Mary's Hospital. The selection of a medical school is a serious event in the life of a young man, but I know I have the concurrence of all in this room when I say that yours has been a wise choice. I have yet to meet the St. Mary's man who regrets the selection of his *alma mater* and I sincerely trust that he will not be found among you newcomers to-day. It would, I believe, be breaking absolutely with the traditions of the past if I did not on this occasion tender you some advice; though I feel that this would come more appropriately from one of my older colleagues. Possibly, however, the experience of one who has but lately traversed the path you are now approaching may have a value of its own. My advice to you is: Learn to be practical. Learn to do things, rather than how to do them. Many epigrams have been levelled at what is popularly known as the practical man: "He is one who practises the errors of his predecessors"; or, as I have heard it wittily said in this room, "The practical man is one who does only things for which he doesn't know the reason." To this, I suppose, the natural corollary is: "That the theoretical man is one who only knows the reasons for things he cannot do." But there is not this opposition between theory and practice. "Each to a certain extent supposes the other. Theory is dependent on practice, and practice must have preceded theory." Hitherto, in the case of most of you, your education has been based on what are known as "the Humanities"—that is, on a study of the writings and actions of bygone men—the best basis of a liberal education. Now you will have an opportunity of studying Nature herself, of acquiring a knowledge of things as opposed to a knowledge of words. See that you do not neglect the opportunity. Every day learn to do something, whether it be to find a nerve or artery in the dissecting-room, to conduct a physiological experiment or a chemical test, or even to dispense a bottle of medicine. Do not be satisfied with a book description as to how it should be done. Learn to do it. In many cases the mechanical process is tedious and would appear to you a waste of time, but let me assure you it is not. You are unconsciously training other faculties hitherto more or less in abeyance. Your knowledge has till now reached you through the eye or the ear as the written or spoken word. You will now be cultivating other channels of perception, as the sense of touch, while the old routes will be opened up to the appreciation of actual natural phenomena in addition to the previously expressed opinions of others. Learn to do things and your previous education and natural curiosity will insist on the reasons for your doing them. Now is your opportunity. We are all always students, but there are seasons in the pursuit of knowledge as in the life of the planet and this is the springtide of your studentship, and it is all too short.

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[7] Royal Commission on War in South Africa, Minutes of Evidence, vol. i., p. 476.

> "Alas! that spring should vanish with the rose:
> That youth's sweet-scented manuscript should close."[6]

See that when you turn the less fragrant pages of advancing middle age you do not, like many of us, have reason to regret lost opportunities of this the springtide of your student life.

Abstracts
OF
INTRODUCTORY ADDRESSES
DELIVERED AT THE
MEDICAL SCHOOLS
AT THE
Opening of the Session 1903-04.

YORKSHIRE COLLEGE, LEEDS.

INTRODUCTORY ADDRESS ON THE MEDICAL CURRICULUM BY E. A. SCHÄFER, F.R.S., LL.D. ABERD., PROFESSOR OF PHYSIOLOGY AT THE UNIVERSITY OF EDINBURGH.

AFTER a few introductory remarks Professor Schäfer went on to say that the object of his address was not so much to place before his audience an ideal at present impossible of attainment as to offer practical suggestions regarding the manner in which a medical curriculum might be planned out in actually existing circumstances. In the first place a university degree in medicine should invariably be a sign of higher attainments than a mere qualification to practise. Medical degrees of the new Leeds University would, he assumed, offer a real distinction and indicate a fair amount of scholarship, but he considered that if as much time were to be devoted to the acquisition of a knowledge of French and German as is given to that of Latin and Greek the result would at least be the acquisition of knowledge which would in nine cases out of ten prove a
man's subsequent career. Most
case if that career were to be the
would, he thought, be even more difficult to obtain a general introduction of the teaching of natural science than of modern languages into secondary schools in the place of a large part of the time now occupied by classical studies. It was appalling to think that many people who passed as highly educated had absolutely no knowledge of any of the sciences except perhaps mathematics. They knew nothing regarding the structure and mechanism of any plant or animal and least of all of the structure and mechanism of their own body. Nature was to them a sealed book and the general fact remained that the ignorance, not of the populace alone, but of the so-called educated classes regarding all matters relating to science was appalling. Professor Schäfer went on to say that as a subject of general education a knowledge of the sciences was an absolutely essential preliminary to the study of medicine and that because such knowledge was not imparted in our schools it had become necessary to incorporate into the medical curriculum, and in so far to burden it with, courses of preliminary science. The rules of the General Medical Council stated that no course of instruction which had not been attended subsequently to registration as a medical student should be permitted to count in fulfilment of the requirements as to science courses necessary for qualification. This regulation was, as they were doubtless aware, being at the present moment defied by the Royal Colleges of Physicians of London and Surgeons of England. These bodies had his entire sympathy in the action which they had taken an
students as it at present stood
the teaching of science in schoo
advocate of the relegation of the
sciences of the medical curriculum to the school period but at present this was impossible. He trusted that the new university would do what lay in its power to promote this reform—that is to say, teaching of science in schools.

Anatomy and physiology, especially physiology, could only be understood by those who had previously acquired a knowledge of these preliminary sciences and the knowledge of physics and chemistry required for the study of physiology was not a mere smattering but should be a very accurate knowledge of certain parts and a good general knowledge of the whole. At present the preliminary sciences were supposed to be overtaken in the first year of the medical curriculum and therefore four years more remained. How were these to be apportioned and what was to be the order of study? The subjects to be mastered during these four years were multifarious and might be divided into three groups, the first of which included anatomy and physiology, the second pathology and pharmacology, and the third medicine and surgery. Anatomy and physiology should certainly be mastered before the study of surgery and medicine was entered upon. He doubted whether in any medical school in this country a sufficient amount of time was given to the practical study of physiology and he was convinced that more benefit would be obtained from working almost wholly at physiology unfettered by any other study, except such a cognate subject as anatomy, for an entire year than during two years with the interpolation of other subjects. Professor Schäfer then continued:

Supposing the way to be cleared by the courses of anatomy and physiology having been completed and the examinations in these subjects passed the student is equipped for the study of pathology and pharmacology and may also begin to work at medicine or surgery in the wards. Of these two I would myself give the preference to medicine as fitting in better with the study of pathology and pharmacology. Besides, it is for various reasons undesirable that the work of the pathological laboratory and attendance in the deadhouse should be concomitant with attendance on operations and the dressing of surgical cases. It is, I know, an almost universal practice to take dresserships in surgery before clerkships in medicine, this being, I presume, one of those traditional usages which die hard. But I know of no valid reason for the practice and I believe the sequence pathology, medicine, surgery to be better. The exact arrangement of the other subjects belonging to the final of the curriculum matters less. Some of the special subjects may be taken earlier, others later. The relative importance of these special subjects is a question about which, as about many others connected with the curriculum, there is by no means a consensus of opinion. But I think that most would agree that it is undesirable to expect as much time to be given to the teaching of such subjects as midwifery as to medicine, to pharmacology as to pathology. Materia medica in the strict sense ought not be part of the curriculum. If a man intends to be a chemist as well as a medical practitioner, he should hold the pharmaceutical diploma. A knowledge of the raw materials of pharmacy is of no value to the student As a rule it is crammed up for examination and speedily forgotten. But a scientific acquaintance with the action of drugs under both normal and abnormal conditions is quite another story and pharmacology must in future have its due position in the medical curriculum and may very conveniently follow physiology of which it is in a sense an extension. As with all other practical subjects, the teaching in pharmacology should be largely of a practical nature. Lectures upon practical subjects are of much less value than practical work in a laboratory: they at least can be replaced by reading; that cannot. It is true that here and there one meets with a lecturer who has the faculty of imparting information in a manner which makes it stick in the brains of his hearers and here and there with a student who can retain more of a subject from the hearing of a lecture than from the reading of the same subject in a text-book. But these cases are rare. More sound knowledge of almost any scientific subject can be obtained within a limited time—and the time devoted to medical studies is very limited—by properly directed reading, accompanied and illustrated by thorough practical work and numerous demonstrations, than from any course of lectures however long. Fortunately the tendency of the present day is to encourage the development of the practical side of teaching. But it is often forgotten in doing so that unless time is found for the practical courses by cutting down the number of lectures the hours of work become unduly prolonged. The number 100 for a course of lectures seems to be a sort of fetish in many universities, as if there were a special virtue in that number or some multiple of it. In these days of good text-books lectures have largely lost the importance they formerly had. Yet we find the newest university, that of Birmingham, the medical curriculum of which is planned in many respects on excellent lines, requiring two attendances on complete courses of lectures on anatomy, medicine, and surgery—no less than 600 lectures on these subjects alone! This, gentlemen, is one of the failings which I would have you avoid.

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[6] Rubaiyat of Omar Khayyam, lxxii.

Let us briefly consider the order and place of the examinations. Examinations are necessary evils; it is not possible, I believe, to devise any means of testing the knowledge of candidates for a medical degree which is to confer a diploma to practise to which far more important objections could not be urged. Nor can the same objection be taken to practical as to written examinations. A sound practical knowledge cannot be crammed: it must be acquired by actual experience. But in most subjects a practical examination is insufficient, because it is rarely possible to cover enough ground in the available time. Nevertheless, the practical side of the examination should be made to preponderate, for it is the best test of real knowledge. Account may also be taken, as is done in the Birmingham University, of the manner in which the work of the practical courses—including, of course, the clinical courses—has been performed. With this combination a fair estimate of the capabilities of the student could in all probability easily be arrived at.

To understand the existing examination system the manner of its development must be borne in mind. In the beginning certain persons or collections of persons (corporations and universities) were privileged to ascertain the qualifications of those who desired to practise medicine The candidates were not required to submit evidence of having passed through any particular course of study but were expected to satisfy those to whom the above privilege had been accorded or ultimately their nominees—whom we should now call the examiners—that they possessed an adequate acquaintance with medicine, surgery, and the preparation and action of drugs. The candidate was always apprenticed to some practitioner—himself a graduate or licentiate of one of the corporations—who gave the necessary instruction, which might be, and ultimately usually was, supplemented by attendance at a private school of anatomy as well as in the wards of a hospital. There was for a long time but one examination, all the subjects examined on being taken at one sitting. You will find an amusing account of such an examination, evidently taken from the life, in "Roderick Random." Precise knowledge of detail was not expected, or did not exist, and the effort of memory needed to recall the various subjects of the examination would not therefore be great. But as knowledge of things medical became more extensive, and especially after it had begun to be recognised that a regular sequence of instruction was necessary, more defined courses of lectures began to be prescribed, and it was found convenient to subdivide the subjects of examination, and to hold this in two parts at definite intervals; anatomy, with a little physiology, being the main subject of the first part, and medicine, surgery, and midwifery those of the second. It is along these lines that the evolution of medical examinations has proceeded. There is a constant tendency to subdivide, and in subdividing to get past the earlier subjects of the curriculum before proceeding to the later ones. It is now usual in many universities to examine first of all in the preliminary sciences of chemistry, physics, and biology—the last again being often taken separately; secondly, in anatomy and physiology, with materia medica thrown in; thirdly, in pathology; and lastly, in medicine, surgery, and midwifery.

Along the same lines it appears to me the evolution of the examination system will continue; indeed, I see no sufficient reason why the process of subdivision should be confined to groups. If a student has attended the prescribed courses upon any subject, why should he not be allowed to present himself for examination in that subject? There is, I know, an impression in some minds that the taking of subjects in this way has a tendency to cheapen the degree. That it will tend to render a degree easier of attainment I am prepared to concede and to my mind that is a very strong argument in favour of the adoption of the plan. But that it will tend to lower the standard of knowledge required for the degree I altogether deny; on the contrary, it will raise that standard, for a student would certainly be better able to master one subject at a time and the standard of examination in each subject might easily be higher than with the group system. Even under this system there has grown up a tendency in many quarters towards disintegration of the groups. Thus in the University of Edinburgh and in other universities which might be named, although the subjects which are grouped together under the headings of first, second, third, and final examinations are supposed to be taken together, a large amount of latitude is permitted with regard both to the deferring of certain subjects of a group and to the acceptance of a subject in which a sufficient standard is judged to have been attained, even when the pass standard has not been reached in other subjects for which the student presents himself at the same time for examination. Thus for the so-called second professional examination, the subjects of which are anatomy, physiology, and materia medica, a student may not only defer presenting himself in materia medica, but may be credited with a pass in only one of the other two subjects of the examination—may, that is to say, pass in anatomy alone or in physiology alone. It would, I think, be better to take a step further and to permit the student to present himself in the one subject only. This, indeed, he sometimes does in an irregular way—riding for a fall in anatomy, for example, in order to get through his examination in physiology, but he thereby incurs the stigma of having failed in the subject which he had not really prepared for and which he had no idea of passing.

But it might be argued that in many cases two or more subjects are so interdependent that from the educational point of view it would be a bad arrangement to allow them to be taken independently. This argument applies more strongly to anatomy and physiology than to any other of the subjects in the curriculum. Physiology, at any rate, cannot be properly studied without a previous knowledge of anatomy. This anatomy need not, however, necessarily be human anatomy, for the previous study of comparative anatomy is all that need be required for the understanding of physiology—which is, in fact, very largely comparative physiology.

If the subjects of the curriculum were directed to be taken in regular sequence, the principle being as much as possible preserved that every subject is disposed of—as regards both study and examination—before the next subjects are attempted, I venture to think that a much more thorough knowledge of each subject would be attained with far less strain on the mind of the student. Above all there should be no long interval of time between attendance on the courses of study and examination in a subject. The examinations should come whilst the student is fresh from study, for it is impossible to keep up indefinitely the details which are demanded in examinations, and the deferring of the examination often leads to neglect of work during the course of study, followed by a feverish attempt to cram up the subjects during the few weeks before the examination We have experience of this in Edinburgh where the students take out their courses of physiology and practical physiology—including histology—during the second year but are not permitted to present themselves for examination before the end of their third winter, that is to say, they may be ready in all respects by the end of the second summer but must wait another nine months before they can be examined in the subject. This is unfair on the student and it operates detrimentally upon his work For human nature being what it is it is improbable that a man will devote himself with the same earnestness to the study of a subject which he will not be examined upon for nearly two years as he would were the examination to come at the end of the courses he is attending It is a distinct hardship that students who may have completed their courses either in anatomy or in physiology by the end of the second annus medicus are prevented from presenting themselves for examination in either of these subjects for nearly a year I put this before you as one of the examples which should *not* be followed in framing the curriculum for your university

An important principle to be kept in mind in settling the periods of examination is so to arrange matters that there shall be no year, and if possible no term of study without its corresponding examination or examinations For, as has just been pointed out, do what you will to urge the necessity of work, many students will not work except with a view to the immediate exigencies of an examination If the examinations for each subject are to be taken separately they would necessarily come even more often than at the end of each annus medicus And if subjects require a second year of study—as with practical anatomy—there should always be an examination at the end of the first year or at the end of the first winter This may be elementary or it may embrace a part only of the subject, but it will serve to stimulate work during that year and render the student better able to attack the work of the second year To take again the example with which I am most familiar, that of Edinburgh The student there during his second year is studying anatomy and physiology, which he cannot be examined in before the end of his third winter, and surgery, for which the examination comes at the end of the fifth year The result is *that a number of students, who have not at that* early stage in the curriculum yet acquired a full sense of responsibility, yield to the tendency to procrastination which is inherent in most of us and devote a large part of their energy during the second annus medicus to the recuperation of their physical forces The result is excellent so far as university athletics is concerned but is much less successful from the academic standpoint I would strongly urge in *the real interest of the student whose future career does* not depend upon his proficiency as an athlete that this should not be possible In saying this I would not be understood to imply any discouragement of athletics which in my judgment should play an important part in the amenities of every university But they are not the most important element and should never be allowed to interfere with the main purpose of a student s career By all means encourage *all those manly games the pursuit of which has given a* characteristically healthy tone to university life in this country, but let this pursuit take its proper place in the curriculum and do not let it at any stage override the pursuit of knowledge

In conclusion I will in a few words sketch out what I should regard as in existing circumstances, the best manner in which the subjects of the medical curriculum can be arranged *Supposing that a student enters in October*, as most do In his first winter he would study only chemistry and physics and would present himself for examination in those subjects at the end of the winter In his first summer he would take a course of biology including the lower forms of plant life but mainly founded on comparative anatomy A course of botany strictly so called is, in my judgment, not essential to a scheme of medical education *The examination in biology would* immediately follow The second winter would be occupied by courses of lectures on anatomy and physiology, by courses of practical physiology, and by attendance in the dissecting room, the second summer by attendance on practical histology, with such expository lectures as might be considered necessary, and by a continuance of dissection At the end of this summer the student should be allowed to present himself for examination in physiology if he is sufficiently prepared. A certain number will be able to do so, while others may need to defer the subject for six months; if this is done an advanced course may be taken in the following winter The third winter will be occupied by dissections and anatomical demonstrations and by lectures and practical instruction in pharmacology which would follow naturally upon the courses of physiology Those students who have completed their dissection of the body by the end of the first winter term—i e, by Christmas—might be permitted to present themselves then for examination in anatomy—otherwise they would defer the examination until the end of the second term (Easter) The examination in pharmacology would naturally come at the end of the third winter

After anatomy and physiology are finished clinical work may be allowed to begin with the holding of a clerkship in one of the medical wards to be followed by a dressership in the surgical wards *Such appointments should always be continued during the vacations* During the third summer a course of pathological anatomy and histology—lectures and practical—would be taken as well as a course of bacteriology and this would also be a suitable time for including the subject of public health—examinations in these subjects coming at the end of that summer The fourth winter would be occupied by medicine and therapeutics and by general pathology, including practical work in experimental and chemical pathology, the interest in these subjects would be enhanced by the previous attendance in the medical wards and in the post-mortem room The examination in pathology would come at the end of the fourth winter and certain parts of medicine might now also be taken The fourth summer session would be occupied by attendance on midwifery and on a separate three months' course of instruction in the special diseases of women and children to be followed as before by examination in those subjects Practical midwifery would be attended at any time after the systematic instruction had been taken

The fifth winter would be devoted to attendance on systematic surgery surgical anatomy, operative surgery, ophthalmic medicine and surgery and diseases of the ear, nose and throat. The use of anæsthetics and instruction in vaccination might also be conveniently taken at this period The course of systematic surgery would extend over six months but the other courses would each occupy not more than half that time At the end of this fifth winter would come the examination in surgery The April vacation and summer of this fifth year would be devoted to attendance at a fever hospital and an asylum to lectures on mental diseases and on forensic medicine and at the end would come the examinations in forensic medicine and the final examination in medicine The curriculum as here planned out can readily be modified to meet the case of instruction in surgery being taken before instruction in medicine, if this—the more usual course—were preferred In that event a dressership would precede a clerkship the fourth winter would be devoted to the surgical subjects and to pathology and the whole of the fifth year to medical subjects the examination in surgery being taken at the end of the fourth winter and all the examinations in medicine at the end of the fifth year

The student is now equipped with his degree of M B, B S, and thereby receives his qualification to practise In some universities he passes after a certain period of time to take up his M D or M S without further examination or other test of work or knowledge In the University of London before its reorganisation a severe examination was demanded before either of these titles was conferred In the Scottish universities and in the universities of Germany and most foreign universities it has long been the custom to demand the presentation of a thesis upon some subject in medicine or surgery or in one of the related sciences This is a custom you will do well to follow in this university, for it has the undeniable advantage of promoting research and has in the past been productive of a large amount of original work which although it may sometimes have been mediocre has in many cases proved of a high order of merit As an alternative to the presentation of a thesis the candidate may be allowed to present himself for examination, such examination being either in general medicine or surgery or in some special branch which the candidate may himself select such as midwifery, gynæcology, ophthalmic surgery, or public health. In this way encouragement is afforded to specialisation after a general knowledge of medicine and surgery has been acquired. In some of the best American universities specialisation is encouraged even for the work of the pass degree. We are also, of course, familiar in this country with the specialisation which is necessary for the diploma of a dental surgeon. But for those who are to receive a diploma to practise medicine and surgery a thorough groundwork in all branches of these subjects seems requisite, even if they intend to practise in only a limited branch. The time of the ordinary curriculum is fully occupied in furnishing this groundwork; nor do I think that any of the subjects I have enumerated could well be omitted from a general course of medical education which is to confer the diploma to practise.

I will not apologise for having taken up time with these details, for it is only by the plotting out of details that the working of general principles can be illustrated. These principles, however, must not be lost sight of in considering the arrangement of the details and I will therefore again state them in the briefest possible terms: (1) the relegation of some or all of the preliminary scientific subjects to the year or two preceding entry in the medical school: the examination in these subjects should be not only permitted but encouraged before entry; (2) the maintenance of a proper sequence of subjects so that in no case should any subject be begun until those on which it is founded have been mastered; and (3) the breaking up of the examinations and the taking of the examination in each subject as far as possible immediately after the courses of instruction in that subject are completed. I am confident that the carrying out of these principles will greatly lighten the curriculum which in its present form is a grievous burden on the student and that so far from having a tendency to lower the standard of knowledge it will help to raise this standard although rendering the degree more easy to obtain. It is, as you will see, no unattainable ideal which I have set before you but a plan of study and examination which is easily capable of realisation. The medical school in Leeds is for its size one of the best appointed and the hospital with which it is connected is one of the noblest in the kingdom. The opportunity which presents itself of carrying out such a plan may never recur. "There is a tide in the affairs of" institutions as of "men which taken at the flood leads on to fortune" but if left to ebb will leave them stranded in obscurity. Let it be yours to steer the good ship which is intrusted to you free of the shoals of obsolete tradition into the clear channels which have been buoyed by science, along which the tide of progress is now swiftly flowing.

CHARING CROSS HOSPITAL.

OPENING ADDRESS BY SIR CHARLES WYNDHAM.

AFTER a few introductory remarks in which he referred with real humour to the steps which had led him to take upon himself the office of giving an address Sir Charles Wyndham said:—

You will naturally expect me first to congratulate the prize-winners. Pardon me if I do the very opposite—advisedly. For what is the position of these brilliant young gentlemen who have been proclaimed victors in these contests? One I would not accept for worlds. They have given hostages to fortune. They are doomed through life to live up to their present eminence and woe betide them if they are lulled into indolence or tempted to rest on these early laurels. No They are certainly entitled to our appreciation, but our felicitations are due to those who have contended manfully in this intellectual arena, though for the moment without tangible result. No Capua invites them to inglorious repose. Theirs is the tonic of unsatisfied ambition, not the possible opiate of gorged achievement.

> "Act well your part; therein the honour lies.
> The virtue's in the struggle, not the prize."

Seriously, I tender my congratulations to all of you who have worked well, whether prizes have or have not fallen to your lot. Work is the one thing worthy of honour. It is the one thing that wins the most solid treasure that life has to give—that supreme consciousness of having put forth the best the worker has in him. The divinest artist demands no more than this; the humblest servant maid achieves no less:—

> "Who sweeps a room as for Thy laws
> Makes that and the action fine."

And now in approaching the most difficult part of my undertaking I pause to wonder in what capacity I shall do so. Shall it be in no special character at all beyond that of the mere layman? If so, what advice can a medical student usefully receive from a layman? The only precedent at my disposal is when the medical student consulted Mephistopheles and the suggestions made by that sulphurous layman were characterised by such deplorable immorality that I dare not take him as my example. It is, on the contrary, my humble ambition to make my observations at least respectable if even pre-eminently dull. Or shall I address you as one who formerly had the honour to belong to the profession you are about to enter? I am entitled to do so. My diplomas are in order, therefore I stand before you legally supposed neither quite unlessoned nor unpractised. Indeed, it is competent upon me to operate upon or to prescribe for any one of you who may have the pluck to entrust himself to my tender mercies. Do not all speak at once. But, alas, "a little learning is a dangerous thing," the lessons of those early days have long since been forgotten, and the theatres in which *my* operations are now conducted are not of a surgical character. Theoretically I may belong to you, practically I stand apart. Apart, but not aloof. For the memory of that part in my life which is now the present and will be the future in yours is to me a bond between us that the rapid and ruthless passage of years can never wholly deface. Or shall I deliver myself of my rambling observations in the character of a mere man of the world, with such value as the difference in our ages may attach to them? A man who like myself has, well, escaped from his first youth must presumably have gathered something from his experience which he can impart to others. In short, I am not too young to give you, nor you too old to receive, a few discursive general hints. Gentlemen, my first counsel to you may seem commonplace: most good advice is. I would urge you to put before and above everything else the primary virtue of loyalty to your profession. I do not mean mere sticking to one another. Valuable as this quality is it may mean or may degenerate into nothing better than trade unionism or the slavish bondage of etiquette to the prejudice of weightier matters. I mean loyalty to the great ideals of the profession. You cannot put them too high. You cannot have too exalted a conception of the vast importance, the nobility, I would almost say the sanctity, of your vocation. There is none to surpass it in the purity and unselfishness of its aims, the multitude of points at which it touches life or the intimacy of its relations to the community, the household, and the individual. "Man," said Bacon, "is the minister and interpreter of nature." The medical art is the minister and interpreter of man. Your influence over the lives, thoughts, pursuits, and desires thus laid bare before you will be enormous. You will be conversant with the simple annals of the poor and the inner lives of the great. You will be welcomed as a friend in the cottage and you may stand on the steps of a throne, blessed by the lowly, desired, even sometimes feared, by the mighty. More to Louis XI. than all the remonstrances of his counsellors, the denunciation of his confessor, the relics of the saints, or the leaden images of the Virgin above his brow, was the uplifted finger of his physician. And the interaction of body and mind is such that no one can treat the one without treating the other too. There have been some extremists who have held that all bodily states are pure creations of the mind; others that all mental states are merely products of the physical organism; or, as Condorcet tersely puts it, "Virtue is a gas and poetry a secretion." Each of these extreme theories has long since been discarded and it is now recognised that by processes mysterious in origin but discernible in action mind and body determinate and mould one another, whilst the empire of medicine dominates both for the preservation of the lives and happiness of its subjects. In exact proportion therefore to the vastness and stringency of this empire are the responsibility of its administrators and the need for those essential qualities of watchfulness, tact, sympathy, and discretion. But do not let this seduce you into even the faintest suspicion of misusing the dominion which you will necessarily possess over the lives and interests of those committed to your charge—whose habits, modes of thought, and human weaknesses will be an open book to you. It is because this danger is so insidious that the law in its wisdom has placed the relation of medical man and patient in the same category as those existing between the priest and penitent, the solicitor and client, not because medical men, solicitors, and priests are dishonourable men or undeserving of grateful recognition, but because the mere existence and intimacy of the relation raise of themselves the presumption of supremacy on the one side and subjection on the other. Do not forget either that you are frequently the repository of private and family confidences, often withheld from the friend or the priest, the husband or the wife, the son or the father, needing on your part the utmost delicacy and discretion. It is sometimes dangerous even to whisper to your nearest and dearest the secrets of the sick room. On the other hand, do not cultivate reticence at the expense of other and equally important qualities. Science demands courage also from its votaries. I do not mean physical courage. It is quite unnecessary to speak of physical courage when addressing a body of young Englishmen entering a profession whose annals blaze with the records of heroism on land and sea, at home and abroad, on the field of battle, in the hospital, the wilderness, and the slum. I mean moral courage. In this age when the smaller vices are multiplying, each with its attendant nemesis of disease, have the courage to call things by their proper names. If a patient courts death or misery by drink, drugs, or vicious life tell him so in the plainest terms. Do not disguise the truth by some euphemistic Greek words ending in "itis"—words which fall weakly on one coward's ears and issue lightly from another coward's lips. To gloss over the vice which causes—nay, is—the disease and thereby to encourage its continuance is high treason to your profession. There are occasions when silence is not golden—cases to which an agreeable bedside manner is less appropriate than a dash of the caustic, sturdy honesty of an Abernethy. These moral requisites of your calling are summed up in the embracing virtue of loyalty—to your profession, to your patients, and to yourselves. No less exacting, however, are the demands made by your vocation upon the intellectual side of your nature. Never was there a time in the history of the healing art when greater alertness and versatility of mind were required by its practitioners to cope with the ever-increasing rapidity of development. Life as it is to-day, when we contrast it even with what it was in the early part of the Victorian era, has become a thousand fold more complex and it will tax all your energies to keep abreast of this growing complexity. New pursuits, new habits, new vices and their consequences, and new diseases, on the one hand, have provoked new theories, new methods, and new remedies on the other. Each successive invention, whether for utility or amusement—railways, lawn tennis, cycles, motor cars, even the fascinating game of bridge, if too fascinating, the growing recourse to opium, chloral, morphia, cocaine, ether, and other deadly poisons—each has carried with it its special ailment and demands its special treatment. Increasing variety of disease demands at your hands increasing resourcefulness. And it will be your own fault if with such armouries and stores as are ready to your hand you are caught by the enemy tripping. At the same time, everything will depend upon yourselves. Material resources will be nothing without the individual brain, lectures and books mere baggage unless properly applied, whilst there is one book of which not this or any other institution has the copyright—the vast volume of human life which lies open to the exploration of any of you. And it is worth every effort on your part. You will have the sympathy and appreciation of everyone to help you. Never has your profession stood higher in man's estimation than now. You have, on the one hand, the most practical Sovereign of the day, our King, faithfully interpreting to you the sentiment of his subjects and, on the other hand, the voice of the nation to sustain you. The large space you occupy in men's minds and hearts is as you see reflected in modern literature and art. The physician has outlived the satire of Molière. To-day the painter, the novelist and the dramatist vie with each other in doing homage to his character. Remember the sensation caused by the picture which a few years ago adorned the walls of the Academy—the doctor fighting for his patient's life through the long watches of the night and inch by inch disputing the ground with death. As on canvas so in print, and upon the stage the physician and the surgeon are proclaimed the friends of men to be loved for the good they do, not, as used to be, the enemies to be feared for the evil they may do. But do not forget that though you start with the goodwill of men and with vast scientific achievements and discoveries at your back there are still many unsolved problems to stir your ardour. Alexander's lament need not be yours, there are still many worlds for you to conquer. Though you wend your steep triumphal way to the Capitol with many a captive bacillus at your chariot wheel there are many more which still elude your vigilance and do not own your sway. Which of you, I wonder, is destined to win imperishable fame as the discoverer of the definite cure for our national scourge, consumption? Whence will come the living radium to burn out that fell destroyer cancer? Gentlemen, it may not be given to all of you to establish epoch making discoveries or to write great books or to become fashionable physicians. Harley-street is not long enough to accommodate every one of you, but it is open to all of you to descend into the arena and to contribute your quota to the ceaseless conflict. For many as are the mysteries which the healing art has fathomed of late, they are as nothing beside that vast, bitter, unplumbed ocean of human disease which still ceaselessly throbs and tosses on the rocky bed of pain and moans around you with its many voices.

KING'S COLLEGE HOSPITAL

INTRODUCTORY ADDRESS ON THE BIOLOGY OF IMPERIAL FEDERATION BY SIR JOHN ALEXANDER COCKBURN, K.C.M.G., M.D. LOND. & ADEL.

THE evolution of the empire is a subject of engrossing solicitude to all British subjects and is of especial interest to a great centre of higher education such as King's College. The world wide possessions of Great Britain present an unparalleled field of activity for every well equipped medical student and science itself owes much to the facilities for travel and research afforded by so vast and varied an area. Who shall say what every department of knowledge would have missed if Charles Darwin had been born in an inland country like Switzerland and had not enjoyed the opportunities for investigation into all forms of life in every climate which were thrown in his way in the navy of the greatest sea power? We live in an age of consolidation. Cables and steam have so contracted the earth's surface that the nation, as the unit of power, no longer suffices. All now aim at empire. The rivalry of the future will be, not between nations, but between empires of which nations are the component parts.

Casting a glance over the page of history we witness the steady advance of the Anglo Saxon race in this direction. The heptarchy a thousand years ago was fused, under the first Edward, into the Crown of England. After centuries of struggle the United Kingdom was evolved, but this goal proved to be only the commencement of a still wider course. The Union Jack, the emblem of that consummation, is but the parent of a family of flags which mark the extended sway of King Edward VII who, true to the traditions of his name, was the first to incorporate in his Royal title "the Britains beyond the Seas." One striking feature of this stupendous imperial growth is that it has been, for the most part, unconscious and has taken place against the will of those who were supposed to be its directing intelligence. As Professor Seeley wrote, "We seem, as it were, to have conquered and peopled half the world in a fit of absence of mind." To the physiologist this unconscious working out of destiny is no strange matter. He knows well that nature is ever chary of intrusting vital operations to human intelligence. Even in our own bodies she is careful to place the control of the organs on which the maintenance of our existence depends beyond the reach of our volition and it is not to be expected she should be less solicitous of the welfare of the race than of the individual for "so careful of the type she seems so careless of the single life." Signs are not wanting, however, that the long period of unconscious incubation is now passed. The imperial idea is surging into a corporate consciousness. Henceforth our intelligence must reinforce and elaborate the instinctive operation.

All authorities are now agreed that there is a close analogy, if not identity, between the laws which govern the evolution of living beings and societies. Some even affirm that a preliminary study of biology is necessary for the comprehension of sociology. Undoubtedly, by such a course many phenomena which appear paradoxical to the ordinary observer would be readily explained. The history of Australian federation furnishes an example of such a paradox. The advocacy of some form of union originated even before the process of fission of Queensland and Victoria from the mother colony of New South Wales had taken place. The simultaneous working of these apparently contrary forces of separation and union however, is no puzzle to the biologist. For him the veil of nature's mysteries is raised. The laws of life, so full of enigmas to others, are but as his hornbook and primer. To him differentiation and integration appear as the complementary manifestation of the same evolutionary force and he recognises that the union resulting from the coöperation of the differentiated colonies was on a far higher plan of organisation than if previous segmentation had not taken place. Similarly when in the latter half of the nineteenth century statesmen set themselves deliberately to bring about the separation of the colonies it seemed as if the knell of the colonial empire had been tolled, whereas studied apathy and neglect at headquarters proved to be but the necessary conditions to develop strong, self-reliant, mobile, and firmly attached members of the empire. It was merely a step in the devolution and decentralisation necessary to produce the variation of a highly developed organism.

The dictum of Turgot that colonies are like fruits which cling to the tree only till they ripen does not hold except in the case of simple social organisms. The Greeks, whose form of government was limited to a single city, knew no other method of colonisation than by complete separation. The parallel to this is to be found in the unicellular protozoon. In higher and more complex structures subdivision is not attended with separation; the cells, although differentiated, remain attached to one another and perform various but coördinated functions. And here, doubtless, we find the parallel to the colonial empire of Great Britain. The concession of complete powers of self-government and local freedom have created sturdy individualities which are ready to be brought into coöperation and collective strength by the integrating force now so strongly manifested. With regard to this consolidating process all undue haste should be avoided; our motto should be "*Festina lente.*" In pathological processes which go from bad to worse it is often necessary to bear in mind the maxim, "When in doubt operate," but in physiological processes where nature usually guarantees the result the opposite is the rule; for example, it is well known that meddlesome midwifery is bad. Imperial federation must be a growth, not a manufacture. "From lower to the higher next not to the top is nature's text." At the same time we must bear in mind that nature herself runs rapidly through stages of evolution which previous experiences have rendered familiar. Australian ederation was a gradual growth although eventually the onstitution was framed in the space of a few months. It was in reality the result of ages of evolution from the Achæan and other ancient leagues through the modern nstances of the United States, Switzerland, Canada, and Germany, just as the embryo presents an epitome of the history of the race, and passes through in a few days stages which thousands of ages in the first instance were required o accomplish.

At one time in our lives we all had tails and gill clefts n our necks, but we did not remain long in that condition. In ascending to imperial federation if we heedfully follow in steps already trodden our progress may be comparatively swift and sure. We know that our union must be on the federal plan; no other is so flexible and firm or so suitable for maintaining a vast territory under that local self government which constitutes the genius of our race and from which is derived our colonising power. Eventually there will be a Pan Britannic Federal Constitution with an Imperial Parliament consisting of a Senate representing the component nations and an assembly with representatives in proportion to the population of each, together with untrammelled trade throughout the whole. But this goal is far distant and none of us may live to see the day. Meanwhile we must so traverse the intervening territory that each step may bring us nearer to it. The colonial conferences of 1887, 1897, and 1902 did much to prepare the way. In future these are to be periodical. Mr. Chamberlain, strong yet ever cautious, prevented many difficulties by consulting the colonies in all questions affecting their interests. An advisory council consisting of representatives in London of the self-governing colonies might with advantage be formed as a stepping-stone to an imperial council. The desire for closer union was never so strong as at present and advantage should be taken of it to extend in every direction mutual interest; this is the soil in which sentiment permanently flourishes, otherwise it is an exotic which a frost may kill. The strange heresy which prevents natural affection from manifesting itself in the channels of trade is rapidly dying out and the way will soon be open for such reciprocity as will eventually lead to intra-Imperial free trade. Common prudence dictates that adequate steps should be taken to secure our supply of daily bread. At present Great Britain depends for nourishment on foreign sources which must be seriously affected or interrupted by a European war or possibly even by market operations. We are in the position of a patient whose supply of nutrient fluid is insufficient for his needs and requires to be sustained by a continuous transfusion of blood from other individuals. In an age of progress every social organism must either advance to a higher stage of organisation or must retrogress. It is true we stand at the parting of the ways but there can be no doubt as to the course that will be pursued. It cannot be that the empire in the recent thrill of realisation attained self-consciousness only to witness its own decay. The divinity which has shaped our ends through so many ages can safely be trusted to guide our steps to the higher life of relationship which has ever been clearly our destiny.

THE MIDDLESEX HOSPITAL.

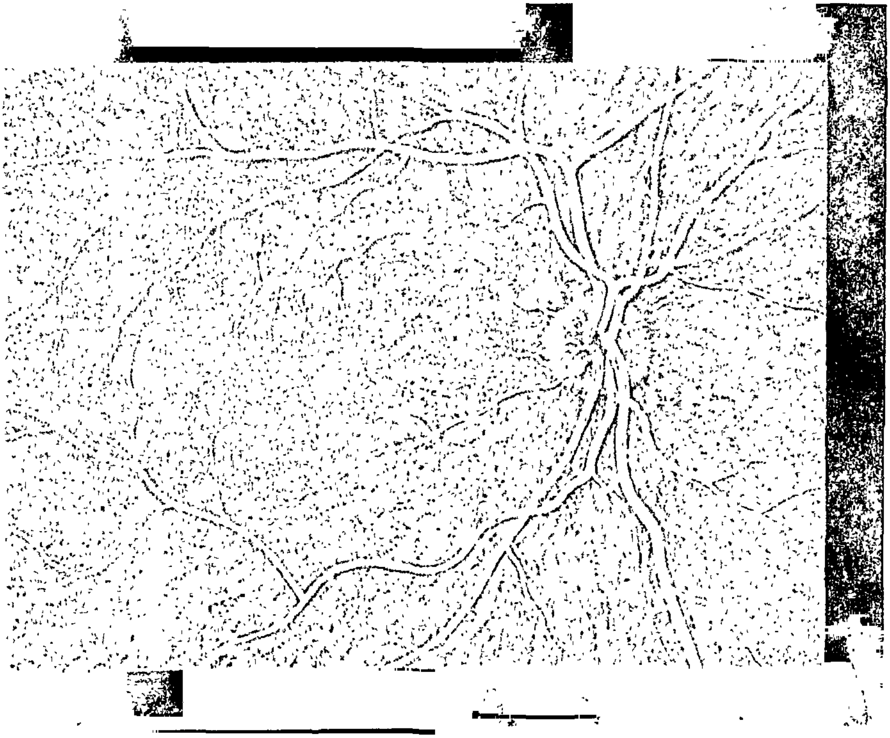
INTRODUCTORY ADDRESS BY WILLIAM HERN, M.R.C.S. ENG., L.D.S.

IN welcoming the new students to the Middlesex Hospital Mr. William Hern dwelt on the value of medicine as a calling in that it developed the highest faculties of man and afforded the widest scope for the exercise of courage, perseverance, tact, and human kindness. He referred also to the enhanced facilities now offered by the well-equipped laboratories and class-rooms lately opened at the Middlesex Hospital Medical School for the acquisition of scientific professional knowledge.

One of the great differences between the medical methods of past and present times, Mr. Hern proceeded to point out, was the substitution for the old empiricism of treatment based upon an inquiry into the causes of disease. The modern practitioner must resemble the farmer who knew and betimes destroyed the sources of blight and mildew. From the utilitarian point of view the labours of the patient investigator into the causes of disease far outweighed in value the devotion and self-sacrifice of the unscientific philanthropist and guardian of the sick. The popular tendency was to ignore the causes of ill-health. Had the physician in *Macbeth* complied with the king's request to find the disease of the commonwealth he must have pointed to the unsuspecting king himself. Martyrs to the results of evil habits and the thralls of dental disease seemed to regard their troubles as the thorns that must inevitably spring into being with the rose of life. Their satisfaction in the possession of remedies for a complaint must not blind them to the necessity of doing all they could to render that complaint impossible. To this end the medical man required to impress upon the people the strict observance in everyday life of hygienic principles. Thus alone might the visits of the medical man be rendered few and far between. A sick man's recital of his woes had usually reference to his symptoms only; the medical man's duty was to discover and to treat the underlying cause.

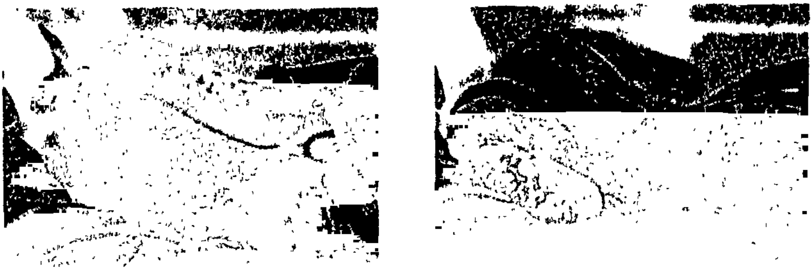
Oral sepsis—i.e., a foul and infectious condition of the mouth cavity—and dental caries or decay were affections of which it was most important to ascertain the origin. The mouth, being open to the air, moist, and warm, and having distributed in it from time to time the débris of food (itself the habitat of minute organisms) served as a most efficient catchment chamber and breeding house for rapidly multiplying disease germs. Following in the steps of Leuwenhoek, a seventeenth century investigator, Galippe, Miller, and others had been able to demonstrate that though some of the micro-organisms of the mouth were harmless to man, others might occur therein which had been identified as associated with maladies the most deadly to human kind. The effect of the mischief-working germs on the gums was to produce inflammation therein which might lead to loss of teeth through suppurative inflammation, to general but minor disturbances of health, or to acute and fatal blood poisoning. That the worst possible results did not commonly follow on prolonged oral sepsis was due probably to the fact that the patient by degrees became to some extent immune to his own poison.

Dental caries, or decay of the teeth, was a disease of all ages of the world's history and most rife among civilised peoples. Nearly 80 per cent. of the children in industrial schools were found in an investigation by the British



TO ILLUSTRATE DR. HALE WHITE'S CASE OF DIABETIC INTRAOCULAR LIPÆMIA.

PHOTOGRAPHS, IN NATURAL COLOURS, OF A CASE OF PURPURIC ERUPTION.



Dental Association not long ago to be subjects of it. Of some half-dozen theories which had been advanced to account for dental caries that which might be termed the "chemico-parasitic," attributing the affection to the work of disease germs, was the one now regarded as tenable. The predisposing causes of caries—those which might be said to prepare the soil for the parasitic growths—included abnormalities in the form, structure, and position of the teeth, debilitating illnesses, congenital tendencies, certain occupations, the somewhat obscure influences which came under the head of "civilisation," and last, and mainly, the diet, more especially one consisting largely of vegetable matter and, he might add, milk. But that which constituted the primary, or exciting, causes of caries was the *form* and situation of the various parts of the teeth, whether such as would retain decomposing and therefore infectious food débris or such as being rounded or continually swept by the tongue and lips did not admit of the lodgment of particles. It followed from this that though the teeth of a robust man did not suffer in the same degree they showed caries in the same positions as in the teeth of the sickliest and most weakly of mortals.

Experiments with sound natural teeth placed in various mixtures had evolved the following facts. Albuminous and fatty matters mixed with saliva and kept warm produced by decomposition an alkaline liquid, non-causative of caries. Starchy and saccharine food similarly treated yielded an acid solution which, like a weak solution of lactic acid, decalcified the teeth and effected the first stage of caries; the second stage was accomplished by the solvent action of micro-organisms provided by the saliva. For the prevention of caries, therefore, the important desiderata were, first and foremost, regular and systematic sweeping of the teeth with tooth brushes stiff enough thoroughly to clear away remnants of food; and, secondly, the use of antiseptic mouth washes. That these measures and the consequence of their neglect had not been brought before the lower orders of society, their children especially, was a reproach to preventive medicine, if not to the State. Thousands of patients yearly attended the hospitals because of ailments directly or indirectly due to unclean mouths, caries, or loss of teeth. A State which could afford to control the drunkard, to provide the poor with free education, and to appoint ophthalmic surgeons to board schools should surely be able to organise some system of gratuitous dental supervision and treatment to supplement the necessarily limited work of the few existing dental hospitals. If it should be impossible to institute State aided dental dispensaries there might at least be provision for instructing the children of the poor in oral hygiene. The cause no less than the effects of oral sepsis or caries must be constantly within the purview of the [illegible] and it is only by the coopera[illegible] healing art in inculcating pre[illegible] be successfully combated.

Knowledge of the importance of good teeth to the well-being of the body and instruction how best to preserve them should be imparted to all patients, especially the poor and ignorant, and the nurse who attended to the ablution of the body should see even more punctiliously to the cleansing of the teeth. Acquaintance with dental pathology afforded valuable clues to the physician, the surgeon, and the throat, the ear, and the eye specialist in tracing the origin of maladies of the most diverse kinds, and he who by timely warning and advice sought to save his patients from the evil consequences of oral sepsis and dental caries was choosing the better part of medicine—the prevention of disease, which was better than the most brilliant cure.

A NEW HYGROMETER.—The *Engineer* of Oct. 2nd states that an Italian has invented a saturation hygrometer which may be used for determining the tension of aqueous vapour in the air in small spaces, such as instrument cases; a portion of the air to be examined is withdrawn and saturated with aqueous vapour, and the increase of pressure thus caused is noted; knowing the saturation vapour pressure it is possible to deduce the aqueous vapour pressure of the experimental air. The apparatus consists of a bronze receiver fitted with a thermometer; into the receiver passes a glass tube drawn out at the lower end and connected at the upper end with a syringe which serves to force in drops of water. The receiver may be put in communication with the exterior [illegible] a graduated tube of 3·2 millimetres

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A CASE OF

DIABETIC INTRAOCULAR LIPÆMIA, IN WHICH THE BLOOD WAS EXAMINED DURING LIFE.

BY W. HALE WHITE, M.D., F.R.C.P. LOND.,
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(*With Coloured Illustration.*)

IN 1880 Heyl[1] published an account of a case of lipæmia in diabetes, in which the fatty blood was recognised in the retinal vessels by means of the ophthalmoscope. The title of his paper is "Intraocular Lipæmia." Although it is so long since this observation was made yet text-books do not allude to the appearance and even Naunyn[2] does not mention it, hence it seemed to me worth while to record the following case. Owing to the time occupied in preparing the accompanying chromolithograph the publication of this case has not been possible till now, but in a clinical lecture published in 1902[3] I mentioned I had seen intraocular lipæmia, and again when opening the debate on diabetes at the Chelsea Clinical Society in March, 1903.[4] Recently Sir T. R. Fraser[5] recorded a case at the Edinburgh Medico-Chirurgical Society, and in the *Ophthalmoscope*[6] there is an abstract of a case published in Germany by Reis. For this reference[7] I am indebted to Mr. A. W. Ormond. I should not, for my own part, say that lipæmia in diabetes is excessively rare and I know of at least one other patient in Guy's Hospital in whom this condition of the blood was observed in the retinal vessels. I have called the condition "lipæmia," for this word is constantly used in describing the blood when it is of a pale salmon colour. This is most often seen in diabetes, but it has also been described as occurring in alcoholism, phosphorus poisoning, pneumonia, peritonitis, and gout. Of these rarer causes probably alcoholism is the most frequent. Most authors say that under the microscope fat globules may be seen and also very fine granules. In many cases undoubted fat granules are present for they are described as staining with osmic acid and they are so depicted by Saunders and Hamilton.[8] But these authors, like others, also describe "a finely granular precipitate evidently not of an oily nature," and they also speak of the albuminoid precipitate as showing no change with osmic acid. Futchner[9] found that the turbidity of the blood was only in part cleared with ether and many of the granules were not stained black by osmic acid, and he points out that the turbidity is only partially due to fat and suggests that the granules are in part albuminous. Others have suggested that the granules are particles of fat surrounded by an albuminous envelope.

One of the points of interest in the case about to be recorded is that a careful microscopic examination of the blood failed to show any fat globules or anything that stained with osmic acid, and so we learn that this pale, turbid, salmon-coloured blood may contain not only fat globules and a [illegible] insoluble in water and salines, but more or less soluble in alkalies. It seems to be a proteid precipitated out by the presence of a fatty substance, but what the proteid is I was not able to discover. The fatty substance is not true fat but apparently an ester of cholesterine with one of the higher fatty acids, or a mixture of them. I extracted the ester from the precipitated body with alcohol and saponified with alcoholic soda and then extracted the residue with hot chloroform. This on evaporation leaves cholesterine, which gives the usual tests and was also identified by its crystalline form. I could not possibly tell, of course, the acid with which it was originally combined." We thus learn that the term "lipæmia" is not strictly correct, for the turbidity is not entirely due to fat globules—indeed, they may be absent when the turbidity is marked and that then, in addition to a precipitated proteid, there is present a substance which, although allied to fats, is not a true fat.

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[1] Transactions of the American Ophthalmological Society, 1880, p. 54.

[2] Der Diabetes Mellitus, Nothnagel's Specielle Pathologie und Therapie, Band vii., Theil 6.

The ophthalmoscopic appearances in my case can be seen in the appended chromolithograph, kindly made by Mr. Arthur W. Head. The arteries and veins, it will be noticed, contain blood of a similar colour, and this colour is a deep cream which in the larger vessels passes into a pale salmon colour, for here there are enough blood corpuscles visibly to modify the cream colour. The vessels appear a little larger than usual; the whole retina is pale. Reference to Heyl's paper will show that this description, which was written before I read his, accords with it. Unfortunately, when the patient was under observation I was unaware of Heyl's paper and consequently of the interesting discussion raised in it as to why the vessels appear large.

Most cases of diabetic lipæmia that have been recorded have been fatal and it has been suggested that the lipæmia is the cause of the coma. That is not now believed and I can testify that it is not so, for I have in many fatal cases of coma failed to find this condition of blood. My case, like Fatchner's, shows that as the patient improves the lipæmia disappears; further, it shows that as the lipæmia goes the fundus of the eye becomes healthy-looking. No satisfactory explanation of the lipæmia has been given. Certainly in my case it bore no relation to diet.

The patient, a man, aged 26 years, was admitted under my care into Philip ward, Guy's Hospital, on Feb. 13th, 1902, on account of hunger, thirst, polyuria, weakness, and wasting. The weakness was noticed first about nine months previously. In September, 1901, the thirst appeared and since Oct. 21st of the same year, when he first came to the hospital, he had been treated for diabetes as an out-patient. For a time he did well and gained weight, but latterly he had not kept at all to the diet ordered and he had become drowsy. On admission he was drowsy and felt sleepy. His body was wasted. His breath smelt very sweet and he had a sweet taste in his mouth. He complained of pain in the loins. His tongue was red. The sugar in the urine was 2595 grains in the 24 hours. The total quantity was 178 fluid ounces, the specific gravity being 1040. One part per 1000 of albumin and 770 grains of urea were present. There was a well-marked ferric chloride reaction. Under treatment the sugar finally fell before he went out on May 26th, 1902, to between 1000 and 1500 grains in the 24 hours, the total quantity becoming about 80 fluid ounces. The specific gravity was between 1030 and 1035 and the total daily excretion of urea was between 600 and 900 grains. The ferric chloride reaction was well given during the whole of his stay; the albumin gradually disappeared. Mr. E. H. B. Milsom, the clinical clerk in charge of the case, even after the patient had been in some time, prepared large quantities of crotonic acid from the urine. He found the total ammonia in the urine on March 10th to be 2 565 grammes, both these facts pointing to the presence of a large amount of oxybutyric acid. The patient was treated by restricted diet and after he had been on this for ten days he was allowed two ounces of lævulose a day. He liked this very much. It did not lead to any increase of the sugar in the urine, nor did it appear to make him worse in any way. The transition from ordinary to diabetic diet was made gradually. He was throughout allowed milk and as he was so drowsy on admission he was given three pints of milk a day and to each pint 100 grains of bicarbonate of soda were added. Before this was done he was so drowsy that a fatal issue seemed probable and it was difficult not to believe that the administration of the bicarbonate of soda diminished the drowsiness, for it gradually became less and ultimately quite passed away. He was allowed milk because, as he was semicomatose, it seemed undesirable that he should have an entirely carbohydrate-free diet.

The main interest of the case lies in the blood. On admission, directly we looked at his eyes we noticed that the retinal arteries and veins both appeared to have in them blood of a pale salmon colour. The retina was pale. As the patient improved the colour in both sets of vessels became more healthy and was quite natural after he had been in for two months. He was fortunately an intelligent man and on Feb. 19th he allowed us to bleed him, only a small quantity of blood being taken. It was very milky and the serum after clotting was milky. Under the micropscope many fine granules were seen, but no globules or anything that stained with osmic acid. On March 17th he was again venesected and the blood was sent to Mr. Cole, whose report has been given. The patient's improvement is shown by the following weights: Feb. 26th, 105 pounds; March 2nd, 114 pounds; March 18th, 115 pounds; March 23rd, 118 pounds; March 27th, 120 pounds; April 5th, 123 pounds; April 26th, 126 pounds; May 3rd, 128 pounds. I should add that Mr. A. W. Ormond, the ophthalmic registrar to Guy's Hospital, kindly introduced the case to Mr. Head's notice and hence we are indebted to him for the chromolithograph, and I am also much indebted to Mr. Milsom for his many careful analyses of the urine.

Harley-street, W.

ON THE PROTECTIVE EFFECT ACHIEVED BY ANTITYPHOID INOCULATION AS EXHIBITED IN TWO FURTHER STATISTICAL RECORDS.

BY A. E. WRIGHT, M.D. DUB.,
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IN the issue of THE LANCET of Sept. 6th, 1902 (p. 651), I gathered together and set forth in a synoptical table all the statistical materials which were available up to that date. In a special supplement appended to the same issue I marshalled the materials for the critical estimation of the value of each of the statistics. I have recently been permitted to publish, through the kindness of Surgeon-General Sir William Taylor, K C.B., Director-General of the Army Medical Service, two further statistical records received at the War Office since the date of the publication above referred to.

The first refers to the incidence of typhoid fever and the death-rate from the disease in inoculated and uninoculated soldiers in India during the year 1901 (vide Table I). The second relates to the incidence of typhoid fever in the inoculated and uninoculated in Lord Methuen's column at the Modder River, South Africa, from December, 1899, to March, 1900 (vide Table II.).

TABLE I.—*Showing the Incidence of, and Death-rate from, Typhoid Fever in the British Army in India during the Year 1901.*

—	Average strength during the year	Cases of typhoid fever.	Deaths from typhoid fever.	Incidence rate.	Death-rate.
				Per cent.	Per cent.
Uninoculated ...	55,955	744	199	1·33	0 36
Inoculated... ...	4,883	32	3	0·66	0·06

We learn here that antityphoid inoculation reduced the incidence-rate of typhoid fever by half and the death rate by five-sixths. A further point of interest in the table is its testimony to the duration of the protection afforded by antityphoid inoculation. It may be premised in this connexion that the number of inoculated in the table represents a falling off of 1100 from the figures of the previous year, a falling off due to the practical suspension of antityphoid inoculations. It follows that the statistics here in question refer almost exclusively to men inoculated in 1898, 1899, and 1900. So far as they apply to men inoculated in 1900 confirmation is furnished to the statistics of 1900 which showed that the protection conferred by inoculation in 1899 showed no signs of diminishing in 1900 So far as the statistics of 1901 refer to a residue of the 4000 men inoculated by myself in India in 1898-99 they amplify previous statistics to the extent that they suggest that the protective effect of inoculation continues for a minimum of three years.

The second statistical record applies, as already mentioned, to Lord Methuen's column during a limited period of the

South African war. It was furnished by Surgeon-General Townsend, C.B.

TABLE II.—*Showing the Incidence of Typhoid Fever in Lord Methuen's Column at the Modder River, South Africa, from December, 1899, to March, 1900.*

—	Number.	Cases of typhoid fever.	Incidence rate.
Uninoculated	10,981	257	2·3 per cent.
Inoculated	2,535	26	1·0 "

It will be noted that Table II. testifies to a diminution of the incidence rate by more than half during the period of observation. It would seem legitimate, in view of the statistics set forth above and of previous statistics, to infer the continuance of a similarly diminished rate of incidence during the whole of these men's service in South Africa. It will be noted also that this table discloses nothing with regard to the case mortality of the inoculated and uninoculated attacked by typhoid fever. This omission is no doubt due to the fact that the sick were transferred to hospitals at the base and passed out of Surgeon-General Townsend's ken. We may probably, in view of statistics in Table I., *supra*, and of those included in my synoptical table, infer that there was here superadded to the diminution in the incidence rate of typhoid fever also a diminution in the death-rate.

Lower Seymour-street, W.

SOME REMARKS ON 50 CASES OF BILHARZIA DISEASE,

WITH SPECIAL REFERENCE TO THE CHARACTERS OF THE WHITE CORPUSCLES FOUND IN THE BLOOD AND URINE

BY S. R. DOUGLAS, M.R.C.S. ENG., L.R.C.P. LOND.,
CAPTAIN, I.M.S.,
AND
F. W. HARDY, M.B., B.C. CANTAB.,
MAJOR, R.A.M.C.

ATTENTION has been drawn by Coles to the presence of an excess of coarse-grained eosinophile leucocytes in the blood of a patient suffering from bilharzia disease. The presence in the Royal Victoria Hospital, Netley, of a large number of cases of this disease in soldiers who had served in South Africa afforded us an opportunity for making further investigations in connexion with this disorder.

Clinical symptoms.—In most of the cases the clinical symptoms were very slight, vague pains in the back being most complained of; only a few of the patients complained of frequent micturition and pain on passing the urine. When blood was passed it was most marked at the end of micturition and nearly all the patients stated that their linen became blood-stained from a drop or so of urine coming away after they had adjusted their dress. None of them complained of any rectal symptoms

Duration of the disease.—The duration of the different cases examined was from nine months to over two years and according to the patients no improvement had taken place since the onset. Many of them had had various drugs administered without the slightest effect.

Incubation period.—But little can be said with regard to the incubation of the disease; of 14 men of the Argyll and Sutherland Highlanders 12 first noticed the disease in January or February, 1901, while at Rustenburg or in that neighbourhood This regiment had been at Rustenburg since September, 1900, and its movements before that date were in the Eastern Transvaal.

Period of the year at which the disease first appeared.—An analysis of the data with regard to the season at which the first symptoms of the disease appeared shows that the disorder may probably be contracted at every period of the year.

Possible extension of the disease to other countries.—The circumstance that patients who contracted the disease in South Africa have already been invalided to Netley from India, Burmah, and Malta, stations hitherto free from the disease, shows that the ova of the parasite must have been widely disseminated over the globe by soldiers from South Africa, and it may be noted that this is in conformity with the fact that the endemic area of the disease in Africa has been widely extended by the movements of infected soldiers.

Remarks on the differential blood counts.—The films were in each case stained with Leishman's stain. The number of leucocytes counted was in each case at least 300, this number being considered sufficient in view of the large number of cases examined and the grand total of 16,149 leucocytes were counted. The blood of all the patients examined seemed to contain an excess of white cells. With the exception of Case 14 the percentage of coarse-grained eosinophile leucocytes was above the normal limits, the average for the whole series being 16 48 per cent. There were, however, great variations in the different cases, the extremes being Case 2 with 40 per cent. and Case 14 with 1·3 per cent. Of the remaining cases 20 (Nos. 1, 3, 4, 5, 6, 15, 20, 22, 23, 24, 30, 33, 34, 39, 45, 46, 47, 48, 49, and 50) [illegible] above 15 and in only two (Nos. 36 [illegible] below 6. The increase of the [illegible] been principally at the expense of the polymorphonuclears. Polymorphonuclear leucocytes were below the average percentage, the average for the series of cases being 44·58 per cent. The general impression was that these leucocytes were distinctly more granular than usual, the granules being both more numerous and of larger size and in some instances almost approached the [illegible] and 42) in which evidences of malaria were found—namely, pigment contained in some of the mononuclears in the former case and both benign and malignant tertian parasites in the other case—the figures were very high, 25 per cent. and 28·4 per cent. respectively; but in ten other cases (Nos. 1, 2, 3, 4, 5, 7, 10, 13, 31, and 39) the percentage was above 15 Many of the mononuclear cells contained a few red-staining granules Intermediary forms between lymphocytes and large mononuclears were numerous and it was often difficult to know into what category the cell should be placed. Doubtful cells were therefore classed as lymphocytes. Lymphocytes gave an average percentage of 25·76, different cases showing large variations. In only two (Nos. 14 and 43), where the figures were 43·9 per cent. and 42·6 per cent., was there a distinct increase, and in both of these cases the coarse-grained eosinophiles were very much less numerous than usual Included under the head of basophile were mast cells and their average number (0·503 per cent.) was rather above the average of normal blood. In no case, however, did they reach 2 per cent.

Taking the mononuclear leucocytes as one class and the polymorphonuclears as the other, the average percentages work out at 38 286 per cent and 61 569 per cent. respectively, this being approximately the proportion found in normal blood.

The urinary sediment.—The urine was in each case centrifuged, one portion of the deposit was examined without staining, another was made into films and lightly stained with Leishman's stain. The number of bilharzia ova varied enormously in different cases and also varied from day to day in the same case, the specimens in which most were found being often comparatively free from both cellular débris and blood. The amount of blood varied enormously—in some cases the urine was bright red, in others nothing was noticeable with the naked eye; many of the cases which contained much blood showed extremely few ova. Bladder epithelium was frequently present.

In all the cases examined the sediment contained many leucocytes which were, as a rule, extremely well preserved; by far the greater number of these were coarse-grained eosinophiles. In some cases no other sort of leucocyte was found after prolonged search and in the cases where they were least numerous this percentage never sank below 50; the other form of leucocyte seen was almost exclusively the polymorphonuclear, lymphocytes and large mononuclears being very uncommon. No explanation could be found for this striking predominance of the eosinophile over the other leucocytes and the only suggestion that can be given is that the irritation arising from the lesion of the bladder causes either the other leucocytes to change into eosinophiles or has some special attraction for this form of cell.

CONCLUSIONS.

1. *Histological characters of the blood.*—(*a*) The percentage of the coarse-grained eosinophile leucocytes is, with very

TABLE GIVING PARTICULARS OF 50 CASES OF BILHARZIA DISEASE.

No. of case.	Rank.	Regiment.	Place and date where the disease was first noticed.	Place whence patient was invalided.	No. of leucocytes counted in each case.	Percentage of various leucocytes.				
						Eosinophiles.	Polymorphonuclear.	Lymphocytes.	Large mononuclear.	Basophiles.
1	Private.	2nd Royal Irish Fusiliers.	Machadadorp, April, 1902.	South Africa.	302	16·2	48·0	18·2	15·5	1·9
2	Private.	8th Hussars.	Rustenburg, February, 1903.	,,	358	40·0	28·0	11·0	20·0	1·0
3	Private.	Argyll and Sutherland Highlanders.	Rustenburg, February, 1901.	,,	336	17·2	38·7	27·3	15·8	0·9
4	Private.	4th King's Royal Rifles.	Daaspoort, November, 1901.	,,	323	23·8	33·7	22·0	20·1	0·3
5	Private.	Argyll and Sutherland Highlanders.	Bezoutenboist Valley, July, 1902.	,,	325	7·9	42·8	29·1	19·6	0·4
6	Private.	Royal Horse Artillery.	Zeerust, July, 1901.	,,	322	19·2	52·5	17·7	10·9	0·6
7	Private	1st Argyll and Sutherland Highlanders.	Rustenburg, January, 1901.	,,	300	33·0	28·6	21·3	16·0	1·0
8	Private.	2nd East Kent.	Nelspruit, February, 1902.	,,	310	13·2	50·6	24·8	9·3	1·9
9	Private.	2nd Duke of Cornwall's Light Infantry.	Koomati Port, May, 1901.	,,	331	12·1	39·0	36·2	12·1	0·25
10	Private.	8th Hussars.	Vryheid, October, 1901.	,,	332	14·1	45·8	22·0	17·1	1·0
11	Private.	1st Worcesters.	Klerksdorf.	,,	312	10·2	38·4	36·2	14·8	0·3
12	Private.	8th Hussars.	Ingogo, October, 1901.	,,	306	6·5	50·0	32·3	10·1	1·0
13	Private.	Royal Army Medical Corps.	Rustenburg, November, 1901.	,,	306	10·4	41·3	29·5	17·3	1·3
14	Private.	1st Welsh.	Johannesburg, November, 1901.	,,	303	1·3	45·2	43·9	9·2	0·3
15	Private.	8th Hussars.	Dundee, November, 1901.	,,	321	27·2	31·9	29·4	9·4	0·7
16	Private.	,,	,,	,,	300	7·7	61·6	19·0	11·7	—
17	Private.	1st Royal Fusiliers.	Pretoria, May, 1902.	Burmah.	322	14·6	40·1	35·1	9·0	0·6
18	Private.	2nd East Kent.	Nelspruit, May, 1901.	,,	312	19·2	45·0	20·5	14·4	0·6
19	Private.	1st Leicesters.	Standerton, May, 1902.	Madras.	304	14·1	49·3	24·0	12·5	—
20	Private.	1st Durham Light Infantry.	Pretoria, March, 1902.	Wellington.	311	22·8	37·6	25·7	12·8	1·2
21	Private.	1st Royal Fusiliers.	Klerksdorp, June, 1902.	Burmah.	316	17·0	44·3	30·4	7·2	1·0
22	Private.	2nd King's Own Yorkshire Light Infantry.	Pretoria, July, 1902.	Malta.	333	28·2	40·5	24·0	6·9	0·3
23	Private.	1st Royal Fusiliers.	Klerksdorp, August, 1902.	Burmah.	318	19·5	34·1	30·8	14·8	0·6
24	Private.	,, ,,	Klerksdorp, June, 1902.	,,	326	28·2	33·8	28·2	9·0	0·9
25	Private.	,, ,,	,,	,,	305	22·5	41·8	25·9	9·8	0·3
26	Private.	Argyll and Sutherland Highlanders.	Rustenburg, January, 1901.	Calcutta.	309	9·0	66·3	15·2	9·4	—
27	Private.	—	—	—	340	16·9	39·0	30·7	13·0	0·3
28	Private.	2nd Berks.	King Williamstown, July, 1901.	Egypt.	321	12·7	47·9	27·7	11·5	—
29	Private.	Argyll and Sutherland Highlanders.	Rustenberg, February, 1901.	Calcutta.	302	6·8	66·0	20·8	6·0	0·6
30	Private.	1st Durham Light Infantry.	Vryheid, February, 1902.	Wellington.	309	25·8	42·6	17·5	14·2	—
31	Lance-Corporal.	Argyll and Sutherland Highlanders.	Rustenburg, February, 1901.	Calcutta.	331	14·2	45·9	23·8	15·4	9·0

TABLE GIVING PARTICULARS OF 50 CASES OF BILHARZIA DISEASE—*(Continued)*.

No. of case	Rank.	Regiment.	Place and date where the disease was first noticed.	Place whence patient was invalided.	No. of leucocytes counted in each case	Percentage of various leucocytes.				
						Eosinophiles.	Polymorphonuclear.	Lymphocytes.	Large mononuclear.	Basophiles.
32	Private.	Argyll and Sutherland Highlanders.	Rustenberg, February, 1901.	Calcutta.	316	6·9	55·3	24·3	13·3	—
33	Private.	2nd Berks.	King Williamstown, December, 1900.	Egypt.	333	27·9	43·2	15·6	12·9	0·3
34	Private.	Argyll and Sutherland Highlanders	Rustenburg, January, 1901.	Calcutta.	335	15·9	56·7	18·4	8·9	—
35	Private.	"	"	"	300	8·3	50·6	16·0	25·0	—
36	Private.	"	"	"	335	5·9	55·2	30·7	7·7	0·3
37	Private.	"	"	"	370	8·6	43·5	36·2	11·6	—
38	Private.	1st Durham Light Infantry.	Brandfort, May, 1902.	Wellington.	345	8·3	60·3	18·5	12·5	0·3
39	Lance Corporal.	Argyll and Sutherland Highlanders	Rustenburg, November, 1900.	Calcutta	378	15·6	46·4	22·6	15·1	0·5
40	Private	"	Rustenburg, November, 1901.	"	322	8·4	58·0	23·3	9·3	0·9
41	Private.	1st Durham Light Infantry.	Vryheid, March, 1902.	Wellington.	315	12·7	39·6	31·7	15·5	0·3
42	Private	1st Yorkshire and Lancashire	Klip River, January, 1902	Mhow.	310	8·1	35·1	28·1	28·4	0·3
43	Private	1st West Yorkshire.	Fredricksbad, August, 1901.	Quetta	312	5·4	46·6	42·6	4·8	0·6
44	Private.	Argyll and Sutherland Highlanders.	Rustenburg, February, 1901.	Calcutta	350	14·6	44·0	33·1	8·3	—
45	Private.	Liverpool Regiment.	Machadadorp, August, 1902.	Burmah.	354	15·8	49·7	27·9	6·5	—
46	Private.	"	"	"	312	24·3	33·7	31·2	10·1	0·3
47	Private.	Royal Fusiliers.	Klerksdorp, March, 1902.	Mandalay.	333	28·5	37·2	21·3	12·0	0·9
48	Private.	West Yorkshire.	Rustenburg, 1900	Quetta	333	17·7	49·5	26·7	5·4	0·6
49	Private.	Royal Fusiliers.	Vryheid, March, 1901.	Burmah.	354	29·6	44·2	12·1	13·8	0·3
50	Private.	East Yorkshire	Klerksdorp, March, 1901.	Mandalay.	317	30·3	30·6	27·5	10·4	0·1

The total number of leucocytes counted was 16,149 The average percentages of various leucocytes were as follows: Eosinophiles, 16·486; polymorphonuclears, 44·58, lymphocytes, 25·76, large mononuclears, 12·526; and basophiles, 0·503

REMARKS ON URINARY SEDIMENT, &c

CASE 1.—Ova in the urine were not very numerous. With very few exceptions all the leucocytes in the urinary sediment were coarse grained eosinophiles

CASE 2.—Percentages were taken to nearest whole numbers Ova were very few. All the leucocytes seen in the urinary sediment were coarse grained eosinophiles

CASE 3.—Ova were numerous. The leucocytes in the urine were numerous, mostly coarse grained eosinophiles, but some polymorphonuclears were present.

CASE 4.—Ova were few. All the leucocytes seen in the urinary sediment were coarse-grained eosinophiles

CASE 5.—Ova were very numerous. The leucocytes in the urine were mostly coarse grained eosinophiles but polymorphonuclears and lymphocytes were also present

CASE 6.—Ova were fairly numerous The leucocytes in the urine were scarce, mostly coarse grained eosinophiles, some polymorphonuclears were present.

[illegible] leucocytes in the urine seemed to [illegible] rly all the leucocytes seen in the [illegible] a few polymorphonuclears were present.

[illegible] rous The [illegible] philes and [illegible] ie urinary [illegible] tes in the [illegible] lears were present.

CASE 12.—Very few ova were present in the urine.

CASE 13.—Ova were scarce; there was much blood in the urine. The leucocytes were not very numerous and were mostly eosinophile, but some polymorphonuclears were present.

CASE 14.—Ova were scarce

CASE 15.—Ova were fairly numerous The leucocytes in the urine were mostly eosinophiles

CASE 16.—Ova were very numerous The leucocytes in the urine consisted almost entirely of eosinophiles

CASE 17.—Two myelocytes were seen. Ova were very scarce and much blood was present The leucocytes in the urine consisted of [illegible] on [illegible] he [illegible] of the leucocytes found in the urine were eosinophiles.

CASE 35.—Some of the large mononuclears contained pigment granules due to malaria

CASE 40.—The patient was recovering from an attack of orchitis.

CASE 42.—Benign and malignant tertian malaria parasites were present in the blood

CASE 45.—There were very few ova Eosinophiles and polymorphonuclears were present in about equal proportions in the urinary sediment; a very few lymphocytes were seen.

CASE 47.—Very few ova were present The eosinophiles were slightly more numerous than the polymorphonuclears. A very few lymphocytes were seen.

CASE 48.—Very few ova were present The leucocytes were mostly eosinophiles, the remainder being polymorphonuclears with a very few lymphocytes

CASE 49.—Very few ova were present. The leucocytes were almost all eosinophiles

CASE 50.—Very few ova were present The leucocytes were largely eosinophiles.

few exceptions, much above the average percentage found in normal blood. (*b*) This increase goes hand in hand with a proportional diminution in the percentage of the polymorphonuclear leucocytes. (*c*) Less frequent is an increase of the large mononuclear leucocytes, and where this is present it is associated with a diminution of the lymphocytes.

2 *Histological characters of the white blood corpuscles in the urinary sediment.*—A very large proportion of the leucocytes found in the urinary sediment are coarse-grained eosinophiles, the remainder being almost all polymorphonuclears, lymphocytes and large mononuclear leucocytes being uncommon.

3. *Variations in the number of ova in the urine.*—The ova vary in number greatly from day to day; large quantities of blood and other cells are often present when but few ova can be found.

SOME INVESTIGATIONS ON THE URINE OF CHILDREN.

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THE object in writing this paper is threefold: firstly, to estimate the average amount of urine passed in 24 hours by children of average health of the ages of six months up to 12 years inclusive; secondly, the estimation of the total urea usually passed in the urine of children when in health; and thirdly, the quantitative estimation of the purine bodies in the urine of children of the ages mentioned. The results obtained are recorded in a table and are in relation to age and to body-weight. A full and complete record of the diet has been kept during each experiment. The great bulk of the cases were taken from healthy workhouse children belonging to the parish of Lambeth, but a few cases were taken from the Royal Hospital for Children and Women, Waterloo-road, S.E. (only those beyond suspicion of disease being selected), and three of the children were private patients. The mode of procedure adopted in order to obtain the samples and to arrive at the estimation of the total urine passed by the child in the 24 hours was as follows. The child was required to empty the bladder at a given time—say, 12 noon. This sample was not saved, but all the urine passed up to, and including that passed at, the same hour next day was kept, well mixed, and a sample taken of the mixed urine. The urine total was measured and recorded in cubic centimetres. Each child was also carefully weighed at the time of the experiment. Urea is the chief nitrogen-containing constituent of the urine and its amount was ascertained by means of Gerrard's ureometer, all urine containing albumin being rejected except one sample which contained a very slight trace; this was boiled and carefully filtered before being tested. The purine bodies, although containing a comparatively small quantity of nitrogen, are of great interest from the point of view of proteid metabolism and the estimation of uric acid and I am not aware that they have been estimated systematically and in this manner before. The purine bodies used to be called xanthine bases or nuclein bases because they are derived from nuclein, or alloxuric bases because they contain in combination two radicles, one of alloxan and the other of urea. Latterly they have been shown to be derivatives of a substance called purine by E. Fischer. They consist of the following amongst others (purine $C_5H_1N_4$): monoxypurine or hypoxanthine, $C_5H_4N_4O$; dioxypurine or xanthine, $C_5H_4N_4O_2$; amido-purine or adenine, $C_5H_1N_4NH$; amido-oxypurine or guianine, $C_5H_4N_4ONH$; trioxypurine or uric acid, $C_5H_4N_4O_3$. Theobromine (dimethyl xanthine), caffein theine (trimethyl xanthine), substances which are present (in quantities varying from 1 to 3 per cent) in cocoa, coffee, and tea respectively, are also purine derivatives. Purine itself ($C_5H_1N_4$) has not as yet been discovered in the body.

The quantity of purine bodies found in the urine bears a direct relation to the amount of the purine contained in the food eaten and is also affected by the extent of the nuclein cleavage in the metabolic processes of the body. The former group have been named exogenous and the latter endogenous purine. The purine bodies may be fully precipitated by nitrate of silver in ammoniacal solutions or by cuprous oxide in the presence of sodium bisulphite. They exist in all forms of meat extracts and in flesh meats of all kinds. The potato and other vegetables, such as the beetroot, contain them. Oats also contain them. The specific actions of uric acid and the other purine bodies upon the various tissues of the body are of great interest and importance: (1) in relation to the question of diet in children during the early years of life; and (2) in regard to the cessation of the processes of growth, the maintenance of adult life, and the gradual decline of bodily activities.

The estimation of purine substances in food has been made by several observers—Kossel-Burian and Schur, Offer and Rosenqist, and more recently by Dr. I. Walker Hall of Manchester. Several methods have been devised for the estimation of uric acid which need not be described here. The method of Dr. Hall for estimating the total urinary purines is one which I have used and is as follows. (In the experiments recorded in this paper only albumin-free urine was used, but for other experiments if any albumin should be present it is necessary to precipitate and to remove it by filtration.) Two solutions are used:—No. I. solution consists of Ludwig's magnesium mixture,[1] 100 cubic centimetres; ammonia solution, 20 per cent., 100 cubic centimetres; and talc, 10 grammes. No. II. solution consists of silver nitrate, one gramme; ammonia, strong, 100 cubic centimetres; talc, five grammes; and distilled water, 100 cubic centimetres. To 90 cubic centimetres of the urine 20 cubic centimetres of No. I. solution are added. An immediate precipitate of the phosphates falls and the clear fluid remains. To 80 cubic centimetres of the clear fluid 18 cubic centimetres of solution No. II. are added. The resultant precipitate is a mixture of silver chloride and silver purine. The former body is dissolved by the excess of ammonia. The filtrate is shaken until all white flakes disappear and the finely granular yellow-white precipitate remains suspended. If the silver chloride is not entirely dissolved strong ammonia is added drop by drop and the solution well shaken until no AgCl remains. These two processes which have first been described are best carried out by means of the "purinometer." It consists of three parts: (1) a closed graduated tube, (2) a stop-cock with above of the same diameter as the upper tube, and (3) a small glass reservoir of known cubical capacity. The graduated tube is capable of being shut off from the broader part by the glass stop-cock. The upper part of the cylinder has a moveable glass-stopper. 90 cubic centimetres of urine are taken from the mixed urine of the 24 hours and poured into the graduated cylinder, taking care to have the stop-cock turned off. Solution I. is added and the resulting precipitate of phosphates is allowed to fall into the lower part of the tube by turning on the stop-cock. The time for the fluid to become quite clear varies, but is never less than five minutes and seldom over half an hour; the powdered talc greatly helps the precipitate to settle. When the phosphates have in this manner fallen to the lower end of the tube the stop-cock is turned off again and No. II. solution is added up to 100 cubic centimetres. The purinometer should be inclined vigorously backwards and forwards for about a minute in order to dissolve the silver chloride and to reduce the flakes to a finely divided precipitate. The apparatus is placed in a cupboard away from the light and then the number of cubic centimetres occupied by the precipitate is read off 24 hours later. Dr. Hall recommends waiting as long as this and I have followed these instructions, but I consider that this time is unnecessarily long. No tea or coffee was allowed during the experiment. Table I. shows the results which were obtained by the methods which have just been indicated.

This table gives a summary of the results of these investigations. It has been shown that in order to obtain reliable information regarding the amount of urine, urea, or purine bodies it is not sufficient to take one 24 hours' sample, at least *three* must be taken from each case. The variation is often considerable from day to day and the urea which on one day shows a high percentage on the following day (and perhaps because of this) may have dropped to a corresponding low ratio. This remark also applies to the amount of urea, which in many cases varies very considerably on different days, and the same applies to the purine estimation. In all, 63 samples have been taken from healthy children, so that the results have some claim to be regarded as fairly representing the normal urinary percentages, &c., of healthy English children.

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[1] Mag. chlor. crystal, 110 grammes; ammonium chloride, 110 grammes; ammonia, 250 grammes; and water, one litre.

General conclusions.—The *amount* of urine of course increases with the growth and development of the body, but the amount of urine passed per kilogramme of body-weight (although presenting some variation in different individuals, due either to their constitution or their habits) will be found *not* to increase. The amount of urea passed per kilogramme of body-weight would appear to be increased about the second year, but after this it remains fairly constant up to the age of 12 years, and the increase at the second year is probably only due to the greater quantity and variety of the food ingested. The results of the investigations of the excretion of urinary purines show that the amount excreted per kilogramme of body-weight bears no relation whatever to the age or sex of the individual. And this is of great interest when it is coupled with the fact that there are comparatively great variations, pointing, as it does, to idiosyncrasies in this respect, and it may be of value as indicating hereditary and constitutional tendencies. The method adopted in this series of experiments has been as nearly as possible physiological. The children were fed on an ordinary and suitable dietary, were healthily employed, and had regular exercise. I consider that the results obtained from specialised dietaries are apt to be misleading on account of the production of aphysiological conditions.

It is interesting to note that these conclusions in respect to the total quantity of urine and urea contained in it are in general agreement with the results obtained by Dr. Churchill, professor of pediatrics in the Chicago Polyclinic[2] (vide Table II.). Dr. Churchill mentions the fact that American children excrete a smaller amount of urine than those of Germany and Austria and some other countries. The present observations show that the same remark applies to English children (or more correctly London children). Vierordt's[3] tables on this subject show an enormous difference in this respect, but as his percentages were based on a very small number of cases they cannot be regarded as final (vide Table III.). As tending to confirm this it is evident that even in adults the amount of urine passed in Germany and Austria is greater than in England and America. Salkowsky gives from 1500 to 1700 cubic centimetres as the average in Germany. Jaksch gives it as from 1500 to 2000 cubic centimetres in Austria. Landois and Stirling record the English average as from 1000 to 1500 cubic centimetres.

TABLE I.—SHOWING PERCENTAGE COMPOSITIONS OF URINES OF 63 HEALTHY CHILDREN.

Age	Kilogrammes (average weight).	Sex.	Total specimens.	Average amount.	Urea, average per cent in grammes.	Purine, average per cent. in grammes.	Urea, average total in grammes.	Purine, average total in grammes.	Urea, amount per kilogramme of body-weight.	Purine, amount per kilogramme of body-weight.	Amount of urine per kilogramme of body-weight.
1 year.	10·0	1 M.	3	214 c c.	1 8	0 0064	3·79	0·0178	0 379	0·00178	21 4 c c.
2 years.	14 0	1 M. 1 F.	6	326 ,,	1 7	0·0124	5 73	0 06	0 4	0 00428	24 0 ,,
3 ,,	13 9	1 M. 1 F.	7	350 ,,	2 6	0 0111	8 09	0·0412	0 625	0 00296	25 7 ,,
4 ,,	16 6	1 M. 1 F.	6	383 ,,	3 35	0·0281	13 04	0 0970	0 785	0 00543	23 0 ,,
5 ,,	15 0	1 M. 1 F.	8	276 ,,	3 5	0·0144	8 896	0 0245	0 593	0 00163	18 4 ,,
6 ,,	18·7	2 F	6	529 ,,	3·2	0 0148	16 26	0 794	0 869	0 0123	28·8 ,,
7 ,,	18 2	1 F	3	397 ,,	3 1	0 0162	12 38	0 0642	0 63	0 0035	21 8 ,,
8 ,,	18 8	1 M 1 F	6	478 ,,	2 65	0 0162	12 79	0·0799	0 63	0 0042	25 4 ,,
9 ,,	22 4	1 F.	3	577 ,,	3·2	0 0150	18 43	0 2733	0 824	0 0122	25 3 ,,
10 ,,	30 4	2 F	6	430 ,,	2 97	0 011	12 8	0 0475	0 424	0 0015	14·1 ,,
11 ,,	23 6	1 M 1 F.	6	615 ,,	3·35	0 131	20 41	0 0801	0 866	0 0033	21·8 ,,
12 ,,	29 2	1 F.	3	586 ,,	3·2	0 0133	17·59	0 075	0 6	0 0204	20 0 ,,

Total, 63 specimens.

TABLE II.—DR. CHURCHILL'S TABLES.

Age.	Body-weight in kilogrammes.	Sex	Total specimens.	Amount.	Urea per cent.	Total urea in grammes	Phosphates.	Sulphates	Amount of urine to kilogramme of body-weight.	Grammes of urea to kilogramme of body-weight.
3 years.	16 8	2 M	5	358 c c.	2 2	7 87	—	—	21·3 c c.	0·468
4 ,,	16 9	7 M 4 F.	31	299 ,,	2 9	8 67	—	—	17 6 ,,	0 513
5 ,,	16 7	1 M 7 F	17	392 ,,	2 6	10 19	—	—	23 3 ,,	0 606
6 ,,	20 9	2 F.	2	405 ,,	2 7	10 94	—	—	24 2 ,,	0 655
7 ,,	22 6	1 M 3 F.	4	564 ,,	1·1	6 2	—	—	26 9 ,,	0 296
8 ,,	26 2	2 M. 7 F.	20	628 ,,	2 2	13 82	—	—	27 8 ,,	0 611
9 ,,	27 5	1 M. 9 F.	25	731 ,,	2 3	16 81	—	—	27 9 ,,	0 641
10 ,,	27·2	2 M 6 F.	15	768 ,,	2 1	11 28	—	—	27·9 ,,	0 592
11 ,,	36 4	1 M. 3 F.	7	716 ,,	2 3	16 83	—	—	26·3 ,,	0 618
12 ,,	—	2 M 3 F.	8	829 ,,	2·8	23 21	—	—	22 7 ,,	0 637

Totals 19 males, 44 females, and 134 specimens.

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[2] Archives of Pediatrics, 1898, vol. vi., p. 646.

[3] Vierordt's Physiologie des Kinderalters, 1877.

TABLE III.—*Vierordt's Table.*

Age.	No. of cases.	Average weight in kilogrammes.	Total urine in 24 hours, cubic centimetres.	No. of cubic centimetres for each kilogramme of body-weight.
3–5 boys ...	4	13·82	743	53·03
3–5 girls ...	4	14·73	708	48·0
6 boys	1	15·5	1209	78·0
7 „	1	22 42	1055	47 06
11 „	1	24·0	1815	75·64
13 „	1	32 69	788	23·12
—		63·0	1700 to 1800	28·0

Gautier gives that of France as from 1250 to 1300 cubic centimetres and Simon that of Americans as from 1000 to 1300 cubic centimetres. Herz,[4] after noting results from 60 children of both sexes from the ages of three to 14 years, found that from 500 to 1400 cubic centimetres was the average daily amount and Camerer found from 619 to 1034 cubic centimetres in individuals of from two to 11 years old. Parrot, Cruse, Camerer, Martin Ruge, and others state that from 200 to 500 grammes are the average diurnal quantity of urine passed by a child from one month to two years old. Dohrn and Martin Ruge state the newly born infant passes in relation to every kilogramme of body-weight four times as much urine as the adult. Holt[5] by combining the results of the investigations of Schabanowa, Cruse, Camerer, Martin Ruge, Pollak, Berti, Schiff, and Herter gives the following :—

TABLE IV.

Age.	Total urine.	
	Grammes.	Ounces.
First 24 hours	0 to 60	0 to 2
Second 24 hours	10 „ 90	½ „ 3
Three to six days	90 „ 250	3 „ 8
Seven days to two months	150 „ 400	5 „ 13
Two to six months...	210 „ 500	7 „ 16
Six months to two years	250 „ 600	8 „ 20
Two to five years	500 „ 800	16 „ 26
Five to eight years...	600 „ 1200	20 „ 40
Eight to 14 years	1000 „ 1500	32 „ 48

Urea.—In regard to the excretion of urea, Dohrn found 36 milligrammes of urea in the bladder of a child who was just born and Martin Ruge found the following quantities (grammes) during the first ten days of life: 0 07683, 0·2504, 0·1358, 0 1817, 0 2567, 0 2267, 0 2284, 0·16240, and 0·1505. Although the amount of urea is very plentiful up to the end of the first month (0 80 gramme per kilogramme of child) according to Parrot, and amounting during the third week to 1 gramme and 1·89 grammes, Dr. Fernandez Figueira[6] of Rio de Janeiro says we may conclude that the amount is 1·7 per cent and therefore less than in adults. Holt (1903) gives the following[7]: First days, 0 076 to 0 114 gramme; two to seven days, 0·140 to 0 660 gramme; one to two months, 0 90 to 1·40 grammes; three to five years, 13 09 to 14·01 grammes; and five to 13 years, 16·0 to 21·03 grammes. This estimate gives a considerably lower amount in the case of children of from three to five years than I have found to be the case and also a slightly lower estimate in children of from five to 13 years of age. Churchill found that not only were the average percentages for children higher than the average given for adults, but individual cases show a remarkably high percentage of elimination of urea, no less than eight children having over 3 per cent., the highest being 3 7 per cent, and this observation exactly agrees with the results obtained in the present investigations. Purdy and Foster also state that the excretion of urea in children is relatively higher than in adults. The low percentage of early infancy is, of course, due to the quiescent state of the child, but Martin Ruge reports wide variations in single specimens during the first ten days of life varying from 0·6 to 1·9 per cent. Schiff also gives wide variations, from 0·28 to 1·7 per cent., during the first 14 days. Vierordt's observations give from 1·1 to 2 per cent. for older children from three to 12 years old, but this result is based on only seven cases. Vogel[8] pointed out in 1863 that although the absolute quantity of urea passed by both women and children is less than by men yet the relative quantity passed by children in relation to the body-weight of the adult is greater. According to Uhle's[9] observations (1859) children pass for each kilogramme of their body-weight as follows: Urea, from three to six years about 1·0 gramme; from eight to 11 years about 0·8 gramme; and from 13 to 16 years about 0·4 to 0·6 gramme. This result as regards the ages eight to 11 years is in accordance with mine. Vogel says that the quantity naturally varies in different persons and in the same person at different times according to the bodily constitution and the nature of the diet and the activity of the nutritive functions of the individual. Moreover, these numbers do not include the maximum and minimum quantities of urea which occur in certain cases in perfectly healthy persons. Neubauer[10] in 1863 proved that the urine of a healthy man fed on a mixed diet contained from 2·5 to 3 2 per cent. of urea and that the amount varied directly as did the weight of body and quantity of food ingested, but numerous other investigations give from 30 to 40 grammes = 0·37 to 0·60 gramme per kilogramme of body-weight. Lehmann found 58 grammes of urea in 24 hours under a purely animal diet and this dwindled to 0·15 gramme on a non-nitrogenous diet. The urea does not wholly disappear even when no food is taken.

It is beyond the scope of this paper to discuss the origin of the urea and the causes of its variation, though it may be mentioned that Franque of Würzburg as far back as 1855 established that it was affected by the amount of nitrogenous food ingested and Vogel stated in 1863 that the amount of urea was an approximate measure of the degree of metamorphosis of proteid compounds going on in the body; both these views are probably correct.

Purine bodies.—The conclusions arrived at by me as to the amount of the purine bodies excreted have been briefly referred to in an earlier part of this paper. The results recorded show that although there is much variation per kilogramme of body-weight, yet this variation bears no relation to the age of the child. Uric acid is included in the purine series and Holt says in the last (1903) edition of his work (p. 640) that few observations have been made on the elimination of uric acid, but all authorities agree that it is much higher in the newly born than at any subsequent period of life.

Proportion of uric acid to urea.—Martin Ruge gives in the newly born, 1 to 14; Herter gives—under one year, 1 to 60; from two to five years, 1 to 50–70; and from two to 15 years, 1 to 45–60.

Concluding remarks.—In presenting the result of these investigations I feel bound to allude to the fact that, since medicine is not an exact science, it is important for physicians in this country to have data to refer to which have been obtained in this country, for however much we may owe to foreigners and to their statistics it is impossible, as the accompanying tables show, for them to be accepted as indicative without modification of the normal condition of things that obtains in the people of our own country who are not only of another race but, generally speaking, live under other conditions.

It is interesting to find that the results of the present inquiry nearly agree with those obtained from American children by Dr. Churchill. The remarks of Dr. Figueira cannot be passed by when he says that the diseases of the urinary system and of other organic local affections demand a practical knowledge of clinical urology, and this chapter of infantile semeiotics is as important as it is generally neglected, either because it is believed erroneously that disturbances of the urinary functions are infrequent in the child or because of the usual difficulty in collecting the urine for examination *Dr A W Gilchrist*,[11] *Dr H Harper*,[12] Mr Edwy G Clayton,[13] and others have recently pointed out that the urine of tuberculous patients shows unusually low proportions of phosphates and of urea. Dr Harper strongly advocates the use of urea to supply the deficiency, but I cannot say that I have ever seen any improvement from its use clinically The diminution of nitrogen in the urine may be taken as a proof that there is an interference with proteid metabolism, but it seems to be a crude therapeutics that would supply it in the form in which it is excreted and what may be a valuable hint from nature becomes of no value practically if it is to be interpreted after this fashion I feel confident that the estimation of the urea and purine bodies as well as of the other constituents of the urine will be of service in the determination and treatment of certain diseases and I am hopeful that this contribution towards the subject may be of use in the evolution and advancement of our knowledge of those early chemical changes that take place in the human organism in the course of disease, antecedent as they are to those gross lesions with which the pathologist becomes so familiar and after all are oftentimes only monuments of the present deficient state of knowledge of the slow and subtle processes whereby those organic changes have been produced

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[4] Wiener Medicinische Wochenschrift, Band xliv.

[5] Holt on Diseases of Infancy and Childhood 1903, p. 638.

[6] THE LANCET, Sept. 12th, 1896, p. 736.

[7] Diseases of Infancy and Childhood, 1903, p. 640.

[8] Analysis of the Urine, Neubauer and Vogel.

[9] Wiener Medicinische Wochenschrift, 1859 (7 to 9).

[10] Analysis of Urine by Neubauer and Vogel, 1863.

SOME OBSERVATIONS AND COMPARISONS ON THE DIETETIC AND DRUG TREATMENT IN CHRONIC PULMONARY TUBERCULOSIS

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THE treatment of pulmonary tuberculosis in sanatoriums is a topic which has excited a great deal of attention The recent literature on the subject has grown to immense proportions and many so called "specific" drugs have been brought forward and advocated by various authorities Some of these are tried, soon given up and are never heard of again Naturally one cannot deal here with such a wide subject. I know fully that there may be little new in what follows and it is mostly for the sake of giving a general survey and of showing the value of the various treatments adopted in the Manchester Sanatorium (which my personal experience has led me to consider the most satisfactory) that I have ventured to bring forward the following Of course in criticising the results of sanatorium treatment it must always be borne in mind that to secure the best results one must be careful in the selection of cases and this is a difficulty with the working classes Early cases are the only ones likely to be cured but there is sometimes the difficulty of making an early diagnosis and frequently cases come too late The existence of tuberculosis cannot always be confirmed by the detection of the specific bacilli in the sputum, as frequently expectoration is absent or it may consist of mucus which may not give positive results even after repeated examinations I have made it a condition in choosing these cases that the tubercle bacillus was found in the sputum, all being fair examples of the "consumptive' patient in whom there was every reasonable hope of establishing an arrest of the disease Moreover, they were in the sanatorium at the same time during the early part of the year and so were subjected to the same climatic conditions and diet

A more practical end will be attained if the diet in use at Bowdon (*vide* diet chart) is first considered and then the cases arranged under the various kinds of treatment employed It is a very remarkable fact that under the influence of the open air treatment and a judicious diet most of the well known symptoms disappear altogether, or, at least, are greatly modified without any drug treatment

The accompanying diet chart compares very favourably with that in use in some of the best sanatoriums The milk at Bowdon is supplied by contract and has to be sterilised or boiled before being served unless otherwise ordered The only comment to be made is that the milk supply to a sanatorium should be above reproach or suspicion so that sterilisation should not be necessary

In looking over the statistics and results of the various sanatoriums the nomenclature in use does not quite tally, so that it will be better beforehand to explain that in use at Bowdon To make the statistics of public sanatoriums of greater value a system of classification according to the stage of the disease on admission and result on discharge should be generally adopted The average stay at Bowdon of each patient is 91 days, who is then discharged in one of the following conditions

Cured, with no cough, expectoration, or physical signs, a temperature with a daily amplitude or excursion of 1° either above or below the normal, 98 4° F being the mid point, the pulse slower, regular, and full, the weight having increased in proportion to height and age, and in the case of women the menstruation regular

Much improved, with no expectoration, very slight cough, physical signs limited to slightly exaggerated breathing over the affected area, with temperature, pulse and weight as above, and ability to return to work as before

Improved, with only a slight cough present, scanty expectoration, no moist sounds in the chest, and a satisfactory temperature, pulse, and weight.

Stationary, with a cough present, scanty expectoration, physical signs confined to the same area and of the same character, and a regular temperature and pulse and increased weight

Worse with no amelioration of the symptoms and the disease extending

Table I gives the results of nine cases treated with an emulsion of creasote (five minims) three times a day, cod liver oil and malt being given in addition No other medicine was given to the above patients A few of them suffered from nausea and vomiting, the creasote mixture being then stopped or only half doses given The majority of these at the Manchester Sanatorium find no inconvenience from the creasote and take it well, in some the "oil and malt' has to be stopped owing to its causing indigestion or diarrhœa, but is continued on the abatement of such symptoms Here there are cases in all stages of the disease, five were discharged as stationary and two worse, the last having increased considerably in weight

Table II gives particulars of six cases treated with guaiacol administered as a pill (three minims) three times a day, "oil and malt being given as well The pills were first given in the usual white coated form, but it was observed that they were sometimes passed unchanged, this was also noticed when an enema had to be given One might argue on this score that the pills were too hard or badly made and not a fair test, *to obviate this uncoated pills were given* It is difficult to detect these in the fæces as being almost of the same colour, but undoubtedly some are dissolved and absorbed In this table the results are most favourable, the increase in the patients weight being far above the average, which is generally about 10 pounds, but the majority of the cases were in the first stage of the disease

Table III gives particulars of six cases treated with liquor arsenicalis (B P) only, no "oil and malt' being given Arsenic was given *in the form of the simplest* mixture with rose water, the dose being gradually increased from three to 15 minims (in some cases) three times a day after meals It was observed that no idiosyncrasy to the drug was shown in any of the patients and none showed symptoms of arsenical poisoning, a few only exhibited prodromata such as suffused conjunctivæ, increased nasal secretion, and sternutation, very few exhibited gastric symptoms The presence of arsenic was subsequently proved in the urine of some of the patients by *means of Marsh's and* Reinsch's tests I may add that I found in the routine examination of the chests that the moist sounds "dried up' sooner and assumed a more crepitant character at an earlier period in the patients taking this drug than in the "control' cases in the sanatorium It will be noticed that in this table the highest gain in weight is 6¾ pounds One is led to ask what would the increase be if the "oil and malt' had been given in addition In one patient (No 3) the disease was confined to the *right apex and in the early stage* the increase in weight being only one and three-quarter pounds and the patient being discharged as "cured,' and one can truly say so of this case

Much of the fat "put on" is probably of little use to the patient and disappears rapidly when he returns to the ordinary conditions of life and work, and one should not forget that to make a patient fat and to make him strong are not necessarily the same thing. *The end in view in open-air treatment of the working classes is to place the patient as nearly as possible on his former wage-earning basis.*

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[11] THE LANCET, Nov 29th 1902, p 1456

[12] THE LANCET, March 9th (p 694) June 15th (p 1672) and Dec 7th (p 1567) 1901

[13] THE LANCET Sept 6th 1902 p 656

Table IV. gives the results of eight cases treated with a simple mixture of nux vomica, gentian, and acid, no "oil and malt" being given. The results in this table compare most favourably with the others and the gain in weight was most satisfactory, showing that the digestion and absorption of certain constituents of the food have been thorough and the increase in weight due entirely to an improved metabolism in the tissues generally, thus making a physiological use of

DIET CHART OF MANCHESTER SANATORIUM.

Meal and time.	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
6 30	Half-pint of hot milk and cocoa.	Same as Sunday.	Same as Sunday.	Same as Sunday.	Same as Sunday.	Same as Sunday.	Same as Sunday.
Breakfast, 8.30.	Eggs.	Cold ham.	Fish, brawn, or eggs.	Cold ham.	Fried bacon.	Cold ham.	Fish.
Lunch, 10.15.	Half-pint of milk and bread-and-butter or bread-and-treacle.	Same as Sunday.	Same as Sunday.	Same as Sunday.	Same as Sunday.	Same as Sunday.	Same as Sunday.
Dinner, 12.30.	Half-pint of milk, roast mutton, potatoes, and boiled pudding.	Roast beef, two vegetables, and milk pudding.	Roast mutton, two vegetables, and milk pudding and fruit.	Roast beef, Yorkshire pudding, two vegetables, and milk pudding.	Roast mutton or stew, two vegetables, and milk pudding.	Minced or cold meat and fish, potatoes, and milk pudding and fruit.	Roast beef, two vegetables, soup, and milk pudding.
Tea, 4 30.	Tea, bread-and-butter, jam or cheese, and eggs.	Same as Sunday.	Same as Sunday.	Same as Sunday.	Same as Sunday.	Same as Sunday.	Same as Sunday.
Supper, 7.30.	Porridge and half-pint of milk.	Varied by soup.		Coffee and bread-and-butter.			
9.30	Half-pint of hot milk.	Same as Sunday.	Same as Sunday.	Same as Sunday.	Same as Sunday.	Same as Sunday.	Same as Sunday.

The diet is slightly varied according to the season.

TABLE I.—GIVING THE PARTICULARS OF NINE CASES TREATED WITH CREASOTE PLUS COD-LIVER OIL AND MALT.

No. of case.	Sex.	Stage and extent of disease.	Tubercle bacillus.	Expectoration.	Cough.	History of hæmoptysis.	Temperature (Fahr.).	Pulse.	Condition of nutrition.	Anæmia and menstruation.	Gain or loss of weight in pounds.	Result and remarks.
1	M.	Second, R.I.	+	Scanty.	Not troublesome.	+	99·2°	80	Fair.	N.S 0.	+ 5½	Stationary.
2	F.	Second, R.I. and L.I.	+	Purulent.	Much.	+	98·8°	90	Spare	M.I.	+ 10½	,,
3	F.	Second, R.I. and II.	+	Scanty, purulent.	Troublesome.	+	98·6°	90	Poor.	Anæmic; M.I.; N.S.P.	+ 10	Much improved.
4	F.	Second, R.I.	+	Scanty, purulent.	,,	0	98 8°	92	Thin.	A.0, M.I., N.S.P.	+ 7¾	Stationary.
5	M.	Third, R.I. and II., L.I.	+	Profuse.	,,	0	99·4°	73	Fair.	N.S.0.	+ 5	,,
6	F.	Third, R I. and II., and L I.	+	,,	,,	0	102 0°	112	Thin.	Menopause; N.S.P.	+ 12	,,
7	F.	Second, L.I.	+	,,	,,	+	98·0°	92	Spare.	A.0, M.0, N.S.P.	+ 11½	Much improved.
8	F.	Third, R.I. and L.I.	+	Profuse and purulent.	,,	0	103·4°	120	Poor.	A.0, M.0, N.S.P.	+ 10½	Worse.
9	M.	Second, R.I., L.A.	+	Scanty.	,,	+	99·2°	96	Spare.	N.S.0.	+ 15¾	,,

TABLE II.—GIVING PARTICULARS OF SIX PATIENTS TREATED WITH GUAIACOL ADMINISTERED IN THE FORM OF A PILL, "OIL AND MALT" BEING GIVEN AS WELL.

No. of case.	Sex.	Stage and extent of disease.	Tubercle bacillus.	Expectoration.	Cough.	History of hæmoptysis.	Temperature (Fahr.).	Pulse.	Condition of nutrition.	Anæmia and menstruation.	Gain or loss of weight in pounds.	Result and remarks.
1	M.	Second stage, fibroid.	+	Purulent.	Slight.	0	99 2°	90	Fair.	N.S.0.	+ 15¾	Much improved.
2	F.	Second, R.I.	+	Profuse.	Present.	+	99 2°	92	,,	Menopause.	+ 20½	Improved.
3	F.	First, R. and L.A.	+	Purulent.	,,	+	98·8°	88	Good.	A.0, M.R., N.S.P.	+ 25¼	Much improved.
4	F.	,,	+	Profuse.	Troublesome.	0	98·6°	100	Poor.	A.0, M.0, N S P.	+ 18¾	,,
5	F.	First, R.A.	+	Scanty.	Very little.	+	98 4°	72	Fair.	M.R., A.0, N S.P.	+ 8	,,
6	F.	First, R.I. and L.I.	+	,,	Little.	+	98 0°	72	Spare.	A.0, M.R., N.S 0.	+ 9	Improved.

the foodstuffs supplied rather than the plethoric storage of excess material.

Table V gives the results of six cases treated with urea (one gramme three times a day flavoured with five minims of spirit of chloroform), no "oil and malt" being given, and Table VI gives the details of analysis of the urine of three of the cases. It was very doubtful from the first whether one of these cases (No. 6) was tuberculous, the sputum was examined on ten or 12 occasions but with a negative result. The physical signs in the lungs showed nothing adventitious, the case was, however, kept as a "control" for the other "urea" cases throughout. None of these cases showed any loss of appetite, nausea, or vomiting, which, according to Dr H. Harper, is an indication against urea. From a study of these cases one cannot but agree *in toto* with Dr S. Vere Pearson's results on the patients at the Brompton Hospital. In the first case only can anything like a favourable result be said to have been obtained.

TABLE III.—GIVING THE PARTICULARS OF SIX CASES TREATED WITH ARSENIC ONLY, NO "OIL AND MALT" BEING GIVEN.

No. of case	Sex	Stage and extent of disease	Tubercle bacillus	Expectoration	Cough	History of hæmoptysis	Temperature (Fahr.)	Pulse	Condition of nutrition.	Anæmia and menstruation	Gain or loss of weight in pounds	Result and remarks
1	M	First, R A	+	Scanty purulent.	Very little.	0	99·0°	80	Fair	N S P	+ 6¾	Very much improved
2	M	,, ,,	+	Scanty	Little	0	97·4°	76	,,	N S 0	+ 5¾	,,
3	F	,,	+	Scanty purulent	,,	0	98·6°	96	,,	—	+ 1¾	Cured
4	M	Second, R I and L I	+	Purulent	Troublesome	+	93·6°	112	Poor	N S P	+ 2¼	Worse
5	F	,, ,,	+	Scanty	Very little	0	99·4°	100	Fair	A 0 M R N S 0	+ 3½	,,
6	F	,,	+	Profuse		+	93·2°	76	,,	A 0 M I N S 0	+ 5½	Stationary

TABLE IV.—GIVING THE PARTICULARS OF EIGHT CASES TREATED WITH NUX VOMICA, GENTIAN, AND ACID, NO "OIL AND MALT" BEING GIVEN.

No. of case	Sex	Stage and extent of disease	Tubercle bacillus	Expectoration	Cough	History of hæmoptysis	Temperature (Fahr.)	Pulse	Condition of nutrition	Anæmia and menstruation	Gain or loss of weight in pounds	Result and remarks
1	M	Second, R A	+	Scanty, thick	Troublesome	+	98·4°	80	Fair	N S P	+ 10¾	Improved
2	M	Second, R I and L I	+	Profuse	Much	0	98·4°	80	Spare	N S 0	+ 11¼	,,
3	F	First, R I and L II	+	Watery	Irritating	0	99·4°	92	Fair	A 0, M 0, N S P	+ 1	Laryngeal complication improved
4	M	Second, R I and L I	+	Profuse	Not troublesome	+	99·0°	96	,,	N S P	+ 16¼	Laryngeal complication, stationary
5	M	Second, I I and II	+	Scanty	Very little	0	98·6°	92	,,	N S 0	+ 18¾	Stationary
6	F	Second, L I and II	+	Mucoid	Troublesome	+	93·2°	72	Poor	A +, M R, N S 0	+ 7¼	Improved
7	F	First, L I	+	Scanty	Not troublesome	+	93·0°	96	Spare	A +, M 0, N S 0	+ 6½	Very much improved
8	M	Second, R I and L A	+	Variable	Troublesome	0	100·0°	96	,,	N S 0	+ 24¾	,,

TABLE V.—GIVING THE PARTICULARS OF SIX CASES TREATED WITH UREA.

No. of case	Sex	Stage and extent of disease	Tubercle bacillus	Expectoration	Cough	History of hæmoptysis	Temperature (Fahr.)	Pulse	Condition of nutrition	Anæmia and menstruation	Gain or loss of weight in pounds	Result and remarks
1	M	First, R A	+	Greenish and thick	Troublesome at night	0	99·0°	80	Fair	N S P	+ 11½	Very much improved
2	M	Second, R I and II and L I	+	,,	Present	0	98·4°	90	,,	N S 0	+ 8¾	Worse
3	M	Second, R I and L I	+	Profuse	Very troublesome	+	99·4°	100	,,	,,	+ 2½	Stationary
4	F	,,	+	Profuse and purulent	Troublesome	+	99·4°	76	Good	A 0 M R N S 0	– 4½	Worse
5	M	Second, R I	+	,,	,,	0	99·0°	83	—	—	+ 6	,,
6	F	R A doubtful	None found	Very little, mucoid	Very little	0	99·0°	82	Good	A 0 M I, N S 0	+ 1	Doubtful if tuberculosis

R I = Right upper lobe. R I and II = Right upper and lower lobes. L I = Left upper lobe. L I and II = Left upper and lower lobes. R A = Right apex. L A = Left apex. R and L A = Right and left apex. A 0 = Anæmia absent. A + = Anæmia present. M R = Menstruation regular. M I = Menstruation irregular. M 0 = Menstruation in abeyance. N S P = Night sweats present. N S 0 = Night sweats absent. + = present.

From the above cases and those now given urea in the wards it appears to have no influence whatever in the progress of the disease one way or the other. If urea is going to do any good an improvement should show itself within three months. The doses given were one gramme three times a day, increased to two grammes three times a day; these are not such large doses as Dr. Harper uses. Now as to the diuretic action of urea (*vide* Table VI.). A daily estimation of the urine was made in Cases 1, 2, and 6; the urine was most carefully collected and analysed. Nothing was given for the first 21 days in the way of drugs or emulsion of oil and malt. Then the patients were given urea, one gramme three times a day, and the urine was collected and analysed as before for 26 days. The apparatus used for the estimation of the urea was Southall's ureometer. In Case 2 only is the output of urea less than that which was administered by the mouth. This I cannot account for, as there was nothing abnormal or adventitious in the urine analysis. Undoubtedly urea must be excreted in some other way than as urea, as the amount of urea "put in" does not show itself in the urea "put out." I was always led to believe that urea induced diuresis, but my observations are not in accordance with this; for the first few days it may be so, but the action soon passes off. In Table VI. it will be seen that in Cases 1 and 2 the average quantity in cubic centimetres per diem of urine secreted is much below that when no urea was taken, whereas in Case 6 (control) the difference is little (about 42 cubic centimetres).

TABLE VI.—*Giving the Particulars of the Urinalysis of Cases 1, 2, and 6.*

No. of case.	Tubercle bacillus found in sputum.	Non-urea period (21 days).			Urea period (three grammes per diem 26 days).		
		Average quantity in cubic centimetres.	Average specific gravity.	Urea, grammes per litre (average).	Average quantity in cubic centimetres.	Average specific gravity.	Urea, grammes per litre (average).
1	Present.	1411	1021·4	0·00158	1174·6	1022·5	0·00176
2	,,	1518	1020·0	0·0015	1303·4	1014·9	0·00132
6	None.	1549	1015·0	0·00103	1507·7	1014·3	0·00131

We will now take the "headings" of the accompanying tables seriatim.

Expectoration.—It is remarkable how those patients who on admission expectorate profusely after the first week or two practically cease to do so and those admitted with scanty and purulent sputum retain it for a longer time. At the sanatorium no expectorants or other drugs are given except in doubtful cases in which the chest is full of coarse moist sounds so as to discern between the transitory and persistent ones.

Cough.—This symptom persists longer than any other and is generally the last to disappear. Until lately almost every patient who had a "troublesome cough" was given syrup of codeine. No doubt this symptom in most cases is a "habit" and will soon disappear if the patient is told to resist the "temptation" to cough and a little moral and assertive persuasion is used on the part of the medical attendant.

Hæmoptysis.—In 17 of the above 35 cases this was present before admission and in only two of them can I find a history of hæmoptysis since admission, and, curiously enough, these were two taking urea. In my experience this is not a very alarming symptom and in only one case do I remember it to be recurrent and persistent. This patient was given the usual drugs, such as ergot, hamamelis, capsules and inhalations of turpentine, adrenalin chloride, and injections of gelatin subcutaneously; none of these appeared to have any permanent effect and the patient did quite as well by absolute rest in bed and liquid diet. Several blood examinations were made and it was observed that there was marked eosinophilia during and after the attacks of hæmoptysis. One is very apt to be surprised in the blood counts of the consumptive, as it is the unexpected that happens. I hope shortly to publish some further observations on this point.

Temperature.—This is always taken by the oral method and for all practical purposes appears to be quite satisfactory. The rectal method is not liked at all, being most disagreeable; the patient will not put up with it for long, and after reading the article on the Comparative Values of the Various Methods of Observing the Temperature by Dr. F. W. Burton-Fanning and Dr. S. Gurney Champion[1] one is inclined to give it up altogether. As a general rule a patient is admitted with an elevated temperature, about from 99·5° F. to 100°, but after a few days' complete rest in bed and the "Liegehalle" it soons settles down and remains about 98·8° or lower. It must not be forgotten that the temperature of phthisis is one of extremes. A low one is quite as indicative of phthisis as a high one and there are plenty of patients with no fever at all. If the temperature be a "swinging" one a "mixed" infection is the cause and these are mostly in the third stage of the disease. Any sudden rise in temperature is mostly due to nervous influence and in women to the menstrual molimen. Pyramidon has been given in cases of a "swinging" temperature above the normal line. The usual dose is five grains in an ounce of chloroform water at 3 P.M. and when the temperature is taken at 6 P.M. it is found to have come down, but not always. It is very seldom, indeed, that any antipyretic is required; on many occasions it has been found that a case with a temperature excursion of 3° (from 97° to 100°) has settled down to a regular line (with an excursion of 1°) when taken out to the "Liegehalle." *One can safely say that the amelioration of symptoms is in the inverse ratio to the amplitude or excursion of the temperature, and the course of treatment adopted should be to contract the daily range of temperature.*

Pulse.—More stress undoubtedly ought to be placed on the frequency, regularity, and tension of the pulse. As the pulse returns more to the normal it coincides more or less with the disappearance of the physical signs and is a better guide to the course of the disease than the temperature.

Anæmia.—I have made over 100 blood examinations and counts and in only about 5 per cent. have I found the hæmoglobin below 85 per cent. In these cases the condition of the mouth and teeth, and consequently that of the stomach, were anything but desirable and this mostly arises from oral sepsis. In several cases it has been noticed that after the extraction of from 12 to 20 teeth the patient has "put on weight" at a most astonishing rate, so the Chinese proverb that most "people dig their graves with their teeth" is not quite true in every respect.

Menstruation is in abeyance in only about 40 per cent. of the cases admitted and is interdependent upon the general condition of the body and when this improves the menses reappear.

Night sweats.—I have never had occasion to prescribe any drugs for the symptom as it disappears before the end of the first week.

One can but conclude from the accompanying tables and the foregoing remarks that the diet is of as paramount importance as any of the active principles of any mixture or drug given. In tuberculosis there is a wasting of subcutaneous fat, but the main feature is wasting of the nitrogenous elements of the muscles. A meat diet supplies a direct physiological want and the materials are "ready-made" for rebuilding the skeletal as well as the cardiac muscle which is also involved. This latter point is shown by the direct improvement of the circulatory condition as the muscular system recovers. All patients, however, should not be given the same amount of food and we can never be quite certain how any given individual will react to a particular kind of food. The diet should be modified to a certain extent for patients with gastric disturbance. With an abundant and mixed diet cod-liver oil is not necessary. The object in view is not to make the patient a "flabby breathless mass of fat," but to turn out a thoroughly solid, robust individual. A gain in weight is by no means everything, as this frequently occurs without an improvement in the pulmonary condition, and when this happens the selection of the diet is of great interest and the supervision and vigilance of the medical attendant are imperative. This latter point is one of the secrets of success in the sanatorium treatment of pulmonary tuberculosis, or, to put it concisely, "the ability to interpretate the individual variations in metabolism."

I should like to take this opportunity of expressing my thanks to the honorary staff for their permission to publish these results and especially to Dr. S. Moritz and Dr. K. Renshaw for their kindly help and advice.

Bowdon.

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[1] THE LANCET, March 28th, 1903, p. 856.

Clinical Notes:
MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

UROTROPIN IN THE PYURIA OF TABES DORSALIS.

By Walker Overend, M.A., M.D. Oxon., B.Sc. Lond.,
LATE SENIOR PHYSICIAN TO THE TOTTENHAM HOSPITAL AND RADCLIFFE TRAVELLING FELLOW.

The following case presents some points of interest. The patient, who was 36 years of age, exhibited the classical symptoms and signs of locomotor ataxia—occasional lightning pains, loss of knee-jerk, muscular incoördination, and vesical troubles. About April, 1899, he first noticed that the bed was wet of a morning, and soon afterwards the urine began to dribble during the day. It gradually commenced to run faster, until after a few months he never passed it at all in a natural manner but suffered from complete incontinence. He was compelled to wear an indiarubber urinal constantly. In the spring of 1900 he resigned his situation and went to live at the seaside. In March, 1901, he consulted me, but not for treatment of the bladder condition, inasmuch as he considered that to be hopeless and incurable. He had, as an out-patient, attended one of the special London hospitals for several years. I persuaded him to take a mixture containing ergot for a time but it proved useless. I then recommended eight grains of urotropin daily but he did not persevere with it. In September, 1901, he contracted influenza but recovered after a few days. The urine was ammoniacal and contained much pus. He was then passing nearly two pints into the urinal during the night and sleep was restless and disturbed. The ignominy of the wretched condition preyed upon his mind and he was morbid, depressed, and hypochondriacal. The vesical weakness in consequence became aggravated. I emphasised the necessity of resuming the urotropin and of taking it regularly for some months, and, irrigation being declined, assured him that the urotropin would greatly benefit him. In February, 1902, he stated that eight grains of urotropin had been taken daily for five months and that he felt much better. There had been no sign of hæmorrhage. The urinal was now practically dry at bedtime; he passed on his own initiative about two pints without pain during the day and the urinal in the early morning contained less than three-quarters of a pint. Moreover, he slept well and was looking out for some employment. One day in January he experienced—for the first time in two years—the desire to micturate. Since then he has learnt to ride a bicycle and he makes use of the machine in his new situation. The urine is free from pus and albumin and has an acid reaction which it retains even after standing for 24 hours. The urinal contains not more than half a pint of urine in the morning and only a few drops at bedtime. I suggested that he should continue the use of the urotropin until the dribbling ceased.

The regular administration of other vesical disinfectants such as salol might have led to equally good results and it seems reasonable to attribute a share of the improvement at least to the asepsis produced by the diurnal exhibition of the drug. The presence of a normal urine within the bladder with the absence of pyuria gave the sphincter an opportunity to recover its tone and the *detrusor vesicæ* its power. The restoration of physical tone and general mental equilibrium —a result of much exercise in the open air—no doubt assisted and favourably reacted upon the beneficial action of the urotropin. The addition of from one-fiftieth to one-hundredth of a grain of strychnine to the urotropin would probably facilitate the effect. The same combination may be suggested for the chronic vesical catarrh and pyuria of enlarged prostate and of diabetes as well as that of hemiplegia and senile debility.

Clacton-on-Sea.

CASES OF STOKES-ADAMS DISEASE (?).

By Isaac Crawford, L.R.C.P. & S. Edin., L.F.P.S. Glasg.

Eight years ago I attended a woman during an attack of pneumonia. She was above medium height, married, of sallow complexion, and very thin. There was nothing about the pneumonia to call for special comment, save that resolution was somewhat delayed.

At the end of the first week of the illness, having been hurriedly summoned, as she was supposed to be dying, I found her pulseless at the wrists and quite unconscious while her breathing was imperceptible. There was a faint, slow flicker to be detected with difficulty in the region of the cardiac apex. Injections of strychnine and digitalin were employed and heat was applied to the extremities and præcordia. She slowly revived, the heart-beats gaining in strength and rhythm until the heart behaved in its customary manner. On inquiry her friends said that the oncoming of unconsciousness was gradual. She had five similar attacks, there being an interval of several days prior to the last which proved fatal. Digitalis was given and curiously enough it was stopped about a couple of days before the last attack. Whether that contributed to the fatal result it is hard to say. In the intervals the heart was normal, no murmur or irregularity being observable. There was no history of any previous similar attacks.

About the same time I attended another patient whose heart behaved in a manner somewhat similar to the above. She was a primipara whom I delivered with instruments under chloroform. There was some hæmorrhage but not enough to be dignified by the name of post partum hæmorrhage. She then for no obvious cause passed gradually into a state of unconsciousness. Her pulse became slower and weaker and finally could not be felt at the wrists; her breathing could not be perceived; her cheeks became white; her limbs grew cold; and the fingers could not detect any sign of life at the cardiac apex. She lay in bed as motionless as if she were carved out of marble. Similar steps towards restoration were taken as in the previous case but I had to leave her still unconscious. Early in the morning I called again at the house and to my great relief I found her in excellent spirits and condition. She had recovered shortly after my departure.

There are references to the above condition in some of the text-books but nothing clear or explicit. I am unable to offer any explanation of the phenomena now described.

Tredegar, Mon.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—Morgagni *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ROMFORD UNION INFIRMARY.

A FATAL CASE OF TETANY IN ASSOCIATION WITH DILATATION OF THE SMALL INTESTINE.

(Under the care of Dr. Dudley G. Greenfield.)

A married woman, aged 33 years, was admitted into Romford Union Infirmary under the care of Dr. Greenfield on August 29th. She had had three children, the youngest of whom was nine months old. About 12 days *before admission* she had been seized with vomiting and had been steadily getting worse. She had previously had no serious illnesses but for some weeks she had been badly fed and cared for. The bowels had been relieved twice during this time on the administration of an enema. On admission the patient had a very worn appearance and complained of lack of sleep owing to the vomiting. She had no acute pain at any time. The vomiting was distressing and very frequent. The vomit was distinctly fæcal in odour and in appearance it was very like a characteristic typhoid stool. The abdomen was considerably distended and tympanitic on percussion, the normal areas of dulness being preserved. It moved fairly well on respiration, no pain was caused on palpation, and no tumour could be felt. The abdominal wall was not in the least rigid and no peristalsis was visible The bowels had been relieved two days previously after an enema and the patient's general condition was fairly good. A soap enema was administered and a very large evacuation of clay-coloured fæces resulted and about half an hour afterwards the bowels again acted freely. The patient expressed great relief and said that she "felt a different woman." The distension of the abdomen was considerably less. She was given albumin water only by the mouth and plain water when thirsty. Five grains of calomel were given but she vomited shortly after. In the evening she was more comfortable, the vomiting was less, and the bowels were moved slightly after an enema. The tongue was moist, the pulse was good, and the abdomen was only slightly distended.

On August 30th the patient had passed a good night and felt much better as she had not slept for several days. The vomiting was only occasional. The vomit had lost its fæcal odour and was only bilious. There was a good result from an enema, the fæces being yellowish and loose and no longer clay-coloured. Another five grains of calomel were given without result. The abdomen was said by the patient to be of about the natural size. Albumin water was still the only food given and she had also ten grains of salol every four hours. In the evening she had two typical attacks of tetany, involving the hands, the feet, and the face and lasting about half an hour on each occasion, giving the patient much alarm. The marked abatement of symptoms, the disappearance of the fæcal odour from the vomit, the four actions of the bowels, and the approach to normal of the last motion all seemed to negative a diagnosis of intestinal obstruction other than that due to impacted fæces. The possibility of a gastro-intestinal fistula was considered and some disease of the pancreas was suggested by the whitish fæces but nothing could be felt on deep palpation of the abdomen. On the 31st the vomiting had ceased entirely and the bowels acted freely after an enema. The pulse was good, about 90, and the temperature was slightly subnormal. She had another attack of tetany lasting about 40 minutes. On Sept. 1st the patient had slept well after an injection of morphia given for the attack of tetany on the previous evening. There was no return of the vomiting and she took plenty of albumin water and fluid by the mouth. She was also given nutrient enemata of starch, eggs, salt, and milk to eight ounces every six hours, but the bulk had to be reduced owing to a bad tear of the perineum (not recent) and difficulty in retention. The bowels acted when the rectum was washed out with saline solution preparatory to the administration of the nutrient enema. The only adverse symptom at this time was the subnormal temperature, but the pulse was good and the extremities did not feel cold. On the 2nd the bowels were opened after the wash-out of the rectum in the morning. The albumin water was well retained as were also the nutrient enemata. In the evening she became very cold and collapsed, but improved again when some stimulant was administered. On the 3rd the patient was better again. The food given by the mouth was increased and the nutrient enemata were administered only twice daily. She took one and a half pints of peptonised milk, two ounces of pounded beef, some essence of beef, beside one pint of albumin water and retained it all. On the 4th her appearance had improved considerably, her face being much fuller. The pulse was good but the temperature was still slightly subnormal. Slight peristalsis was visible in the morning and in the afternoon the vomiting returned. On the 5th the patient had vomited frequently in the night, small quantities of bilious material being brought up. The bowels were moved several times quite naturally; the fæces were loose but normal in appearance, no blood or mucus being present. Peristalsis was again seen in the morning and her friends were advised that an operation would probably be required. In the afternoon, however, she became rapidly worse and died unexpectedly.

Necropsy.—A partial examination was permitted. On opening the abdomen some very distended coils of small intestine lay in front, matted together by some tough adhesions. These proved to be the upper part of the jejunum, the lower half of the jejunum and the ileum being empty and contracted. The junction of the distended and contracted portions was matted firmly down behind, close to the root of the mesentery. A finger passed down from above easily went through the point of apparent obstruction and that before the positions of the parts were much disturbed. On unravelling the coils no cause of obstruction could be determined. There was no fibrous stricture and no evidence of dragging or strangulation could be demonstrated. There was very slight capillary injection of the lowest end of the distended portion but there was no extravasation of blood, no lymph, or any sign of recent peritonitis. The pancreas was apparently healthy and the peritoneum showed no hæmorrhages or fatty masses. The stomach was not dilated and was free from any sign of ulceration. The rest of the abdominal viscera and the heart were quite normal in appearance.

Remarks.—From the post-mortem examination it is clear that the primary trouble was acute dilatation of the upper part of the small intestine. No obstruction could be discovered although the patient had old peritoneal adhesions and seeing that the bowels were opened well on each day that she was in the infirmary (eight days in all) and that on the last two days the bowels were opened naturally several times, no obstruction was probably present. Was this then a paralytic distension? The occurrence of tetany was very interesting in a case of this sort. It was fortunate that no operative interference was attempted as the utmost that could have been done was to have relieved the distended bowel and any attempt to arrive at the point of apparent obstruction would have been useless and impracticable owing to the dense bands of fibrous tissue. The post-mortem examination proved that the suspicion of pancreatic disease as a cause of these conflicting symptoms was unfounded.

The case came under my care while doing the work of Mr. J. A. Fraser of Romford and I am indebted to him for permission to publish this account.

HERTFORD GENERAL INFIRMARY.

A CASE OF SUPPURATING HYDATID; INFECTIVE ENDOCARDITIS; ANEURYSM OF THE PERONEAL ARTERY.

FOR the notes of the case we are indebted to Dr. Gordon Moir, house surgeon.

The patient, a lad, aged 19 years, was admitted to the Hertford General Infirmary on June 18th with the following history. His occupation was gardening on an estate in Hertfordshire, where he had lived all his life. His family history was very good, but one sister had recently died from phthisis. He had always been perfectly healthy except for typhoid fever which he had had nine years previously. He had never had any venereal disease and there was none in the family. In the beginning of May, 1903, he had a "feverish attack" and was laid up for a day or so, which he soon got over and resumed work. At the end of May whilst going to his work he was seized with sudden pain in the left leg and had to return home; he could hardly walk, the pain was so severe. He returned to work the next day and remained at it for three days, when the pain in his leg became so acute that he stayed at home and kept in bed with the foot raised. It was noticed at this time that there was a swelling in his leg; pulsation was not noticed till a week after its first appearance, when it had become slightly larger. The leg was swollen and painful.

On admission it was noted that the patient was a strong, healthy-looking lad, rather pale about the lips, and his voice was rather quavering. On the left leg, about two and a half inches below the head of the fibula on the postero-external surface, there was a hard, tense swelling of about the size of a fowl's egg. The skin was not adherent or reddened; it was slightly painful. The swelling was deeply situated, not moveable, and elongated. There was a distinct expansile pulsation. On compressing the popliteal artery pulsation was lessened, but there was no decrease in size; on releasing the artery the swelling regained its maximum pulsation in three or four beats. There was loss of pulsation in both anterior and posterior tibial arteries in the foot; the left ankle was somewhat swollen. The left leg measured 11½ inches and the right 10½ inches. The knee-joint was normal and there was no pain on flexion. There were no enlarged glands on the left side, but there were a few in the right groin. On examining his heart the impulse was in the fifth space just internal to the nipple line. Dulness extended to the second costal cartilage and to the right edge of the sternum. There were a loud presystolic bruit and a systolic murmur traceable to the angle of the scapula. On impulse there were an accentuated pulmonary second sound, a loud diastolic bruit in the aortic region, and a faint systolic bruit. The liver was not palpable; dulness did not extend below the margin of the ribs. The spleen was distinctly enlarged, coming down three and a half inches on *deep expiration.* It was not tender on palpation. The pulse was regular, of good volume, but rather dicrotic. The urine was of specific gravity 1008 and had no abnormal constituents. The left leg was raised to about 45° on pillows and kept at rest by sand-bags. On June 25th it was noted that the swelling had become more posterior, but its size and pulsation were the same as on admission. On the 28th there had been an intermittent pyrexia running up to 99° or 100° F. since admission. Treatment of the aneurysm was conducted [illegible] bandage applied firmly [illegible] r it, and ending at the r [illegible] ed every other day for about half an hour, when it became so painful that it was removed. On July 15th the patient became very anæmic; his pulse was decidedly water-hammer in type. On auscultation the systolic bruit in the aortic region was much more marked. The aneurysm had become much smaller, the pulsation was lessened, and it was situated nearly in the centre of the calf. On August 16th the patient complained of pain in the right hypochondriac region; his temperature had remained normal since July 15th. On August 17th the patient was seized with *sudden* pa[illegible] his dinner. He [illegible] dyspnœa then c[illegible] relief by sitting up and bending forward till his head rested on the bed. His pulse was 110 and his respirations were 30. He was given brandy. At 4 P.M. his temperature was 95°; the dyspnœa remained the same. He was given strychnine hypodermically and oxygen inhalation. On the 18th he dozed off and on during the night and he died at 3 P.M.

Necropsy.—On dissecting out the swelling in the left leg it was found to be a small saccular aneurysm of the peroneal artery, the deep fascia of the leg being tightly stretched over it. There was one pint of clear yellowish fluid in the left side of the chest and three-quarters of a pint in the right side. Both lungs were œdematous. No infarct was found in the lungs. With regard to the heart, the right ventricle was slightly hypertrophied; the rest of the right side was quite healthy. The left auricle was normal in appearance. There were numerous small vegetations on the mitral valves; the valves were thickened and distorted; the chordæ tendineæ in many places were missing; there was a small patch of ulceration on the left side. The left ventricle was enormously hypertrophied and dilated; the muscle was pale in colour and measured half an inch across. As to the aortic valve, on the right cusp there was a large fungating vegetation of about the size of a sixpenny piece; on the central cusp there were three small perforations; on the left cusp there was a patch of erosion and there was also erosion on the surface of the aorta corresponding to it. In the left kidney one large infarct was found and there were numerous smaller ones, giving rise to a "flea-bitten" appearance. The spleen was enlarged; its substance was very soft; at the upper end was a large cyst one inch in diameter which on being opened was found to be a suppurative hydatid. The liver was enlarged; in the right lobe were two large hydatid cysts containing daughter cysts and ordinary hydatid fluid. The rest of the viscera were healthy.

Remarks by Dr. MOIR.—The curious points about the case were the absence of all direct symptoms of the hydatid disease, as the enlarged spleen was accounted for clinically by the condition of the heart. During the whole time the patient was under observation he only complained of pain once which was in the epigastrium. Pressure in the splenic area seemed to cause no pain. The course of the case seems to have been, primarily, hydatid disease in his liver and spleen, the latter suppurating at the beginning of May (his "feverish attack"), and from this suppuration infective endocarditis was set up, which accounts for the rest of the symptoms. It was impossible to make a bacteriological examination of the various pathological lesions to see whether these were all due to the same organism.

ACTION FOR THE RECOVERY OF MEDICAL FEES.—At the Cardiff county-court on Sept. 30th Dr. Thomas Wallace of Cardiff sued the late proprietor of a Cardiff hotel for £27 for professional services rendered in 1901. Dr. Wallace had attended the defendant's housekeeper at the request of the defendant who had previously paid him for such attendance. The judge found for the plaintiff for the amount claimed with costs.

Reviews and Notices of Books.

Anleitung zur Durchführung bakteriologischer Untersuchungen für klinische diagnostische und hygienische Zwecke. (Guide to the Performance of Bacteriological Examinations for Clinical Diagnosis and Hygienic Work.) By Dr. LUDWIG KAMEN. Vienna: Josef Šafář. 1903 Royal 8vo. Pp. 311, with 12 plates and 118 figures in the text. Price, marks 8 40.

THIS is a useful, if rather voluminous, note-book which outlines the course in practical bacteriology at the Military School in Vienna and is intended for use at the bench. Following a short historical survey which serves as an introduction, the bulk of the book is divided into two nearly equal parts. The first, which comprises 135 pages, is devoted to matters of technique; the second, of 154 pages, deals with the chief specific bacteria considered in relation to the diseases with which they are associated. The first part is fairly full and comprehensive and opens with a short description of the morphology of bacteria in general and their structure, both physical and chemical. Next their growth and reproduction are considered and their biological activities and the end-products of their metabolism are described in a clear and concise manner. In this connexion the author gives an interesting table of the results obtained from acid- and alkali-forming bacteria grown in Petruschky's neutral litmus whey, showing the extent of the reaction in terms of normal alkali and acid respectively—bacillus typhosus, for example, forming from 2 to 3 per cent. of acid, whilst the bacillus pyocyaneus produces from 8 to 9 per cent. of alkali. Another table shows the result of the fermentative action of various micro-organisms upon certain specified compounds. Immunity and cognate subjects such as agglutination and hæmolysis are briefly, but at the same time sufficiently, discussed. Chapters III. and IV. are devoted to a consideration of microscopical optics and the microscope itself, together with accessory apparatus—the author, of course, remaining faithful to the instruments of Zeiss and Richert. The next seven chapters deal with technique proper and review in turn the methods of sterilisation, microscopical methods for the demonstration of bacteria, the artificial cultivation of micro-organisms, the immunisation of animals, and the preparation of toxins.

Many of the methods described and recommended will no doubt appear old-fashioned and out of date to the English or American bacteriologist; for instance, the directions given many years ago by Löffler for the preparation of nutrient broth are closely followed, as will be seen from this passage: "The faintly acid broth should be neutralised by the addition, drop by drop, of a concentrated solution of sodium carbonate, or better still made faintly alkaline"; while the author recommends the use of Unna's steam filter for the rapid filtration of agar. The ordinary methods of cultivation on plates and in tubes are well set out, but the useful "shake" culture is not even referred to. The section dealing with experiments on animals leaves much to be desired; the recommendation of Strohschein's syringe for inoculation purposes, for instance, will hardly meet with universal approval, while the directions for the immunisation of animals are practically valueless. In the illustrative example—that of the immunisation of the guinea-pig against cholera—the rule-of-thumb method given of inoculating the animal every eight or ten days is distinctly less efficacious and less scientific than that which regulates the intervals between the injections by the fluctuations of the "agglutination value" of the serum, but which is not even mentioned.

In the special portion of the book Enteric Fever is treated rather fully, considerable space being taken up by methods for the isolation of the bacillus typhosus, the most recent of these, that of Drigalski and Conradi, receiving due attention. In this connexion we note that in his description of the preparation of the nutrose-agar medium the author totally disregards the fact that in the filtration of agar a certain amount of the medium is invariably lost, so that the percentage composition of the finished medium as described by him varies considerably from that suggested by Drigalski and Conradi. Fig. 88, too, which represents the L-shaped glass rod employed in spreading the plates, shows the point turned up and rounded off in a manner that would effectually prevent the successful manipulation of the plates. Cholera is also fully dealt with but the other microbial diseases are dismissed very shortly. An appendix is included which contains directions for the bacteriological examination of water, air, soil, and milk. This is certainly the least satisfactory portion of the book, the methods quoted being antiquated and from the point of view of bacteriologists, in this country at least, totally inadequate. 12 plates at the end of the book display some 76 splendid photo-micrographs of pathogenic bacteria, malarial parasites, and anopheletes in various stages.

Hernia, its Etiology, Symptoms, and Treatment. By W. MCADAM ECCLES, M.S. Lond., F.R.C.S. Eng., Assistant Surgeon to St. Bartholomew's Hospital, &c. Second edition. London: Baillière, Tindall, and Cox. 1903. 7*s.* 6*d.* net.

THE average student of medicine knows comparatively little about trusses when he passes his final examination; he can, perhaps, distinguish between a truss for a femoral and one for an inguinal hernia, but to measure a patient accurately for a truss and to be sure that it fits, or if it does not fit to know what is wrong with it, would oftentimes prove too much for him. Though it is fairly easy to apply a truss to an ordinary case of hernia, yet much knowledge and skill are required when any unusual conditions are present. To all medical men who have to deal with such cases this little treatise by Mr. McAdam Eccles should prove very useful. It is elaborately illustrated with representations of herniæ and the forms of truss suited for them. All the chief operations for the radical cure of hernia are also described. An adequate account is given of all the varieties of hernia as well as of the treatment suitable for each. The work contains 100 illustrations, nearly all reproduced from photographs, and these certainly are very good. A very useful chapter is that dealing with Hernia in its Relation to Life Assurance, Accident Assurance, and the Public Services. On the whole, the author thinks that a hernia which is readily reducible and readily controlled by a truss should not constitute a reason for extra rating. Though in no way intended to be an exhaustive treatise on hernia, yet this volume supplies information much needed in practice and not readily obtainable elsewhere.

Die Krankheiten des Kehlkopfes und der Luftröhre, mit Einschluss der Laryngoskopie und Lokal Therapeutischen Technik, fur Praktische Aerzte und Studierende (Diseases of the Larynx and the Trachea, including Laryngoscopy and Local Therapeutic Technique, for Physicians and Students) By Dr. PHILIPP SCHECH, Professor at the University of Munich. Second thoroughly revised and enlarged edition. With 340 Plates and 89 Illustrations Leipsic and Vienna: Franz Deuticke. 1903. Price 7 marks.

Professor Schech's previous edition, which has been recognised as a standard work on laryngology, has been most thoroughly revised and the book now includes all the latest German work, though it will be noticed that but little reference is made to literature not written either by Germans or in the German language. The chapter on General Diagnosis and Therapy forms an excellent criterion for the rest of the work. It is not a compilation including all the remedies and methods of treatment at the disposal of the laryngologist but contains a careful description of all those of acknowledged merit. Every disease of the larynx is discussed and, where considered advisable, illustrations are added. The question of diagnosis between diseases difficult to distinguish one from the other, such as tubercle, syphilis, new growth and lupus, is entered into very carefully. If we are unable to say that there is very much that is new, we are merely stating generally the fact that, with the exception of some progress in the treatment of laryngeal tuberculosis and the research into the etiology of paralyses of the laryngeal nerves, especially the recurrent, the science of laryngology is to a certain extent stationary. The various theories of recurrent paralysis are considered and treated in a very lucid manner. As we have already intimated, Professor Schech's work occupies a high position amongst treatises on laryngology and will be found to be of great service both as a work of reference and as a guide for physicians and students.

Die Krankheiten der Oberen Luftwege. Zweiter Theil. *Die Krankheiten des Rachens. (Diseases of the Upper Air-Passages.* Second Part: *Diseases of the Naso-Pharynx.)* By Professor Dr. OTTOKAR CHIARI, Principal of the Clinic for Diseases of the Throat and Nose at the Imperial University at Vienna. With 118 Illustrations and 1 Plate. Leipsic and Vienna: Franz Deuticke. 1903. Pp. 260. Price 8 marks.

THE first two chapters of this part of Professor Chiari's work are devoted to the anatomy and physiology of the naso-pharynx. The next discusses the general pathology of this region in relation to interference with its functions, including interference with resonance, the effects of disease on articulation, interference with the ingestion of food in relation to diseases of the pharynx, and the neuroses of the palate, in what the author considers especially the globus hystericus, clonic spasm and ataxic affections of the palate, the remainder of the chapter being devoted to anomalies of secretion and of sensation, interference with the sense of taste, and vaso-motor diseases. Local treatment is described with the greatest attention to detail and is of an essentially practical character, the various remedies required and instruments used being dealt with at considerable length. The remainder of the work is chiefly confined to a discussion of the various diseases, their symptoms and pathology. The great knowledge that Professor Chiari has obtained from his long study of diseases of the upper air-passages makes the section of his work at present under consideration of the greatest value. He does not subdivide the affections of the faucial tonsil with the same minuteness as is customary amongst our French colleagues, but in contra-distinction to this those diseases of the naso-pharynx which do not accompany or follow the exanthemata, such as herpes, aphthæ, and other affections of the mucous membrane, as well as the various lichens and urticarias, are very fully considered, as are also the new growths and their treatment. The work is of the highest order throughout and being the outcome of long experience will prove of great value to all students who are especially interested in naso-pharyngeal surgery. The illustrations, although frequently reproduced from other works, are of the same high standard as the rest of the book.

The Five Nations. By RUDYARD KIPLING. London: Methuen and Co. 1903. Pp. 215. Price 6*s.*

A NEW volume by Mr. Kipling is always a source of pleasurable excitement to the reader who opens it for the first time and this collection contains some of his best work. Many of the poems show the writer's wonderful faculty for land- or sea-scape painting in words. Take, for instance, the poem "White Horses," or "The Sea and the Hills," or "Sussex," or, above all, "Bridge Guard in the Karroo," with its wonderful picture of sunset in a mountain-encircled desert.

"[illegible]

Royal the pageant closes,
 Lit by the last of the sun—
Opal and ash-of roses,
 Cinnamon, umber, and dun."

All who, like so many of our readers, have been in a like country will have it all brought back to them as they read. The poem which naturally appeals to us most from a medical point of view is the "Dirge of Dead Sisters" which is, indeed, a threnody worthy of its subject. Here are two stanzas:—

"[illegible]
 [illegible] …lowness,
 [illegible]

We are amused to think that Mr. Kipling is acquainted with the works of a remarkable poet who belonged to our own profession—namely, Dr. Thomas Holley Chivers, a passage from whose work, "Eonchs of Ruby" (this is not a misprint), is, surely, embodied in "Files." Not many medical men have been poets of any kind, but Chivers, although he wrote an infinity of verses which were all sound and no sense, occasionally produced a really fine line. But if he obtains immortality it will be from his having been referred to by Kipling and not on account of this sort of thing from "Virginalia":—

"More coy than the wild goldfinches
 When they hunt for the butterfly,
Which the dew of the morning quenches
 In the psychical month July,
Like an opaline dove's neck chiming
 Cherubic beauty for me
W[illegible]
[illegible]
O [illegible]"

Mr. Kipling's "Files" has a strong suggestion of Poe's "Bells," and the above quotation from Chivers shows that Poe derived models as well as amusement from the works of Chivers, which, indeed, he criticised in an essay that is extant. So that there is an hereditary sequence of events if Mr. Kipling has studied the works of Chivers, the unknown medical poet.

LIBRARY TABLE.

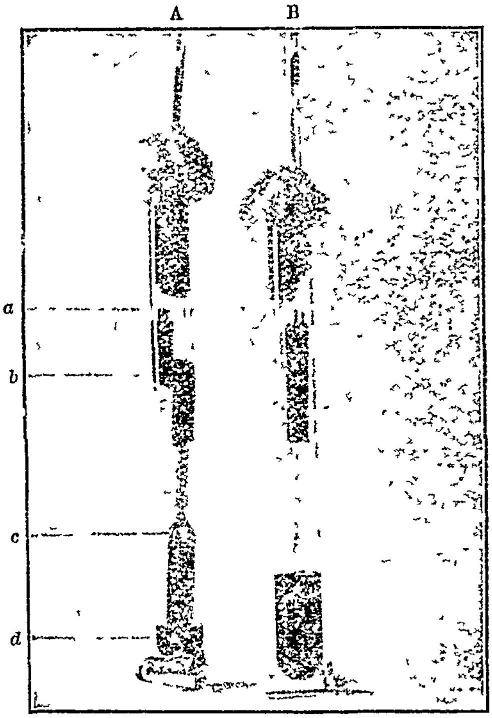
Literary Etiquette. By VICTOR G. PLARR, M.A. Oxon., Librarian of the Royal College of Surgeons of England. London: Adlard and Son. 1903.—Mr. Victor Plarr's little pamphlet says a great deal within the compass of its 15 pages. While stating that the old robust piracy of literary property is generally obsolete, he points out that in many matters literary ethics require improvement. In particular Mr. Plarr is interesting on the subject of literary ghosts. "If you employ a hack writer to make, say, a translation for you, come to an agreement with him on paper before he begins his work. ...... A man does not cease to have a literary reputation because you employ him. ...... Never trade upon your employé's modesty, or his belief in your integrity, or his unbusiness-like methods." Is the use of assistants, then, so wide-spread among authors as to require a code for its regulation? The unbusiness-like behaviour of editors comes in for the usual criticism and the one concrete example of editorial villainy requires a word or two of comment. "An editor," says Mr. Plarr, "has no *right* to order an article and then to return it unused after a long lapse of time accompanied by the customary printed formula of rejection." Granted; but how often is this behaviour dictated by kindness? The article is ordered and it is not exactly what is required; it is too long, it is too short, for half a dozen reasons it will not quite suit the needs of the paper. The simplest thing the editor can do is to send it back by return of post with a few words of rejection, explaining that although an article was ordered the one that has been received is of no use. But a kind-hearted editor thinks that perhaps, sooner or later, he may be able to use the article, or some of it, or may have time to revise it himself or to advise the author how to alter it. And so he keeps the article by him until a letter from the author, often a peremptory one—and we do not say that the peremptoriness is unjustifiable—demands from him an account of his stewardship. This is often the explanation of Mr. Plarr's story: these things are not always done out of naked wickedness.

A Handbook of the Diseases of the Eye and their Treatment. By HENRY R. SWANZY, F.R.C.S. Irel. Eighth edition, with Illustrations. London: H. K. Lewis. 1903. Pp. xx.+678. Post octavo. Price 12*s.* 6*d.*—This work is one of the best of the numerous manuals on ophthalmology that have appeared of late years and the numerous editions that have been published are sufficient evidence of the esteem in which it is held. The descriptions of disease are clear and good, the illustrations are excellent, and the paper and type are unexceptionable. The author has introduced many facts that have either been recently ascertained to be supported on good evidence or which serve to elucidate those which are generally accepted. Most of the additions are duly set forth in the preface; amongst the more important of these are a description of conjunctivitis petrificans and of various forms of keratitis to which special names have lately been applied, a description of the eye symptoms in myasthenia gravis, an account of P. M. Maxwell's operation for shrunken socket, and one of Professor Krönlein's temporary resection of the outer wall of the orbit for the removal of orbital tumours. Many of the chapters have been extended and the work has generally been brought well up to date. The sections on the diseases of, and operations on, the eyelids and upon the diseases of the lacrymal apparatus are particularly complete. For the relief of ptosis many operations have been devised. Mr. Swanzy describes Mules's, Pagenstecher's, Panas's, Everbusch's, and Hugo Wolff's methods, the account in each instance being accompanied by illustrations in the text which enable the steps of the operation readily to be understood.

New Inventions.

A TUBE FOR THE CULTIVATION OF ANAEROBIC ORGANISMS IN FLUID MEDIA.

IN the *Centralblatt für Bakteriologie*, vol. xxvii., p. 74, Professor J. H. Wright of Boston described a simple method of cultivating anaerobic organisms in glucose bouillon by means of an apparatus like that shown in the illustration. It consists of a piece of indiarubber tubing three inches long, uniting below with a glass bulb and above with an ordinary piece of glass tubing. The bouillon, after inoculation, is sucked up to just past the upper limit of the indiarubber, the upper glass tube is then pushed downwards with a little twist so as to cause a double angle in the indiarubber, and a column of liquid freed from the atmosphere is thus obtained for any anaerobic bacteria to grow in it. The present slight modification is in regard to the upper glass tubing, which is made longer and narrowed a little at one point so as to admit a small wool plug at the top. The whole test-tube can thus, after the usual sterilisation, be kept indefinitely, requiring only a short boiling and cooling just before use This method has answered admirably and besides the simple construction it has the advantage of doing away with the hydrogen apparatus, of showing any formation of gas in the inner column, and of differentiating a facultative from an obligatory anaerobe in the same specimen. Wright's ingenious plan seems to have escaped attention and my chief purpose in bringing this modification forward is to emphasise its simplicity and utility in growing anaerobic organisms in fluid media

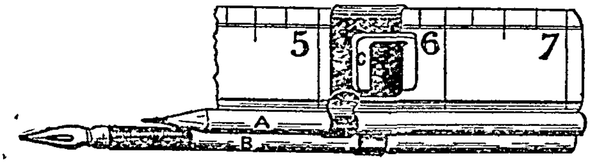


A, The tube after inoculation, and B, before use *a*, Upper limit of liquid *b*, Bend in the indiarubber *c*, Inner column, anaerobic. *d*, Outer column, aerobic

Gnoh Lean Tuck, M B , B C Cantab.,
Research Student, Emmanuel College, Cambridge.

A PEN AND PENCIL CLIP.

The accompanying illustration explains itself It depicts a main clip which embraces a graduated ruler and three smaller clips carrying respectively: (A) a pencil; (B) a penholder; and (C) a piece of indiarubber. The clip is the invention of Mr. J. Clark, F.R G S., headmaster of the Boys' Department of the Clay Cross Board School. The idea is that every boy will be able to keep separately for himself his own working utensils and so that a somewhat overlooked cause of infection will be avoided. It is, for example, not an unknown habit among board school boys—and for that matter among the boys of our famous public schools—to chew the end of the pen or pencil.



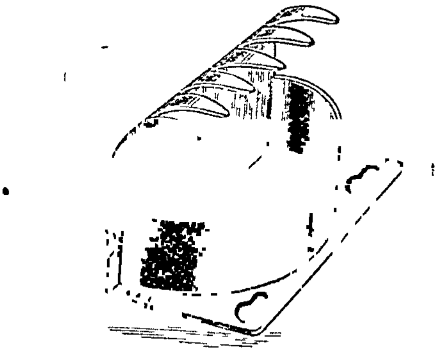
CLEANLINESS IN "GAS BAGS."

When during the course of the administration of nitrous oxide any "to-and-fro" breathing from the bag is allowed—and such a proceeding is often of advantage—it is obvious that a very thorough cleansing of the interior of the bag is essential if hygienic demands are to be properly observed. The most usual mode of obtaining cleanliness properly is to immerse the bag in hot water and to allow this to flow freely into the interior of the bag through the open vulcanite tap which is detached from the tube leading to the cylinders and, no doubt, the bag can be fairly cleaned in this manner after every administration. A much more efficient cleansing, however, is possible when the bag can be turned inside out. Mr. Vernon Knowles of Reading has contrived a bag of this description and in a recent issue[1] we gave an illustration of his apparatus. The process of turning the bag inside out takes certainly a little extra time, but this is more than compensated by the additional certainty of cleanliness, and the material of the bag is undamaged by boiling. Mr. Knowles's bag was first intended for use with ethyl chloride and similar anæsthetics, but since our notice of it in this capacity it has been adapted to the employment of nitrous oxide. The "reversible gas bags" may be obtained from the Dental Manufacturing Company in Lexington-street, London, W.

A WOOL TIDY.

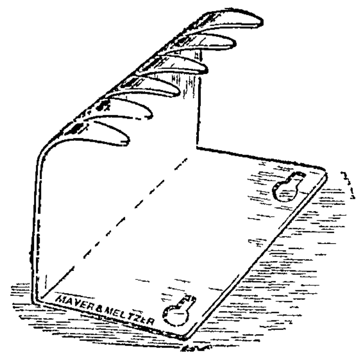
This instrument consists of a serrated scraper or rake for the easy removal of cotton wool from probes, forceps, &c. It is firmly secured to the table by means of screws which pass through slots in the foot-plate but it is readily detachable. The wool is easily removed with one hand only by simply dragging the applicator firmly through one of the clefts with a slight rotatory movement, a difficult feat with the usual metal box which, owing to its unsteadiness, demands the use of both hands. It is made by Messrs. Mayer and Meltzer in two forms, with and without a well which is detachable for sterilising purposes Although specially designed for aural and nasal work it will be found equally serviceable in dental and other work which requires the use of wads for cleansing and escharotic treatment. When fixed the teeth should point away from the operator

Fig. 1.



Wool tidy with well.

Fig 2



Wool tidy without well.

V. H Wyatt Wingrave, M.D. Durh.
Devonshire street, W.

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[1] The Lancet, August 1st, p 323.

THE LANCET.

LONDON: SATURDAY, OCTOBER 10, 1903.

The Opening of the Medical Schools: Introductory Addresses.

THIS year the introductory addresses at the opening of the winter session at the various medical schools, both metropolitan and provincial, were of more than usual interest, because they were less reminiscent of the medical pedagogy to which for so many years we have been accustomed. In certain instances the opportunity was taken to impart to the neophyte in medicine salutary admonitions on the necessity for a proper and Hippocratic appreciation of his future responsibilities, and this, we think, is a rightful use of the occasion on which introductory addresses are delivered. Similarly Sir DYCE DUCKWORTH's address to the students of the Medical Faculty of the University of Liverpool inculcated a very proper spirit. This address we published in full last week. As a whole, however, the addresses, apparently infected with the prevailing epidemic of Imperial expansion, took a more ambitious view of their objective and dealt with matters of national, if not of cosmopolitan, importance. Particularly so was this the case in the instance of the address delivered to the students of King's College Hospital by Sir JOHN A. COCKBURN and of the address delivered to the students of St. Mary's Hospital by Mr. V. WARREN LOW. Sir JOHN COCKBURN in an interesting manner pointed out the analogies between the development of empire and the organic evolution of individuals. Mr. LOW took as his subject the relationship of the military medical service to the civil profession and outlined a scheme for preventing the confusion, mismanagement, overlapping of duties, and general condition of unpreparedness which distinguished all departments of the medical service in the recent war in South Africa. The main principles which were advocated in Mr. LOW'S scheme were as follows: (1) organisation with the Royal Army Medical Corps as a framework; (2) for the medical reserve officer temporary rank equivalent to that of the regular service; (3) annual registration and payment while on duty; (4) graduation according to civil standing; and (5) appointments to definite army corps and if possible to definite units. The experiences of the late war brought to light many anomalies of administration and many personal grievances, especially in the relationship between the regulars and the volunteer civilians. The scheme which Mr. LOW'S personal experience in South Africa has enabled him to indicate deserves the consideration of the proper authorities. It is a clear, well-considered, and suggestive proposal for the organisation of a civilian medical reserve for the military medical services.

At the Yorkshire College, Leeds, Professor SCHÄFER, in eagerly pressing for reforms in our methods of education, touched upon another subject of the first Imperial importance. He congratulated the College on its newly granted charter and on its limitless opportunities for working out its own destiny on new and improved lines unhampered by the fetters of hide-bound traditions. He insisted on the superior advantages of practical work in the laboratories and of practical demonstration in the wards, as compared with the benefits to be derived from the attendance at lectures. The pertinence of this remark is self-evident when we realise that in these days of good text-books certain lectures have lost their *raison d'être* as instruments of education, a point upon which we recently enlarged in a leading article. Professor SCHÄFER strongly advocated the relegation of the study of most of the preliminary scientific subjects to that period of the educational curriculum which is antecedent to joining the medical school. We think that every year this becomes the more usual order of procedure and elementary chemistry, physics, and biology are now more often than not studied at school by those who intend eventually to take up the profession of medicine. A further suggestion on the part of the lecturer was that candidates for a medical diploma or degree should have at least the option of offering themselves for examination in the various subjects separately, as far as possible immediately after the courses in these several subjects were completed. This method, as opposed to that of grouping several subjects together, has probably as much to be said against it as for it—indeed, it lends encouragement to a system of cramming and superficial reading. If Professor SCHÄFER had the appointment of the examiners the plan might work, but the examiners who can distinguish between real knowledge and the appearance of knowledge that is lent by cramming are not numerous. As regards the sequence in which, according to Professor SCHÄFER, the various subjects should be taught in an up-to date and progressive medical school, such as that of the Yorkshire College aspires to be, we agree with his views; indeed, his scheme represents closely the method and order adopted in our metropolitan schools.

At the Charing Cross Hospital an interesting departure from conventional precedent was initiated by the invitation to Sir CHARLES WYNDHAM to deliver the opening address. The justification of this proceeding will be at once admitted by those who read the abbreviated report of his address which is reproduced in another part of our present issue. Although, to quote his own words, "his operations are now conducted in a theatre which is not strictly of a surgical character," nevertheless from a medical point of view, and by reason of the validity of his diplomas, there was nothing incongruous in this great actor divesting himself of his histrionic mask and addressing himself to a body of young students. Indeed, from his necessarily wide experience of worldly matters it is likely that his advice would carry at least as much weight in the estimation of his audience as would the words of any eminent physician or surgeon who, though occupying a high place in the medical profession, would probably possess a more limited and circumscribed knowledge of human affairs. Sir CHARLES WYNDHAM urged on his audience the necessity of showing moral courage in the conduct of their professional duties; "in this age," he added, "when the smaller vices are multiplying, each with its attendant nemesis of disease, have the courage to call things by their proper names; if a patient courts death or misery by drink, drugs, or vicious life, tell him so in the plainest terms. Do not disguise the truth by some euphemistic Greek phrase ending in 'itis.'" This advice is perfectly sound. There are cases known to all of us in which the patients may be intimidated into a fitting condition of submissiveness by the very verbosity of the high-sounding nomenclature which Sir CHARLES WYNDHAM deplores, but that is a small exception to the rule that plain speaking is generally the proper course. And plain speaking does not connote blunt rudeness and vulgarity. Our professional relationship with patients requires the exhibition of a quality—namely, tact—which can only be acquired by experience and by those only who have natural gifts for its acquisition. The example which Sir CHARLES WYNDHAM has set in making his introductory address an occasion for appealing to the humorous as well as to the serious instincts of his audience is one which is well worthy of being followed on similar occasions in the future.

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Accident or Disease? A Question in the Working of Compensation Acts.

THE Act dealing with compensation to workmen for accidental injuries suffered in the course of their employment, which came into force some five years ago, was calculated to be of considerable benefit to the labouring classes. This we allowed at the passing of the Act and an experience of its working since has confirmed this view. Certain trades and occupations have risks inseparable from the nature of the work which has to be undertaken and it is only just that the masters should be compelled to adopt every possible precaution for the safety of the men in their employ. A widespread system of insurance enables them to do so without imposing upon themselves, at any rate in most cases and with ordinary circumspection, an undue burden. But although the Act seems to have worked well hitherto there are not wanting indications that it is possible for the law to be subjected to serious attempts at abuse and if this be so amendment must be attempted. It is a curious fact that the classes in which are included operatives and labourers are prone to misuse the laws made for their benefit. They love to apply these to purposes for which they were never intended. Trade unions are a striking example of this statement. Originally they were regarded as illegal combinations, but they obtained legal recognition on the understanding that they were necessary to prevent tyranny on the part of the employers of labour. It is certain that they have done this and have led to the amelioration in many respects of the conditions under which certain trades are carried on, but the trade unions have on occasions been perverted to obstructive tactics with the most pernicious effects on the commerce of the country. The details of the Taff Vale case sufficiently prove the mischief that may be done by a trade union working improperly.

The peril which menaces the benefits conferred by the Workmen's Compensation Act has not yet made much appearance in England but two instances of possible abuse under similar legislation in France have been recently referred to by our Paris correspondent.[1] In both cases an attempt was made to include improperly under the term "accident" an illness or disease contracted by a workman during his employment. In the first instance a worker in a glass factory contracted syphilis through using a blow-pipe which it was alleged had been infected by one of his fellow labourers. He thereupon demanded damages from his employers and brought the matter before the courts. The judge nonsuited the plaintiff on the ground that he had adduced no proof that syphilis had been contracted in the manner alleged, while a further proof of the weakness of the case lay in the fact that his fellow workman was examined medically and showed no trace of syphilis. In the second case a railway porter referred a pulmonary hæmorrhage to the strain of lifting a trunk which was too heavy for him. At the time of the so-called accident he presented no signs of pulmonary tuberculosis but the disease manifested itself within a short period and he accordingly, with the advice of his medical attendant, sued the railway company for damages. The railway company, dreading a case against it which might in the future be used as a precedent, preferred to compromise the matter by paying the plaintiff a sum of money. It seems to us a matter of regret that this course of action was adopted, as it lays the railway company and similar bodies open to claims of this sort in the future, a development which would lead to action on the part of employers of labour of a sort which could not fail to be irksome to the employed classes. Labour agitators would, we think, have no difficulty in inducing the employed to believe that such actions at law as those to which we have alluded are for their benefit. We trust, however, that no attempts in this direction will be made, as disastrous results would be likely to follow. If the workman who claimed compensation from his employers because he had contracted syphilis from a fellow workman had proved successful in his case the employers would have been perfectly justified in discharging every man on their wage-roll who showed signs of syphilis. And as the individual infected with syphilis will often, and naturally, deny ever having had the disease a further step might be expected—namely, refusal of employment to any man having a cutaneous eruption in case it should be of a syphilitic nature. With respect to tuberculosis a similar course of action would be justified if such a symptom as pulmonary hæmorrhage were held to be an accident within the meaning of the Workmen's Compensation Act. Not only would the unfortunate victims of the disease suffer by being discharged from their work but any man or woman who developed a cough would run the risk of dismissal on the plea that "consumption might be developing."

We need not enter into the many questions which have arisen in respect of the measure of the infectivity of tuberculosis; suffice it to say that if due precautions are taken the risk of infection is reduced to a very small one. If an employé is known to be tuberculous it is the duty of the employer to see, as far as possible, that all means are adopted to prevent the sufferer from becoming a danger to his fellows. Instructions should be given both to him and to them and then if the injunctions are persistently or wilfully neglected dismissal of the disobedient would be justified. But an employer is not necessarily supposed to be aware whether those under him are afflicted with syphilis, tuberculosis, or any other constitutional complaint. The symptoms of these diseases and of others which to some extent are communicable by man to man are varied and uncertain, and it would be unjust without careful inquiry into the master's knowledge of the state of affairs that he should be mulcted in damages because one workman might infect another. The Workmen's Compensation Act did not contemplate such a position and no such intercommunication of disease can be regarded as an accident for which compensation is due. It is suggested by our Paris correspondent that lead workers and the employed in similar trades intend to try the question legally whether poisoning as the results of their work can be considered as an "accident" compensation for which must be paid by the masters. We have every sympathy with workers in dangerous trades who fairly expect, and ought to receive, a high rate of remuneration, but to mix up disease with accident as concomitants of labour must lead to confusion and to injustice. The private life of the workman may predispose him to the malignant effects of the poison of syphilis or alcoholism, but if a breakdown in health should occur in such individuals it cannot be regarded as an accident. Still less can a mischance to one of their fellow workmen arising out of a fellow workman's condition be regarded as an accident for which the employer must pay compensation. Where would such a state of things end if once such a theory of "accident" were admitted? Defective social surroundings, speaking in the most general terms, undoubtedly constitute a danger to the health of the workman and may conduce to his breakdown while he is a wage-earner, but such occurrences, though very tragic, cannot be laid at the door of the masters. Certain *risks* must be taken in all classes of life and it would be equally foolish for a medical practitioner to claim damages from a patient from whom he had contracted an infectious disease, such as scarlet fever, as it would be for a workman in lead or phosphorus to consider lead or phosphorus poisoning as an "accident." The risk of the employment must be considered in the wages and the employés must be made to minimise these risks as much as possible, but the Workmen's Compensation Act was meant to meet cases of genuine accidents.

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[1] THE LANCET, Sept. 19th, 1903, p. 854.

Quackery and Death.

THE Manchester city coroner, Mr. E. A. GIBSON, recently concluded an inquest in which he investigated with commendable thoroughness the causes responsible for the death of a child. The outline of the facts which were brought to light may be given in very few words, as the story is referred to in detail by our Manchester Correspondent this week. The deceased was taken ill, or was observed by the parents to be ill, on a Saturday. No medical practitioner was summoned but a quack medicine called "Jackson's febrifuge" was administered by the father, because, as he said, it was well known and the neighbours advised him to try it. The child died on the following Monday and the coroner's jury found a verdict of "Death from natural causes." This was strictly correct, for medical evidence showed that the cause of death was broncho-pneumonia and death probably was not accelerated, as certainly it was not retarded, by the use of "Jackson's febrifuge." There is a delicate irony perhaps in recording as a death from "natural" causes the decease of a child left to die with no other assistance in the struggle for life than nature might afford, but there was no evidence which could render JACKSON directly responsible for the tragedy.

We quite recognise that there must be considerable difficulty in bringing home in these cases, which with trifling differences of detail are so common, the grave charge of manslaughter either against the quack medicine vendor, or against the parent who uses fraudulent concoctions upon his luckless children instead of asking the advice of a medical man. In some cases where medical aid is not summoned, the charge of neglecting to procure it, resulting as it does in causing a child unnecessary suffering, may secure the conviction and punishment of the parent, but these prosecutions, as a rule, take place in somewhat different circumstances. Our Manchester Correspondent also reports this week that a father, residing at Manchester, was recently sentenced to imprisonment because, being a disciple of the man DOWIE, he had recourse to prayer, and prayer only, on behalf of his child who was suffering from a broken collar-bone It can be contended that there is a difference between relying upon a quack's "febrifuge" recommended by a neighbour in a case of pneumonia and trusting to prayer and Providence when a collar-bone is found protruding through the skin. But the distinction is a theoretical rather than a practical one. In each case the child would suffer needless pain. The disciple of DOWIE may appear to most people to have treated his child with the greater callousness as the administrator of the quack potion can contend that in selecting JACKSON and his "febrifuge" he had exercised his right to choose his own medical adviser. Mr. ESTCOURT, the analyst of the city of Manchester, said in his evidence that he had made an analysis of the "febrifuge," and the following were the constituents, with their approximate quantities: chloride of ammonium, 4·0 grains per fluid ounce; chloride of potassium, 2·4; sulphate of potassium, 6·2; sulphate of sodium, 4·0; sugar, 10·4; ipecacuanha, (nearly) 2 0; camphor, (nearly) 1·0; cloves, ginger, liquorice, and probably rhubarb, 9·0; and chloroform, faint trace. The witness further said that the bottle he received in order to make his analysis contained four ounces and that the mixture was of such a complex nature as to render it impossible to estimate accurately the small quantities of some of the constituents present. He found no trace of any poisonous substance save chloroform in the medicine. A statement was made to the coroner by a solicitor representing the compounder of the "febrifuge" to the effect that it contained 14 active ingredients and three inactive. It was suggested that the chloroform would act as a preservative from decomposition and that it was there for that purpose only. The general correctness of the analysis was in no way disputed but JACKSON himself, before the adjournment for the purpose of analysis was made, had refused to say anything as to its composition beyond describing it as a herbal remedy. A pamphlet was produced in evidence which claimed for the concoction above described that it would cure about 30 specified diseases, including consumption, rheumatism, quinsy, and chicken-pox, or, as the coroner expressed it, "everything on the face of the earth." JACKSON went into the witness-box and showed himself there no less audacious than in his pamphlet. He boasted of selling thousands of gallons yearly, bandied words with the coroner who without mincing matters described the traffic in the "febrifuge" as a common swindle, and alluded to having given death certificates in 150 instances. Can it be a fact that registrars have accepted this man's official notifications of deaths and in such numbers? JACKSON'S qualification for carrying ont he business of a druggist consisted, according to his own evidence, in his having done so before the passing of the Pharmacy Act Amendment Act of 1868. He has therefore had a long career and no doubt a profitable one. Reference has been made to a sale of thousands of gallons; the precise figure given by JACKSON'S advocate showed that it amounted to 87,360 shilling bottles (2184 gallons) during last year.

In considering whether it is right that a traffic of this kind should go on unchecked it should be borne in mind that in the case under consideration the child died and that under medical treatment in all probability the child would have recovered. At all events the chance of recovery would have been afforded. Two questions further may be asked. Ought a parent to be able with impunity to allow his child needlessly to die simply because he administers somebody's cure-all pill or potion? And, secondly, Ought the pill or potion to be sold with impunity to ignorant people by means of pretences with regard to its powers which are provably false? The Manchester city coroner appears to have told the jury candidly with regard to JACKSON that he was an absolutely ignorant man and a quack and that it was perfectly scandalous that he should be allowed to do a business of the kind which he undoubtedly does. His words would refer equally to scores of persons who carry on a like traffic with like impunity, and the coroners who use plain language about such a condition of things do real good to the community.

Annotations.

"Ne quid nimis."

THE RECONSTRUCTED CABINET AND PUBLIC HEALTH.

THE changes which have recently taken place in the Cabinet have not obviously affected the position as regards public health administration, but the fact that Mr. Walter Long is apparently to remain at the Local Government Board is not without significance. The place at present occupied by the Local Government Board, which Sir Michael Foster has termed "the hierarchy of Government departments," is not such as to justify the indefinite retention of a Minister of Mr. Long's ability and record as its Parliamentary head, and were there not important changes in store for that department it might reasonably have been expected that Mr. Long would have been transported to one of those nominally more important posts which carry with them not only a substantially greater emolument but also the coveted title of Secretary of State. The fact that no such promotion has been made lends colour to the belief that the special committee which has been appointed to inquire into the working of certain Government departments, of which the Local Government Board is one, may see its way to recommend that the time has now arrived when the enormous expansion of local government throughout the country calls for a corresponding development in the central health department and for some strengthening of the position which its Parliamentary head occupies in the Cabinet. There are some who think that this development should take the shape of the creation of a Minister of Public Health, but we doubt if those who advocate this have a very clear conception of what is meant by this term or of the difficulties which beset its accomplishment. Public health is a part and parcel of our present system of local government and the first step to take is so to enhance the central department of that great system as to afford it a better chance of being adequately represented in the Cabinet. In our view this step will be likely to make for greater efficiency in the public health administration of this country than would the appointment of an isolated Minister of Health who would preside over a department which would be the youngest in the State and the representative of which, *if any*, in the Cabinet would occupy a relatively inferior position. Moreover, there is at present practically no prospect of the appointment of a Minister of Health with a seat in the Cabinet. If an *addition* is made to the Cabinet it will probably take the shape of a Minister of Commerce. But there is, we believe, a fair prospect of the elevation of the central health department to the dignity of a Secretaryship of State and every effort should be made by local governing bodies throughout the country, quite irrespectively of any political bias, to see that the status of the cause for which they labour is properly represented in the Cabinet. But we are far from contending that the medical department of the Local Government Board can be regarded as receiving at the present time the support or status which must be accorded to it if it is to continue to lead the public health administration of this country. In our view it should undergo very material expansion. It is a somewhat strange anomaly that the medical officership of the Local Government Board, a post which carries with it the duty of advising other Government departments in a manner which intimately concerns the development of preventive measures in the empire as a whole, should be accorded a remuneration smaller than that which is given to the medical officers of the Royal Navy or the Army Medical Department. It is strange, too, that the grant of £2000 per annum for scientific investigation which was, we believe, accorded to the central health department at a date prior to the passing of the Public Health Act of 1875 should still be regarded as adequate. No wonder that in these circumstances the research work done in Germany in matters relating to the public health has of recent years far outstripped the progress made in this country. If the State sets an example such as this it is somewhat difficult to find fault with the tardiness of local administrative bodies. Possibly the Treasury in failing to afford the Local Government Board a more adequate financial support has in mind the fate which in the year 1854 befell the little band of sanitary reformers which was led by the late Sir Edwin Chadwick. Possibly, too, that memory might still militate against the creation of a Ministry of Public Health. But circumstances have altered since Sir Edwin Chadwick's time and now in every sanitary area throughout the country there are at least some representatives of local government who would welcome a more vigorous central administrative action. If, therefore, the time is not yet ripe for a Ministry of Public Health there is at least need for some expansion of the public health services and a general coordination of its several branches

THE PISTOLS ACT

THE first case that has come before a magistrate under the Pistols Act, 1903, was heard by Mr Curtis Bennett recently as the result of a young man accidentally shooting a tobacconist who was serving him It was found by the police that the pistol used upon this occasion had been lent to the person carrying it by the owner, a youth under 18 years of age, and that he had bought it from a man trading in the Edgware road, who had committed two offences under the new Act—in selling without observing the formalities prescribed by the new Act and also in selling at all to a youth under 18 years of age The seller of the pistol pleaded complete ignorance of the Act which only came into force on August 11th very shortly before the sale in question took place He was accordingly bound over to come up for judgment when called upon under the first summons and under the second was fined 5s with 2s costs The youth who bought the pistol was also summoned and bound over and the person who was carrying it without a licence and whose careless handling of it had injured the tobacconist was fined These two, also, were ignorant of the provisions of the law In the columns of THE LANCET we have very frequently called attention to the serious danger to life and limb arising from the unrestricted sale of cheap firearms to irresponsible, ignorant, or ill intentioned people and it is satisfactory to note that in an instance such as this two out of the three persons involved could be dealt with under the Act which has recently come into force and that the third, owing to the attention called to his conduct, was punished under the previously existing law The Pistols Act of 1903 has been considerably improved since its first appearance in the shape of a Bill and though it may easily become inoperative if there is any want of system and care in enforcing it, it is quite capable of achieving the results at which its promoters have aimed and of putting an end to a very dangerous trade The Act makes it unlawful to sell or to let a pistol to anyone not producing a gun or game licence, unless he be entitled to carry a gun without having such licence or being a householder intends only to use the weapon in his house or curtilage, or is a person who requires it for use abroad. Every person selling or letting a pistol is to enter the transaction in a book with full particulars of the weapon, of the name and address of the purchaser or hirer, and of the gun or game licence produced by him, and this book is to be open to the inspection of any police officer or officer of Inland Revenue No one under the age of 18 years, except those exempt from penalties for carrying a gun without a licence, is to be allowed to buy, to hire, to use or to carry a pistol and any such person may be ordered by a magistrate to forfeit any pistol found in his possession Fines ranging up to £5 may be imposed for the infringement of these provisions but for knowingly selling to a person intoxicated or not of sound mind a penalty of £25 may be inflicted or a term of imprisonment with hard labour not exceeding three months The Act does not apply to Ireland It will be seen from this summary that should the police and the Inland Revenue but particularly the former, exercise vigilance in the matter the selling of revolvers as cheap toys in shops and the promiscuous brandishing of them by boys in the streets should entirely cease The love lorn youth with ill balanced mind who has hitherto experienced no difficulty in shooting his sweetheart and then himself should also find time for reflection during the preliminaries necessary to the fulfilment of his purpose, even if the difficulties put in his way do not altogether prevent him from carrying it out The more sane and deliberate criminal may not be affected but the use of the pistol by criminals may be said in general to vary in inverse proportion to their sanity It is to those reckless of the penalty attaching to murder that it has generally proved attractive It may be suggested that the police should take steps throughout the country in order that no one dealing in cheap pistols should be able to plead ignorance of the law It is not a plea that will excuse him but it may be taken into account by the bench which tries him The official printers, who in London are Messrs Eyre and Spottiswoode, East Harding street, E.C , sell the Act at 4d a copy, so that even the hooligan of less than 18 years of age may easily possess a copy should he desire to do so

NEED SMOKE BE "BLACK" TO CONSTITUTE AN OFFENCE?

IN the report of the medical officer of health of the City of London for the nine weeks ending on Sept 12th, 1903 we are glad to note that the authorities are keeping an active watch over those who have no regard for the purity of the air and its freedom from filthy smoke A list of offenders is given and the medical officer has recommended that notices should be served upon the owners or occupiers of the premises named to abate the nuisance and to do what is necessary for preventing a recurrence of the evil, "failing which Mr Solicitor be instructed to take such proceedings as he may consider necessary to enforce your (i e , the sanitary committee's) orders " In ten other cases in which the names and addresses are also given the evidence obtained is at present insufficient to warrant active interference Whilst we admit that a good deal has been done towards suppressing the smoke nuisance, yet there is still, we think, plenty of opportunity for other authorities to instruct "Mr Solicitor to take proceedings" elsewhere According to our observations the offenders are chiefly occupiers of restaurants and dining-rooms It is regrettable, we think, that in Section 24 (b) in the Public Health (London) Act the word "black" as applied to offensive smoke is retained There is abundance of smoke given off by chimneys in London which is not black yet which is an intolerable nuisance As Dr W. Collingridge says "Many complaints are received of smoke nuisances which we are unable at present to deal with by reason of the fact that the smoke emitted—although intolerably objectionable—is not black, but of some less pronounced tint as yellow or brown On occasions we get complaints of nuisance from even white smoke " We may add that we have experienced a blue smoke that was very objectionable We heartily agree therefore with the Westminster City Council and the Corporation of London that the word "black" should be deleted from that section of the Public Health Act dealing with the smoke nuisance

ADDITIONAL OBSERVATIONS UPON TENT LIFE FOR THE TUBERCULOUS INSANE

SINCE the last report on tent life for the tuberculous insane by Dr A E Macdonald, medical superintendent of the Manhattan State Hospital for the Insane, a matter which was dealt with in a leading article in THE LANCET of May 2nd last, p 1249 a further report has been issued on the subject by Dr A B Wright and Dr C Floyd Haviland, both resident assistant physicians of the asylum The report deals with new developments and recent departures in regard to the treatment of the patients The camp for tuberculous patients has been enlarged and a separate tent has been provided for the accommodation of the more active patients and those suffering from mixed infections In general the isolation of the tuberculous patients has been made more complete as in no circumstances are they permitted to mingle with non tuberculous patients This enforced isolation is bearing fruit in the lessened number of cases diagnosed in the wards of the hospital. Encouraged by previous success it was determined to carry on the camp in its entirety during the winter 1902-03 and the same successful results have characterised this effort as marked the camp treatment during the summer months. In addition to the two large tents used previously a third large tent was erected on the present occasion. This contained no beds but was partitioned by screens into a dining room and a living room for such patients as were not confined to bed. For it was found that only the large tents could successfully withstand the severe weather of the winter months and by this new arrangement it was possible to dispense with the small auxiliary tents. Large coal stoves provided ample heating facilities in severe weather but a high indoor temperature was avoided inasmuch as the cool air had, in this treatment, appeared to exert a decided therapeutic effect of its own. The large living tent was left somewhat cooler than the other tents, so that patients in going in and out of doors passed through it and avoided too sudden changes of temperature. Notwithstanding the constant exposure "not a case of ordinary cold or pneumonia developed during the entire winter" and even when the climatic conditions were unfavourable the patients could securely live a constant outdoor life. A high dry altitude was demonstrated to be essential for the successful treatment of pulmonary tuberculosis. The mortality rate of tuberculous patients during the winter 1902–03 was found to be appreciably lower than that of the previous year. Of 61 patients with slight or moderate tuberculous disease 53 gained weight, seven lost weight, and one remained unchanged. The average gain of weight was 15½ pounds per patient. The general principles of treatment and diet were carried out as in the previous season. The statistics, add Dr. Wright and Dr. Haviland, show a decided improvement over those of the preceding year and encourage the further continuance of the methods of treatment adopted.

THE M.D. DEGREE OF BRUSSELS.

On p. 1037 we publish a communication from Dr. N. Leonard who states very clearly the procedure necessary to obtain the M.D. degree of Brussels and estimates fairly the difficulty of obtaining the degree and the standard of scientific attainment required to cope satisfactorily with the examinations. He concludes his remarks, which will be of value to some of our readers, by saying that the time and trouble spent in the attainment of the degree will be amply repaid in an improvement of social status, and we think that he is right. We also think it particularly unsatisfactory that he should be right, for surely it is an absurd position that the medical man of a country like ours should find it necessary to go to Belgium for a professional hall-mark. We are not intending to open up an endless discussion upon the use of the title of "Doctor." Everyone knows that the title is used in two ways—academically when it implies the medical degree of a recognised university and colloquially when it implies the carrying on of the profession of healing. Everyone also knows that in professional opinion it is wrong for the medical man who does not possess a medical degree to style himself "Doctor," but a practitioner cannot help the fact that his patients will habitually style him "Doctor." The double use of the title has produced an ever-annoying situation. Undoubtedly it is a disadvantage in medical practice that it should be possible to say of any man that he has no right to the title of "Doctor." The public do not understand that only non-possession of a certain university degree is implied, not an inferiority of some sort or other as a practitioner. This mental confusion of the public is particularly hard upon a large number of medical practitioners who hold excellent diplomas, because the work that they have done for these diplomas would as easily as possible have obtained for them a university degree had circumstances placed a university curriculum before them. The holder of the diplomas of the English Conjoint Board has passed tests as stringent as those required for medical degrees in many of the universities and the only reason why such a practitioner does not possess a medical degree is that he was educated in London. He has had the advantage of attending some famous metropolitan school and of seeing clinical practice in an institution where the wealth of material is unrivalled but not being prepared to give up the time necessary for the obtaining of the M.D. degree of the University of London he is without the title of "Doctor." Dr. Leonard recommends that in this plight he should have recourse to Brussels and in the present position of affairs doubtless there are many who will follow his advice. But we may hope that the reconstituted University of London will soon be able to offer to the London student a proper opportunity of obtaining a medical degree. Already the matriculation examination of the University is a fairer introduction to graduation than it used to be and we look forward to the time when a simplification of examination processes, which is not the same thing as a lowering of scientific standards, will lead more London students to try for the medical degree of their own university.

THE KING'S SANATORIUM.

In *The Health Resort* for October appears a paper entitled "The King's Sanatorium. A Waste of Lives and Money. A Criticism by Chas. Reinhardt, M.D." After a careful perusal of this article we can only express our regret that it has ever appeared in print. It is founded on views which we feel sure will not be supported by the majority of those who have had extended experience in the sanatorium treatment of pulmonary tuberculosis. The very title of the communication is objectionable and its publication may be productive of harm and much misconception with regard to a most excellent and carefully considered scheme. There are many sentences in Dr. Reinhardt's paper to which we take strong exception, but space forbids us from mentioning them all. Dr. Reinhardt starts with the assumption that a "costly, substantial, and not altogether appropriate hospital of 'palatial' character" is to be built. Considering that the plans have not yet been made public we entirely fail to understand how Dr. Reinhardt is aware of the detailed nature of the building which is to be erected; consequently the oft-repeated word "palatial" is meaningless. It would have been in much better taste if such an epithet had been withheld until the plans were known. We feel, moreover, that nothing could be further from the committee's wishes than that a "palace" of any kind should be constructed. Dr. Reinhardt's main contention is that the sanatorium should be built on the chalet, instead of on the pavilion, system. He says: "Every physician who has had the opportunity of comparing the results of treatment upon the chalet and room principles will accept the following statement: Incipient cases are cured in 25 per cent. less time where chalet patients are concerned than is the case where patients occupy rooms." We feel sure that such a statement is not correct and we have derived our information from those who have had practical experience. It is possible that in a suitable climate the chalet or hut system is preferable when only a few patients, say up to 20, have to be dealt with. Above this number, however, the difficulties in administration and nursing are so great that the advantages of the huts are far over-shadowed by the discomforts inseparable from a large number of chalets scattered over a considerable area of ground, at any rate in this country. Dr. Reinhardt attempts to prove that, owing to the King's advisers not having adopted the chalet system, by the time that the "Haslemere Palace" will be ready 7800 persons might have been saved from suffering and their lives prolonged. The method of arriving at these figures is singular. Instead of erecting a sanatorium for 100 patients as is proposed he maintains that ten sanatoriums, each capable of holding 100 patients, could have been built in different parts of the country for the same sum as that which it is proposed to spend on a single sanatorium. We greatly doubt whether these figures will bear investigation, considering that the cost of the sites, water-supplies, and building of these ten separate institutions is included. We trust that we have said sufficient to indicate the unpractical and unscientific nature of Dr. Reinhardt's paper and to counteract the very false impressions to which it may give rise.

CEREBELLAR TUMOURS AND THEIR TREATMENT BY OPERATION.

IN a recent annotation[1] on the subject of brain surgery it was stated, on the authority of cases collected and observations made by Professor M. Allen Starr, that tumours of the cerebellum were rarely accessible to surgical operation. In the *American Journal of the Medical Sciences* for September Dr. W. H. Hudson records two cases of operation for cerebellar tumour, in both of which the tumours were found in the right lobe of the cerebellum and recovery followed operation, though one patient died unexpectedly from an intercurrent disease. The first case was that of a girl, aged nine and a half years, who in the summer of 1895 developed headache, vertigo, and attacks of vomiting, and from being a bright and lively girl became inactive and disposed to be in bed. After some time there followed symptoms of staggering gait and failing eyesight and the diagnosis of cerebral tumour was made. The pupils were widely dilated and did not react to light. There was paresis of the right facial nerve. The muscles of the neck were stiffened and the head was slightly retracted. The mother of the patient stated that when the child awoke in the morning "her head was drawn far back and that it took several hours of hot applications and rubbing before she could straighten her neck." Pain was elicited by firm pressure over the right cerebellar fossa, both knee-jerks were absent, the grasp of the left hand was much weaker than that of the right, and the left leg was also weaker than its fellow. The patient could not walk without assistance and if unsupported would stagger and fall towards her left. Ophthalmoscopic examination showed intense neuritis in both eyes. She eventually grew more feeble and emaciated and it was decided that an operation should be undertaken. This was performed on June 15th, 1896. On opening the skull in the region of the right lobe of the cerebellum the dura mater bulged out tensely "like a well-inflated bicycle tyre." On opening it a tumour was discovered superficially forming a mass "half as large as an English walnut," and this was excised together with a small portion of brain substance which protruded around it. The basal part of the tumour was thought to have infiltrated the brain substance and as much of it was removed as seemed proper. The patient recovered from the operation, she grew cheerful and happy, but weakness and incoördination of movement still persisted. A hernia cerebri gradually developed after the operation and attained the size of half an apple. A second operation was decided on as signs of a cystic accumulation of fluid (or blood) in the brain manifested themselves. At this operation a hæmorrhagic cyst was found and evacuated, its location being deep within the right cerebellar lobe. The cyst had been growing unsuspected at first and had destroyed most of the right lobe and adjacent parts of the cerebellum. She made an uneventful recovery after this and four months later was enjoying excellent health. She now walked well, showing very few defects of coördination, and eight months later was shown at a medical meeting at which time she was still in a good condition of health. The optic neuritis had, however, gone on to optic atrophy some time previously and she was now quite blind. The second case was that of a man, aged 29 years, an athlete. At 12 years of age he had been struck by a stone from a sling above and just behind the right ear. The scalp was cut to the bone but at the time the bone was considered uninjured and nothing further was thought about the accident. A few years later he began to suffer from headaches and also from "a peculiar feeling in the [right side of the] head but this feeling was not described as pain." He developed diplopia and a staggering gait and began to suffer from attacks of vomiting. Failure of vision gradually followed and epileptiform attacks supervened. A striking symptom in such attacks was the turning of the entire body, especially the head and shoulders, to the right (screwing movement). He was unable to stand up or to walk. The mental condition was normal. The symptoms, which also included double optic neuritis, tenderness to pressure over the right occipital lobe, and paralysis of the right external rectus muscle and seventh nerve, indicated that there was a growth in the right cerebellar lobe. An operation was performed and on opening the skull and cutting open the tense dura mater *a deep-seated tumour was found by palpation. It was* estimated to be three-fourths of an inch below the surface of the brain and of solid consistence. The tumour was removed by enucleation with the finger and was of about the size of a hen's egg. Practically the entire right lobe of the cerebellum had been destroyed by the growth. The patient rallied after a period of temporary collapse of respiration. On the third day after the operation he appeared to be in a remarkably good condition, his headache was gone, his eyesight was improving, and the wound was healing without hernia cerebri. Shortly afterwards, however, while continuing to improve as regards his cerebral symptoms, he contracted a severe form of diarrhœa with vomiting from which he died on the eleventh day after operation. The tumour was found to be a tuberculous one. Dr. Hudson points out that in both cases the tumours were well placed for surgical operation and advises that this should be resorted to in cases of cerebellar tumour, since a fatal issue is otherwise inevitable.

SEA WATER FOR STREET WATERING.

SOME years ago the municipal authorities at Hastings tried the experiment of employing sea water for watering the streets and flushing the sewers and their example was soon followed by the local authorities of a number of other towns on the coast. The wastefulness, not to say folly, of using for such purposes water that had at considerable labour and expense been filtered to the highest attainable degree of purity seemed obvious and though, of course, it involved the installation of a separate system of pumping station, mains, and hydrants, the fact that the supply was inexhaustible and itself cost absolutely nothing was so evident that it was strange that this source had been neglected so long. The sanitary and economic results seemed more than to justify the innovation, for, to say nothing of its slightly antiseptic action, the hygroscopic property of the salt caused the effects of each watering to last for a much longer time, and the surface of the roadway was believed by some to be more compact and cohesive, than when fresh water was employed. Besides these retrenchments the new system presented a direct source of revenue in the demand by many private householders for a salt-water service to their bath-rooms so that they might enjoy the luxury of sea bathing at home. But a few years' experience has unfortunately brought about no small disillusionment; the owners of carriages complain of the destructive action of the salt mud on the varnish and paint and the tradesmen complain of the injury inflicted on goods of all kinds by the salt dust and its subsequent deliquescence. Lastly, the users themselves, the local authorities and their private customers, have discovered that the salt water exerts such a corrosive and generally destructive action on metal pipes and fittings that the number of persons contracting for a domestic supply has fallen from 200 to two and the leakage from the joints of the street mains has caused the deaths of the trees planted in the best streets and promenades, so that the engineer to the corporation that had been the pioneer in the movement finds himself compelled, in an exhaustive report of its experience, to admit that the system has proved a complete failure.

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[1] THE LANCET, August 15th, 1903, p. 485

HORSE DUNG IN THE STREETS.

THE prompt removal of horse dung is of the greatest service in promoting the cleanliness of the streets, but not even the most diligent scavenging can protect the surface of the roadway from a certain amount of fouling. Dr. J. A. Calantarients of Scarborough thinks that the difficulty may be solved by catching the droppings before they fall to the ground and for this purpose he has devised a collecting shoot and receiver to be attached beneath the front of the vehicle to which the horse is harnessed. This contrivance is minutely described by him at p. 1050 of our present issue and his opinion that it is not very obtrusive or ugly is fully borne out by a photograph which he has sent to us, showing an open four-wheeled carriage fitted up as he suggests and with a horse in the shafts. If in practice it carries out all that is claimed for it and horse-owners could be induced to make use of it the expense of scavenging no doubt would be greatly reduced and the public would be benefited in many ways.

SUBPARIETAL INJURIES OF THE KIDNEY.

THE *Boston Medical and Surgical Journal* of July 9th and 16th contains an important paper on Subparietal Injuries of the Kidney, by Dr. Francis S. Watson. It is based upon six cases observed by him and on 660 previously published cases. Laceration or serious injury of the kidney may be produced by muscular action and sometimes by apparently inadequate force. For example, a man sprang backwards and felt a violent pain in the left renal region. At the first micturition afterwards hæmaturia appeared and it persisted for four days. A perinephritic abscess followed. In another case a man in lifting a woman across a bed felt severe pain in the loin. Hæmaturia followed and persisted for three weeks. In a third case a man ruptured his kidney with fatal result in the muscular effort of delivering a blow in boxing. 20 cases have been recorded of laceration of the kidney from blows on the front of the abdomen. Abdominal symptoms may appear immediately after the injury or as late as the second day. Tumour of the loin was observed in 111 out of 486 uncomplicated cases. In 39 of them the tumour was due to a perirenal extravasation of blood, in four to hæmatonephrosis, in 28 to hydronephrosis, in 38 to perinephritic abscess, and in two to pyonephrosis. According to Küster laceration of the kidney after non-penetrating wounds is explained by hydraulic pressure acting through the full vessels and pelvis and causing the organ to burst along lines radiating for the most part from the hilum towards the point of maximum impact of the lower ribs. In one case Dr. Watson sutured the renal wound, an operation which appears to have been performed previously in only six cases. The patient was a man who fell on his back while stepping off his cart. There were great pain at the seat of injury and profuse hæmaturia which continued in somewhat less degree for four days. On the night of the fourth day the hæmaturia suddenly ceased and a tumour developed in the loin and increased rapidly. An hour later the kidney was exposed in the loin. It was more than twice its normal size, dark purple in colour, and surrounded with blood. The pelvis was enormously distended by clots. The fibrous capsule was not torn. There was a large laceration of the kidney from which protruded beneath the capsule a clot which had dissected the latter from the kidney over nearly the whole of the posterior surface. The capsule was incised and the clot was expressed through the wound by pressure upon the distended pelvis. The kidney at once resumed its normal size and colour. No wound of the pelvis was found. The renal wound was closed with seven catgut sutures and hæmorrhage was completely arrested. A fistula formed after the wound in the loin had been closed for five or six days. Two months later the kidney was exposed through the old incision. Its anterior surface was adherent to the overlying peritoneum. The fistula led to a sac of about the size of a hen's egg on the outer and posterior surface of the kidney. This sac was incised. No communication could be established between its interior and that of the kidney. Part of its walls was excised and drainage was effected through the lumbar incision. The patient rapidly recovered but the fistula had not closed when he was last heard from, two months after the second operation. In six of the seven recorded cases of renal suture the operation was quite successful. In the unsuccessful case the patient made a good recovery from the operation but secondary nephrectomy was performed later with a fatal result. In all the cases suture of the renal wound immediately arrested the hæmorrhage.

BABY SHOWS.

IN THE LANCET of June 20th, 1903, p. 1753, we drew attention to the mischievous effects of baby shows held under the conditions which usually obtain and took exception to the standard of infant excellence thereby encouraged and to the method of awarding prizes to the babies who manifested the greatest degrees of obesity and the heaviest weights in the scales. We pointed out that in the case of infants mere weight was no test of physiological excellence and that high degrees of obesity were of pathological significance and often the results of unsound methods of feeding. We further pointed out that baby shows if properly conducted might be made valuable instruments for educating the public in the best methods of rearing babies and of securing their normal physical development. The necessity for some practical means of educating the public in these respects is abundantly testified by the alarming and progressive fall in the birth-rate and by the huge annual mortality among infants under one year of age. No subsequent measure can compensate for the constitutional disabilities which are engendered by a neglected or mismanaged infancy; no medical or surgical skill can in after years correct the stunted growth and bony deformities which are the direct outcome of injudicious feeding in infancy and of the neglect of ordinary precaution. It is, therefore, with gratification that we notice that at a baby show recently held at the Murphy Memorial Hall, Southwark, most of the prizes were given to breast-fed infants. Another step in the right direction was that evidence of rickets was considered a disqualification. We may, perhaps, take credit to ourselves that our recent remarks in THE LANCET, which were widely reproduced in the lay press, have conduced to this reform and in the hope that it may be fruitful of further reform we would suggest that some of the following points should be taken into consideration in awarding prizes at subsequent baby shows: that as an indication of health the general condition of development and the firmness and elasticity of the tissues should be taken into consideration and not the gross weight of the infant; that the condition of the skin, the muscles, the bones, and the nervous system should be examined and that absence of the stigmata of degeneration, sweating, pot-belly, mouth-breathing, and snuffles, should be considered as points in the competitor's favour. Marks should also be given for evidence of care and attention with regard to clothing and cleanliness. Since perhaps the best test of health in infancy is a regular and steady increase in weight week by week marks might be awarded for the best record in this respect and mothers should be encouraged to take an interest in, and to understand the importance of, a steady normal increment in weight, as opposed to the disadvantages of the abnormal and pathological deposition of fat.

AMBULANCE INSTRUCTION AT MINES.

A MEETING of the North of England Institute of Mining and Mechanical Engineers was held at Keswick on June 10th and in the course of the proceedings a paper on Ambulance Work at Mines was read by Mr. William Leck. This gentleman, who is an inspector of mines, commenced by giving an outline of the work and methods of the St. John Ambulance Association. He said that although there did not appear to be any close connexion between ambulance instruction and the subjects which an institute of mechanical and mining engineers might be expected to take into consideration, yet statistics showed that amongst miners there was a great necessity for ambulance knowledge, as in the year 1901 the inspectors of mines received reports of 1229 deaths at mines and quarries and of 5326 persons injured. The St. John Ambulance Association undertakes the formation of "centres" throughout the country and the Cumberland Mines and Quarries Centre was formed in 1895 by the late Mr. J. L. Hedley, an inspector of mines, as the result of a conference with the mine owners of the county. Mr. Leck then gave some details relative to it. Lord Lonsdale became the president, Mr. Hedley the chairman, and Mr. Leck himself the secretary. The reading of the paper resulted in a discussion which presented some points of interest. Mr. M. H. Habershon of Sheffield suggested that the training of suitable men in the use of apparatus for breathing in noxious atmospheres might be undertaken by such an organisation as the one in Cumberland. He said that with the most recent form of the Giersberg apparatus selected men could breathe for two hours and do light work without discomfort after being properly trained. Dr. Thomas Oliver of Newcastle-upon-Tyne recommended that in the ambulance classes instruction should be given in the treatment of persons overcome by noxious gases or apparently killed by electricity.

LUNACY IN AUSTRALIA.

A BRIEF account of lunacy in Australia, with special reference to New South Wales, was recently published in THE LANCET. The report on lunacy in Queensland, which has just been issued officially, states that on Dec. 31st, 1902, there were 1813 patients under care in the various hospitals and reception houses for the insane in Queensland. During the year the number of patients rose from 1752 to 1813, an increase which is very slightly in excess of the average annual increment. Calculated on the estimated population of Queensland on Dec. 31st, 1902, there were 35 2 persons who were insane for every 10,000 of the general population. The corresponding ratios for the other States were: New South Wales 32·5, Victoria 37·3, South Australia 26·7, and New Zealand 33·4. The number of patients admitted to all institutions in Queensland during the year was 339, comprising 204 males and 135 females. "It is satisfactory to record," says the report, "that the admissions for the last two years have been almost stationary." Hereditary tendency to insanity and alcoholic intemperance were among the chief causes of insanity in the admissions. "The worries and anxieties of the drought did not, as might have been expected, largely increase the admissions." The number of patients discharged as recovered during the year amounted to 131, or 7·3 per cent. of the average number resident. The deaths during the year amounted to 94, or 5·26 per cent. as calculated on the same basis. Of the deaths 21 were due to diseases of the brain and nervous system, 11 to chronic renal disease, 19 to inflammation of the lungs, 21 to pulmonary tuberculosis, and the rest to other causes. Nine of the patients who died from tuberculosis were suffering from the disease on admission to the hospitals. The total cost of the institutions for the year was £50,885 16s., an increase of £4304 over the cost for the previous year. This extra expenditure was entirely due to the drought, with the consequent rise in the price of foodstuffs and the failure of the asylum-grown crops.

THE VENTILATION OF THE HOUSE OF COMMONS.

MUCH time and thought have been devoted to the subject of the ventilation of the House of Commons and it has been generally supposed among sanitary engineers that the method adopted left little to be desired. The "Mother of Parliaments" is, however, as regards her domestic affairs rather a fidgety old lady and in consequence a select committee was last year appointed to investigate the condition of the arrangements for supplying our legislators with the fresh air necessary to sustain them during their arduous exertions. This committee, which consisted of Mr. Akers-Douglas, Mr. Dillon, Dr. R. Farquharson, Sir Michael Foster, Mr. Goddard, Mr. Penn, and Sir John Batty Tuke, met ten times between April and August, 1902, under the presidency of Mr. Akers-Douglas without coming to any definite conclusion. On June 17th, 1903, the committee was re-appointed with Mr. Victor Cavendish and Mr. A. H. Smith in place of Mr. Akers-Douglas and Mr. Penn, and four additional meetings were held with Sir Michael Foster as chairman. The results of these labours are now made public in a couple of reports. Evidence was first heard in regard to the existing mechanism which, as described by Mr. Edward G. Rivers, engineer and surveyor to His Majesty's Office of Works, is as follows. Air taken in on the river front and in certain courtyards is washed by a spray of water and passed through a layer of scrim cloth to remove solid particles. After being heated by steam batteries it enters the chamber through grids under the matting of the gangways and through panels at the ends of the hall. In foggy weather the air is passed through six inches of cotton wool and in summer it can be cooled by blocks of ice placed in the air way. The vitiated air is removed from the upper part of the chamber and passes to an upcast in the Victoria Tower. A thorough examination of the air supplied was made. It was found to contain, with half the seats in the chamber occupied, about 5 parts per 10,000 of carbonic acid and to have a mean temperature of 62° F., with a humidity of from 60 to 72 per cent., while Dr. Graham Smith reported the presence of micro-organisms to the extent of six per litre, no infectious diseases being represented. With the House ordinarily full the amount of fresh air entering was more than 50 cubic feet per minute per head. Altogether, as the committee declares, the air as regards purity "may be said to far exceed that found in many such buildings." Unfortunately, however, "this conclusion, obtained by means of objective tests, is not confirmed by the subjective test of the Members' own feelings." The following recommendations are therefore made: (1) that electrical fans should be substituted for the exhaust furnaces; (2) that the air inlet should be simplified and properly cleaned; (3) that wet screens should replace the water spray; (4) that a more powerful in-take fan should be provided; (5) that the introduction of air under the seats should be tried; (6) that the matting should be removed from the floor of the chamber every day; (7) that there should be frequent general cleaning under the supervision of one person; (8) that a sanitary officer of recognised scientific knowledge and experience should be appointed specially to watch the ventilation; and (9) that inquiries into problems connected with ventilation should be instituted. It will be seen that these recommendations amount to very little in the way of novelty but this is because there is not much room for improvement. The passage of the entering air through matting which is being continually soiled by the boots of Members is certainly objectionable and alteration in this respect was called for. Members will be relieved to learn that they are not being slowly poisoned while assisting in the deliberations of their august House and will be no doubt easily reconciled to the expenditure (over £300 for the fees of witnesses alone) which was incurred in setting their minds at ease.

SOME INTERESTING FACTS IN THE ANNUAL REPORT OF THE COMMISSIONERS OF HIS MAJESTY'S CUSTOMS.

IT is obvious that to a certain extent the annual reports of His Majesty's Customs officers must afford interesting information not only as to the nation's prosperity but as to its moral trend also. For example, the reports show whether an increase or a decrease is taking place as regards the the consumption of alcoholic liquors, of certain taxed foods, and of tobacco. It is thus possible to gather from their pages how far the nation shows in certain directions moral advancement or moral back-sliding. In the report, for instance, recently issued for the year ended March 31st, 1903, there are some interesting fluctuations to be observed in regard to the clearances of alcoholic liquors. The clearance of foreign spirits increased from 8,981,880 gallons in 1901–02 to 9,785,976 gallons in 1902–03, or 9 per cent. It is true that the quantity used for "methylating" has risen enormously on account of the great reduction in the price of foreign spirits, but broadly while a little over 1,000,000 gallons were cleared for "methylating" over 8,000,000 gallons were taken for other purposes. Rum and imitation rum showed an increase of £18,062 this year (0·8 per cent.) and "had it not been for the comparative mildness of the winter the increase," the Commissioners think, "would in all probability have been greater, for prices have been low owing to over-production and to the cheapness of sugar." "Fluctuations in the consumption of rum are difficult to explain," they add; but is it not a fact that rum is used for "blending" purposes? The duty received from brandy showed an increase of one-half per cent. and the Commissioners remark that the consumption of brandy is not so great as it was a few years ago, the decline being mainly attributable to the greater favour extended to whisky. There is a decrease in the amount of brandy cleared in casks and, in spite of an extra duty of 1*s.* per gallon, the increase first alluded to has been due to clearances of brandy in bottle. There has been a great demand for foreign plain spirit and to such an extent as to create considerable competition with British spirits. "Blending" or the pernicious practice of substitutes may possibly account for this increased demand. The consumption of wine has decidedly increased since 1900 and 1901—an "improvement" attributed to the cessation of the war. The stronger wines in cask are chiefly responsible for the increase but lighter wines in cask and sparkling wines in bottles also show an advance. The lighter still wines imported in bottles have diminished, a falling off that has been more marked since the imposition of the extra duty of 1*s.* per gallon on still wine imported in bottles. The greater part of the increase in clearances of heavy wine was in connexion with wines from Portugal. Tobacco shows an increase of 17·8 per cent., which, however, is not wholly due to consumption, for the clearances of the previous year were considerably reduced in anticipation of a rise in duties by forestalments made at the end of the year 1901. It is probable, however, that the normal rate of increase during past years has been maintained in regard to tobacco. Chicory shows practically no change in the quantity cleared; cocoa shows a decrease of 11·5 per cent., chiefly in connexion with raw cocoa and the demands made previously for this article during the war. Coffee shows an increase, while tea remains at much the same figure as last year—that is, the net quantities of duty-paid tea were no less than 254,000,000 pounds. It is to be wished that the Government could exercise as much vigilance over the quality and description of the imported foods and beverages of the nation as it does in collecting every penny that is levied upon them.

PHOTOGRAPHS IN NATURAL COLOURS OF PATHOLOGICAL SUBJECTS.

WE publish this week a coloured supplement in illustration of Dr. W. Hale White's case of diabetic intraocular lipæmia and on the same plate will be seen two photographs in natural colours of a case of purpuric eruption. An account of the case was read before the Dermatological Society of London by Dr. W. Ewart and has been reprinted in the *British Journal of Dermatology.* The patient was a man, aged 30 years, of regular habits and healthy antecedents. He was seized on Dec. 24th, 1902, with sore-throat, trembling, and chilliness though without definite rigor. Two days later he took to his bed and on the 28th the sore-throat disappeared but the left side of his face was swollen. He was admitted to St. George's Hospital on Dec. 30th suffering from typical facial erysipelas. Full doses of perchloride of iron were ordered but as no improvement took place an alkaline mixture was substituted and frequent doses of quinine were given. Under this treatment the patient improved rapidly, the temperature falling to 99° F. on Jan. 3rd and never rising again to any great height. On the evening of the 3rd the first purpuric symptoms were noticed. He had then had 20 grains of quinine and the total amount taken when it was stopped on Jan. 5th was 40 grains. The eruption consisted of small dark purple patches with raised, pink, and intensely tender areolæ. The earliest sites to be attacked were the lower extremities but on the second day the eruption had crept up on to the trunk. Much larger patches were soon formed, partly by coalescence of smaller ones, and the eruption spread on to the back of the thorax and the outer aspects of the upper arms. There was also a patch on the occipital region and there was chemosis of the conjunctiva with subsequent flow of blood-stained tears. The characteristics of the rash were: (1) its occurrence in circular patches; (2) the raised and extremely tender, pink areola; (3) the gradual disappearance of the purple centre which became lighter than the periphery; (4) the occurrence after a few days of considerable œdema of the conjunctivæ, the arms, the legs, the back, and the thighs; (5) the obvious localisation at the points of pressure; and (6) the formation of bullæ which necrosed and left superficial ulcers. As regards the causation of the rash considerable interest was attached to it owing to the fact that the patient had been taking large doses of quinine. It was at first impossible to determine whether the purpura was the result of quinine intoxication or was connected with the erysipelas but later the patient, who had nearly recovered, took more large doses of quinine with no recurrence of the eruption. The photographs in colours, which we reproduce, were taken by Messrs. Sanger, Shepherd, and Co., by certain improved appliances recently introduced by them, and we are informed by Dr. Ewart that they are excellent; we are also informed that several members of the medical profession have now applied the process successfully to their work and that the appliances for colour photography have been added to the laboratory of one of the metropolitan hospitals. A year ago the process employed by Messrs. Sanger, Shepherd, and Co. was successfully applied to the photo-micrography of stained bacteria. A considerable advantage is gained in lantern slides (three and a quarter inches in diameter) made by this method directly through the microscope, the colours of the stained bacteria being rendered correctly. The brilliancy and sharpness of the image are even greater than when actually viewed through the eyepiece of the microscope and when the eyepiece is inserted in the lantern and focussed upon the screen the enlargement of detail possible is, of course, very great.

SOUTH AFRICAN SANATORIUMS FOR THE TREATMENT OF CONSUMPTIVES.

WE have received the particulars of a scheme initiated by the directors of a company bearing the name "Cradock Sanatorium and Thermal Baths" with the object of establishing sanatoriums for consumptives in South Africa. There is no need for us to comment on the advantages which the climate of South Africa offers for the treatment of tuberculosis; they are too well known. Owing to several circumstances it has been found extremely difficult, if not impossible, to form charitable institutions for the relief of necessitous patients in suitable districts in South Africa. A company, however, has been floated to form a hydropathic establishment and sanatorium at Cradock, where there exist a number of mineral and warm sulphur springs. The directors also propose to form a separate section of the company for the purpose of building and equipping a sanatorium solely for the employment of the "open-air" method of treatment. It is proposed to solicit the required capital from the public and to guarantee interest at the rate of 3 per cent. per annum. Up to this point it might well be considered that the proposal is purely a financial one. It has, however (and this is the reason that we wish to draw attention to the scheme), a philanthropic side. A careful estimate has been made of the probable revenue and expenditure and it is estimated that out of the income received from paying patients it will be possible to receive, and to give all the benefits of the sanatorium to, a certain number of cases gratuitously. Thus the institution will not only be self-supporting but will also be doing a charitable work in the care and treatment of poor patients. The whole scheme is a very ambitious one. Whilst proposing to start with buildings capable of accommodating 40 patients, it is intended that similar sanatoriums may be erected in various districts of South Africa especially adapted by climatic and other conditions to the treatment of tuberculosis. It is hoped that patients will thus reap the benefit of constant change of air and scenery, since a series of sanatoriums will enable them to be transferred from one place to another should indications point to the desirability of a move. We feel confident that such a scheme as we have just outlined is well worthy of support. The position of many patients who proceed to South Africa on account of being victims to tuberculosis is a deplorable one and a sanatorium for necessitous individuals is much to be desired. We sincerely trust that the necessary funds will be forthcoming. We may add that it is proposed to form a medical advisory board in London, to which applications for admission would have to be made. Mr. D. C. Lauer, one of the directors, is now in England in order to make the necessary preliminary arrangements.

THE CHAIR OF PHYSIOLOGY IN THE UNIVERSITY OF MELBOURNE.

OWING to the appointment of Dr. C. J. Martin as director of the Lister Institute of Preventive Medicine the chair of physiology is vacant at the University of Melbourne. Particulars as to duties and emoluments can be obtained from the Agent-General for Victoria. The new professor will be required to commence work on March 1st, 1904.

KING'S COLLEGE HOSPITAL.

A SPECIAL court of the corporation of the president, vice-presidents, and governors of King's College Hospital will be held in the large theatre of King's College, Strand, on Monday, Oct. 12th, at 4 o'clock in the afternoon, for the purpose of obtaining the sanction of the members of the said corporation to the removal of the hospital from its present site to a site in South London, which proposed removal is put forward at the initiation of both the council and the committee of management.

HÆMOPHILIA.

IN THE LANCET of Oct. 3rd, p. 958, we published a case of persistent secondary hæmorrhage after enucleation of the eyeball for sarcoma which was under the care of Sir William J. Collins. The history of troublesome hæmorrhage on several previous occasions clearly showed it to be a case of hæmophilia. Very many cases of hæmophilia have been observed and yet it cannot be said that we are materially nearer a knowledge of its true pathology. It is generally accepted that there is no demonstrable alteration in the walls of the bloodvessels. The chemical composition of the blood in hæmophiliacs does not manifest any abnormality and the time required for coagulation is not greater than is needed by the blood of those in health. There is, however, one important difference. When profuse hæmorrhage occurs in a healthy person the coagulability of the blood steadily rises, for a time at least, so that the arrest of the hæmorrhage is assisted; but in those who suffer from hæmophilia the coagulability of the blood diminishes as the amount lost increases. The only point about the etiology of the disease which is indubitable is its transmissibility through the female line, the members of which are themselves unaffected, but in this hæmophilia is not peculiar, for a similar mode of transmission appears to obtain in pseudo-hypertrophic palsy and other conditions. The first clear description of hæmophilia was given by Sir William Fordyce in 1784 and Dr. J. C. Otto in 1803 described the disease in a family where it had occurred for nearly 80 years. Our knowledge of the etiology and pathology of hæmophilia is unsatisfactory but still more unsatisfactory is the treatment. Several drugs, such as chloride of calcium and ergot, have been credited with some power in stopping the hæmorrhage and probably in some cases they do good but certainly in other cases they do not prove of the slightest avail. It is to be hoped that preparations of the suprarenal gland will be of use and they deserve an extended trial though, in Sir William Collins's case already referred to, adrenalin solution did not arrest the hæmorrhage. The most important part of the treatment is prophylaxis. As far as possible all wounds should be avoided and only absolutely compulsory operations should be performed.

"DECAPODS" AND THEIR DANGERS.

THERE seems to be a general movement amongst the managers of our suburban railways to introduce rapidly starting trains and already on two lines engines for that purpose have been designed which are known as "decapods." It may be assumed that this name has its origin in the number of wheels on the engines which, we believe, are "braced." It is stated that these engines are capable of getting up a speed of 30 miles an hour within 30 seconds of making a start and that in consequence much time is saved at the end of the journey. We have no desire to discourage the attempts that are being made to secure punctuality and despatch with regard to our suburban railway service—there is room for improvement; but, above all, we should prefer to see more attention given to increased accommodation rather than to the sudden getting up of speed. It seems to us that if the system of "decapods" or rapidly starting engines is universally adopted some alteration in the method of admitting passengers to the platform must be made. The system of shutting all entrances to the platform 50 seconds before the train is timed to start, as is the rule in the United States, would become imperative. It is stated that the guards of the "decapod" train are compelled to be well inside their compartments if they wish to run no risks before giving the signal by whistle to start. If that be so, what is likely to happen to the passenger who attempts to enter the train whilst it is in motion? Apart from this aspect of the proposed innovation the question of the effect on passengers of suddenly attaining a speed of 30 miles an hour has to be considered. The policy of the "decapod" is, we think, a mistake and it seems to us that a more rational means of dealing with the congestion and expedition of railway traffic could be devised. The career of the "decapod" from start to finish would seem to be necessarily hazardous. A rapid start, for instance, made in foggy weather when there proved to be a train at a standstill not far ahead might be the preface to very serious consequences.

NORMALLY UNEQUAL GROWTH AS A POSSIBLE CAUSE OF DEATH.

THE subject of comparative pathology is an important branch of biological science of which as yet the merest fringe has been studied and it thus offers splendid opportunities for research, the results of which may probably be of very great value in human pathology and in elucidating the causes of variation in type of diseases affecting man and the lower animals. Mr. Frank E. Beddard, F.R.S., whose great experience as prosector at the gardens of the Zoological Society invests his observations with great weight in these matters, records in an interesting letter to *Nature* of Sept 24th, p. 497, a condition of the circulatory system of the Japanese salamander (*Megalobatrachus japonicus*) which he regards as a result of a normally unequal process of growth and which he suggests as a cause of death—"a truly 'natural' cause of death," as he expresses it. He states that as a result of a good many years' experience he has frequently found it difficult to assign any definite cause of death to the lower vertebrata which die in the gardens of the Zoological Society. In the animal under consideration, which had lived 19 years in the gardens and was some three feet in length, no obvious signs of disease were found in any organ. Judged by its length it must have been old, for a specimen three feet long is stated to have been at least 52 years old.[1] On comparing the heart of this animal with that of another specimen some 20 inches in length, Mr. Beddard found, as he expected, that it was larger and that its subdivisions maintained their relative proportions, but in the larger animal the two sets of valves at the anterior and posterior ends of the pylangium were so small in relation to the lumen of the tube that they would not meet in the middle line and were thus incompetent, while in the smaller salamander they were large enough in relation to the size of the tube to close it completely. Mr. Beddard therefore suggests that these valves in the process of growth do not increase *pari passu* with the general increase in size of the heart and the conus arteriosus. Admitting the accuracy of the observation there are, however, some difficulties in accepting Mr. Beddard's view that this condition should be regarded as the result of a normal process of growth or even as a probable cause of death. In the first place it is difficult to see any *a priori* reason why the valve curtains should not share the general tendency to progressive growth; their failure to do so rather points to a defect of growth and it would be of interest to know the microscopical condition of the cusps and of the wall of the pylangium. It certainly comes as somewhat of a shock to regard a normal process of growth as tending towards death. Again, while it is certain that the condition described would interfere with the circulation, it is obvious that it must be of very gradual development and it might be expected that a defect of this kind would be compensated more or less completely by an increased growth of heart muscle, which apparently did not occur in this case, and that if not so compensated some pathological effects would be discoverable in other organs. On the other hand, that regurgitation can be produced by defective coaptation of healthy valve curtains in the case of both the mitral and the tricuspid valves in man owing to dilatation of these orifices is a fact in human cardiac physics now almost universally admitted, and by some observers a similar condition at the pulmonary or even aortic orifice is believed to occur. Moreover, Mr. Beddard quotes a record of a dissection by Hyrtl of an animal two and a half feet in length in which the valves were figured of small size relatively to the lumen of the vessel, though according to Mr. Beddard incorrectly in some particulars of structure. In any case the observation is of great interest and should direct the attention of those with opportunities for dissection of lower vertebrata to this question, more especially to determine if the condition is frequent and whether it is of normal or pathological origin.

DENTAL OPERATIONS UNDER CHLOROFORM.

A RECENT death under chloroform which occurred at Manchester draws attention once more to the danger of using chloroform as an anæsthetic for dental operations unless there is exceptional and convincing reason for its selection. We are not at the moment, however, specially concerned with this aspect of the case but rather with the remarks made upon it by the coroner if the general press, our only present source of knowledge in the case, may be taken as giving a correct account. According to one version we have read the coroner in his remarks to the jury stated that he had a great objection to the administration of chloroform for the extraction of teeth. So far we are, generally speaking, entirely in accord with him. The coroner, however, is reported to have continued by saying that the extraction of teeth should be accomplished without any anæsthetic drug whatever. We cannot believe that the coroner made such a perfectly unjustifiable generalisation. Not only would a needless amount of pain be inflicted upon the public were anæsthetics not employed for dental operations but these operations would also be increased in number. A number of extractions that can be safely performed at one sitting upon an individual when anæsthetised could not be borne by a conscious individual, and, moreover, there are plenty of cases in which the operation would actually be dangerous by the pain and shock to a conscious person when it is free from danger to the individual skilfully anæsthetised with nitrous oxide or ether The coroner s remarks in this case, as well as the case itself, should help to enforce a principle that we have insisted upon before now—viz that if there is any question of the necessity for chloroform in a dental operation the drug should not be administered without the presence of someone experienced in the use of anæsthetics There is no question that a considerable number of fatalities would be avoided every year if such a principle were everywhere acted upon

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[1] Gadow: Amphibia and Reptiles, p. 99.

THE OUTBREAK OF CHOLERA IN SYRIA

THE details given in our present issue of the epidemic of cholera in Syria by the British delegate to the Ottoman Board of Health are deserving of serious attention, for it is evident that although the Egyptian Government was successful in combating cholera when it appeared in Egypt in 1902 yet the progress of the disease was not checked, for notwithstanding every effort to limit its extension the infection was carried into Syria and is there spreading over the greater part of that country Cholera, as is shown, was not long in reaching Damascus and by August of this year some 223 deaths were reported The villages around Damascus soon became infected and from there the disease seems to have advanced steadily northwards It has been epidemic at Hama, a town about half way between Damascus and Aleppo, and as in the vicinity of Damascus so in the neighbourhood of Hama a large number of villages are suffering from the disease The news received from these villages is scanty and intermittent and there is reason to believe that the extension of the disease is greater than is likely to be gathered from occasional telegrams In many instances, it is stated, the name of a village has only been notified after the disease has been present for weeks and has already caused a high mortality From Telhab the earliest announcement was that the mortality from cholera was ten per day, while almost the first notice of cholera in the village of Rebebó was the announcement of 350 cases with 310 deaths Cholera has not yet reached the town of Aleppo but it is in the vilayet of that name and has advanced well on its way to Antioch Tripoli is the only seaport town reported in which the disease has become epidemic In August the inhabitants were in a state of panic and were leaving the city by land and by sea, so that there is every probability of the infection being distributed in many directions Beirut is mentioned as one of the places to which the disease has been carried by refugees Besides spreading to the coast the cholera has also travelled as far as Biredjik, an important town on the Euphrates, where it is feared it will have opportunities of extending to Armenia on the one side and to Mesopotamia on the other

THE International Sanitary Convention is about to hold a meeting in Paris, the delegates not having met since the convention at Paris in 1897 The British delegates are Mr Maurice de Bunsen, Secretary of Embassy in Paris, Dr F G Clemow, representative of the International Sanitary Board at Constantinople, Dr Theodore Thomson of the Local Government Board, Colonel Richardson of the India Office, and Dr M Armand Ruffer, President of the Sanitary and Maritime Quarantine Council of Egypt

THE new east block of the Mount Vernon Hospital for Consumption and Diseases of the Chest at Hampstead will be opened by the Marquis of Zetland, K T, the President of the hospital, on Tuesday, Oct 27th, at 3 o clock Communications on the subject should be addressed to Mr J Morton, the secretary of the hospital, at his office, 7, Fitzroy square, W Last year this hospital received a handsome donation of £121 000

As regards plague in the Mauritius a telegram from the Governor received at the Colonial Office on Oct 2nd states that for the week ending Oct 1st there were 57 cases of bubonic plague and 37 deaths As regards the Cape Colony the medical officer of health of the colony states that for the week *ending Sept. 12th the only cases of plague notified* were 1 at Port Elizabeth and 1 at East London

THE annual dinner of the Association of Public Vaccinators of England and Wales will take place at the Hotel Cecil, Strand, W C, on Friday, Oct 23rd, at 7 P M Communications on the subject should be addressed to Mr Charles Greenwood, the organising secretary, at the offices of the association 1, Mitre Court buildings, Temple, E C The association has now been established for five years

THE King has granted to Dr F M Sandwith His Majesty's Royal licence and authority that he may accept and wear the Insignia of the Third Class of the Order of the Osmanieh, conferred upon him by His Highness the Khedive of Egypt, authorised by His Imperial Majesty the Sultan of Turkey, in recognition of valuable services rendered by him

THE death of Mr W J Walsham F R C S Eng, surgeon to St. Bartholomew s Hospital, is announced as taking place on Oct 5th Mr Walsham had been ill for some weeks and had only just returned from Wiesbaden, whither he had gone for the benefit of his health We shall publish an extended notice of his career in a future issue

Dr B A Whitelegge, C B, His Majesty's Chief Inspector of Factories, has been appointed President of the Epidemiological Society in the place of the late Dr W H Corfield

THE M D DEGREE OF BRUSSELS.

BY N LEONARD, M D BRUX., M R C S ENG,
L R C P LOND

I HAVE had several letters from members of the profession who are strangers to me asking for particulars as to the general requirements of the M D Brux examination This induces me to think that a large number of medical men in England are interested in the examination and would be glad to know something of it from one who has been ' through the mill And, again the fact that one reads in almost every issue of the medical press complaints against the English Royal Colleges and other licensing bodies that their Members and Licentiates are prevented from obtaining the much coveted title of M D influences me to give a *résume* of the examination which may possibly induce others to enter for the Brussels degree and so find a satisfactory solution to the difficulty

In an endeavour to give a lucid description of the examination my remarks naturally fall into the following sections a recapitulation of the regulations of the examination as set forth in the printed syllabus of the University, and a detailed account of the method of examination, including specimen questions in the several parts While giving, also, some idea of the general standard required and the relative difficulty of the different subjects, I shall also mention the books usually read

The regulations as set forth by the University are briefly as follows The examination, which is conducted *viva voce* in English, consists of three parts, viz —First Part (1) General medicine, (2) general therapeutics, materia medica, and pharmacology, (3) pathology and morbid anatomy, and (4) special therapeutics and medicine of internal diseases, including mental diseases

Second Part: (1) Surgery (theoretical); (2) theory of midwifery; (3) public and private hygiene; and (4) medical jurisprudence. Third Part: Clinical examinations on patients in (1) medicine, (2) surgery, and (3) ophthalmology; (4) practical midwifery examination; (5) operative surgery examination; and (6) regional anatomy, with dissections. Fees and charges: Matriculation fee, £8 12*s.*; for the three examinations—First Part £4 8*s.*, Second Part £4 4*s.*, Third Part £4 8*s.*; legalisation of the diploma 8*s.*, making a total of £22. Examinations take place on the first Tuesday in November, December, February, May, and June, and usually last from seven to nine days, so that candidates need not be absent from their professional duties longer than 11 days at the outside. Or the three examinations may be taken separately by those who are unable to be absent from home so long, but in such a case the matriculation fee of £8 12*s.* must be renewed. According to the printed syllabus the examination is conducted in English through the medium of an interpreter, but it will be found that the majority of the examiners speak excellent English, as do most people in Brussels, so that the services of the interpreter are dispensed with through the major portion of the examination. Copies of the printed regulations may be obtained by writing to the University or to Dr. Reeve, 2, Harewood-place, Hanover-square, London, W.

The whole of the theoretical part of the examination is *vivâ voce*, each of the *vivâs* in the general subjects lasting from 15 to 20 minutes. In most of them only *one* question is asked and the candidate is then expected to "talk" on that subject for the required time. For example, he may be asked to describe a typical case of typhoid fever. The examiner settles down to listen, making no remarks during the course of the candidate's answer, but merely notifying him at the expiration of his stipulated time that the *vivâ* is ended. It is in this main point that the *vivâ* at Brussels differs from that in England, for here the examiner showers questions on the candidate which require but short answers, often merely "Yes" or "No," whereas in Brussels one must be prepared to give a kind of lecture by way of reply. As a rule, only general questions are asked, and on topics that the average man in general practice should have a good knowledge of. But some of the *vivâs*—and important ones from the Belgian standpoint—may require considerable reading to prepare for, notably those in pathology and pharmacology, the standard of which at Brussels considerably exceeds that required by the Conjoint Board in London. The *vivâ* in theoretical midwifery is rather different, inasmuch as the examiner does not confine himself to one question but divides his time between embryology and midwifery proper. Considerable stress is laid on the subject of embryology, but one can get up all that is required from the first 90 pages of Galabin's "Manual of Midwifery." The Third Part of the examination presents some difficulties, particularly to the man who has left his hospital days long behind him, as the regulations require him to be familiar with anatomy and, in addition, to dissect some part. Ophthalmology, although little stress is laid on it, may also cause some trouble to one who has had little experience in that branch. Still, the cases are generally simple and straightforward and will be easily overcome by a little reading up of the subject.

I propose now to give a specimen question or two in each subject of the examination in order that the prospective candidate may thoroughly understand what is expected of him.

FIRST PART.

1. *General Medicine.*—Describe a case of cirrhosis of the liver. Describe a case of cholera.

2. *Materia Medica and Therapeutics.*—What do you know of belladonna? (You are expected to give its source, dose, preparations, actions, and therapeutical uses.)

3. *Pathology.*—What do you know of cancer? (The examiner requires a brief description of the various kinds, their usual situations at onset, their mode of spreading, their microscopical appearances, and, possibly, your theories as to its cause.) What is the pathology of tuberculosis of the bones of the spinal column?

(No microscopical specimens are given.)

4. A fourth *vivâ* of ten minutes' duration is given on methods of staining microscopic sections and the elements of bacteriology.

SECOND PART.

[illegible] at 8 A.M.).—General questions on frac- [illegible] diseases, with treatment and prognosis. [illegible] detail the macroscopical and microscopical [illegible] and explain its formation. Describe the [illegible] changes which take place in it at birth. [illegible] and give your treatment. Describe the methods of producing premature labour.

3. *Hygiene.*—Methods of ventilation in a private house, water and its impurities, &c.

4. *Medical Jurisprudence.*—Drowning and its diagnosis. Hysteria and its relation to kleptomania, &c.

THIRD PART.

1. *Clinical Medicine* (held at 8.30 A.M. on Sunday).—Clinical cases in the wards, one case being given to each candidate and questions being asked of the patient through the medium of the interpreter. Plenty of time is given, the candidate not being limited to ten minutes as at the English Conjoint Board examinations, but a full examination of the patient must be made and candidates must be prepared to discuss the case with the examiner like the commentaries required in the higher examinations of the English universities.

2. *Clinical Surgery* (at 8 A.M.).—Cases are selected at random from those waiting to be seen in the surgery. One case is allotted to each candidate. The same remarks as applied to the clinical medicine hold good for the surgery.

3. *Ophthalmology.*—Simple clinical cases as mentioned above—e.g., granular conjunctivitis, corneal ulcer, &c.

4. *Practical Midwifery.*—Use of the forceps, demonstration of "mechanisms" of labour, and the usual operations on the mannikin (model of pelvis).

5.. *Operative Surgery.*—One or more actual operations are required to be performed on the cadaver, usually simple ones, such as the amputation of a toe, the ligature of an artery, or one of the commoner amputations on a limb. The candidate will also be asked to mark out with coloured chalk the line of incision and to describe verbally the more difficult operations. He must also be familiar with surface marking, particularly for trephining.

6. *Dissections.*—The most commonly required are the palm of the hand, the dorsum of the foot, Scarpa's triangle, and anticubital fossa. One is not expected to make a particularly neat dissection, as the time is limited to two hours, but anatomical questions will be asked afterwards on the particular part dissected.

The general standard of the examination is, on the whole, rather lower than that of the English Royal Colleges; in some subjects the examination is more difficult and in others it is considerably easier. The relative difficulty of the subjects is approximately as follows: materia medica, therapeutics, pathology, and operative surgery, above Conjoint Board standard; medicine (theoretical and clinical), midwifery (theoretical and practical), and ophthalmology, similar to Conjoint Board standard; surgery (theoretical and clinical), dissections (with anatomical *vivâ*), public health, and medical jurisprudence, below Conjoint Board standard. Honours are granted in each part on the same lines as at the English universities to candidates who obtain a certain percentage of marks.

The books generally read, and which I should recommend, are as follows. Medicine: Taylor's "Practice of Medicine." Materia Medica and Therapeutics: Hale White's "Materia Medica" and Lauder Brunton's "Action of Medicines." Pathology: Bowlby's "Surgical Pathology," and Green for reference purposes. Surgery: Rose and Carless or Walsham. Midwifery: Galabin's "Manual of Midwifery" and Herman's "Difficult Labour." Ophthalmology: Jessop's "Ophthalmic Medicine and Surgery." Operative Surgery: Waring's "Manual of Operative Surgery." Anatomy: Gray.

The total cost to the average candidate, including examination fees, residence in Brussels, return passage, and coaching fees (and I would strongly advise coaching by correspondence), would be about £40, as residence in the Belgian capital is remarkably cheap, especially at the English "pensions" on the Boulevard de Waterloo.

The average percentage of failures recently is 50 to 60, which is rather disheartening, but is easily accounted for by the fact that the foreign candidate under-estimates the standard of the examination, particularly in the stiffest subjects—namely, therapeutics and pathology.

Fuller particulars than one can give in the limited space of a short paper will be found in Dr. Henchley's little book, recently published ("The M.D. Examination of Brussels University," by A. R. Henchley, M.D. London: Mitchell, Hughes, and Clarke. 2*s.* 6*d.*).

I trust that these remarks may be helpful to those of my profession who are considering the advisability of entering for the Brussels degree, which I honestly believe to be well worth the time, trouble, and expense spent upon it. I feel confident that the possession of the degree will amply repay them in social status for the worry and anxiety always associated with an examination.

VACCINATION GRANT.—Mr. Legh Richmond Marshall has received the Government grant for efficiency in vaccination as public vaccinator in the Mary Tavy district of the Tavistock union.

BORIC ACID IN MILK.—The Exeter city council has issued a circular to the vendors of milk in that city drawing their attention to the fact that the addition of boric acid to milk is an offence under the Sale of Food and Drugs Act.

ANNUAL REPORT (FOR 1901) OF THE REGISTRAR-GENERAL OF ENGLAND AND WALES.

II.[1]

AMONG the many purposes served by the national records of English mortality from specified causes is this—that they constitute a standard by which may be measured the mortality from corresponding causes in particular administrative counties, urban and rural sanitary districts, the sanitary circumstances of which are, or ought to be, under constant medical supervision. In our editorial capacity we are frequently applied to by medical officers of health for standard data of this nature needed by them for the compilation of their local reports; and here we pause to remind our official correspondents that within six weeks of the close of each year the Registrar-General publishes in his return for the fourth quarter the vital statistics concerning the country generally, the inclusion of which in the annual reports of medical officers of health is required by the Local Government Board.

To return to the volume before us, we notice that in the report for 1901 an attempt has for the first time been made to establish a *norma* with which the several death-rates, not for urban districts alone but for rural districts also, may properly be compared.

In consequence of the changes in the character of rural communities that are constantly being effected by the "urbanising process" everywhere going on accurate discrimination between urban and rural aggregates of administrative areas is found to be impracticable. The following expedient, however, has been adopted as the best attainable in present circumstances. A selection from among the English counties has been made so as to show in one list certain counties that are chiefly urban in character and contain most of the industrial centres, and in another list certain counties that are exclusively rural or that contain only a few small towns which, although technically styled urban, nevertheless partake of that character to a slight degree only. In this way a rough sorting of counties into urban and rural has been established which, although not ideally perfect, will nevertheless usefully serve the object in view—namely, that of furnishing criteria by which the health conditions of individual urban and rural areas respectively may be tested.

In the case of such diseases as pulmonary phthisis, enteric fever, diarrhœa, or pneumonia it would be futile to compare the mortality in a distinctively rural area such as that of Shropshire or of Somersetshire with the corresponding mortality in England and Wales, more than half of the population of which is essentially urban in character. Equally futile would it be to compare with the same standard the mortality from any of these diseases in a vast urban community like that of Manchester or Birmingham, for it will readily appear on reference to the tables that the mortality from every one of the diseases mentioned is enormously greater amid the unhealthy conditions of our crowded towns than in the sparsely populated areas of our country districts. Therefore, in order that the mortality from a given cause in a rural area may be rendered fairly comparable with that in an urban area allowance must be made for differences of age constitution of the population.

In the earlier portion of this report a table is given which shows that almost without exception the mortality in the several counties that are mainly urban has been increased, whilst that in the mainly rural counties has been reduced, by correction for the differences referred to. That this is the case will clearly appear if the mortality of Lancashire, an essentially urban county, be contrasted with that of Norfolk, which is mainly rural; for whilst the rates of mortality uncorrected for age differences of population show an excess in the case of Lancashire amounting to only 20 per cent., the corrected rates show an excess of 53 per cent. The explanation is obvious, for whereas in the increasing population of Lancashire 85 per cent. of the people are found living at ages from five to 65 years, and only 15 per cent. at ages outside these limits, in the relatively stationary population of Norfolk the proportions are 81 and 19 per cent. respectively. Thus, of the population exposed to the high risk of mortality attaching to the beginning and the end of life there is a much larger proportion living in Norfolk than in Lancashire. It is, therefore, apparent that wherever great differences exist in the age constitution of communities their several death-rates must be modified in order to allow of valid comparison.

Tuberculosis and cancer, two diseases the prevalence of which has recently engrossed a large share of public attention, are treated of in considerable detail in the present report. From an interesting table which compares the mortality from pulmonary phthisis at several age groups in quinquennial periods at the beginning and the end of the last quarter of a century we learn that in 1901 this disease was fatal to 1487 per 1,000,000 of the male population of England and to 1055 of the female, the male rate having decreased since 1876-80 by 28 per cent. and the female rate by not less than 42 per cent. Among both males and females the reduction in the death-rate has been greatest at ages below 35 years. Males suffered more severely than females in London and in most of the other English counties, the male rate of mortality from this disease in the county of Warwick being nearly double the female rate. After correction for age differences in the several populations the death-rate from pulmonary phthisis among males at all ages is higher in the urban than in the rural counties by 29 per cent., whilst among females the urban and rural rates are practically identical. When, however, separate account is taken of the mortality at particular ages it is found that among persons of both sexes at ages from 15 to 35 years the disease is more fatal in the rural districts than in the urban, whilst at all other ages the reverse is the case. This apparent exception in favour of the towns suggests comparison with the case of pneumonia, the mortality from which disease is greater at all ages in the town than in the country. The explanation probably lies either in the circumstance that migration frequently takes place of young country-bred adults to the towns or in the nature of the diseases themselves. It may reasonably be supposed that as a rule the more vigorous of the young people are attracted to the towns in expectation of lucrative employment and we know that a portion of these eventually fall victims either to pulmonary phthisis or to pneumonia. The course of the former disease is generally chronic, its victims tending to become incapable of sustained exertion for a considerable period before death. The course of pneumonia, on the other hand, is generally so rapid as to prevent the patient's removal to long distances from the place of attack. Consequently, in the former case many of the patients return to their native places and their deaths are there recorded; in the latter case such return will almost certainly be the exception. Moreover, the longer the period of residence in a town the less is the probability of return to the country in case of disablement; in the first place, the previous home is less likely to be available, and in the second place the patient is more likely to be tied to the town by the responsibilities of a family.

From these considerations it might almost have been foreseen that the increase of mortality from pulmonary phthisis in rural districts caused by the return of natives from the towns would be limited to a small group of ages. The table shows that this has actually been the case, for in both sexes after the thirty-fifth year this mortality in the rural counties is seen to be much lower than in the urban.

From cancer the mortality in England and Wales during 1901 was the highest on record. Among males it was fatal at the rate of 691 per 1,000,000 living, which exceeded the decennial average rate by 16 per cent. Among females the rate was 985 per 1,000,000, or 9 per cent. in excess of the average. The present report contains two new tables which show for males and for females separately the relative frequency with which cancer affects the different parts of the body. The ages at death of the victims to cancer are also stated. The statistics of 1901 confirm those of previous years in showing that malignant disease is much more fatal among women than among men, but it still remains true that this is because of the tendency of cancer to affect the generative and mammary organs of the female rather than those of the male. In the year 1901 the male deaths from malignant disease less those from affections of the organs referred to were equal to a rate of 673 per 1,000,000 living, whilst the female rate with the same limitation did not exceed 575 per 1,000,000. It is in the case of diseases like cancer, which are fatal chiefly at particular ages, that the necessity of correction of the death-rates after the method already referred to is especially apparent. The mortality from malignant disease at ages below 35 years is small and is generally disregarded, but if the cancer mortality in 1901 at all ages over 35 years be judged of by the uncorrected rates it will appear to be higher in the rural counties than in the urban, whereas if the corrected rates be examined the opposite conclusion follows, for the rural mortality is in that case shown to be the lower. In the calculation of local cancer rates of mortality a serious complication arises from the occurrence of the deaths of many country patients in the hospitals of our great towns and their registration there. In addition to this it would be absurd to assume that the place of every patient's last residence before death had been also the place of origin of his disease.

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[1] The first notice was published in THE LANCET of Sept. 26th, p. 900.

Among the other interesting matters dealt with in the present volume we have only space left to notice one more section which now appears for the first time—namely, that relating to infantile mortality. The mortality among infants and very young children has always been regarded as a valuable test of salubrity and for this reason Dr. Tatham has thought well to devote to it special attention in the present report. Two important new tables have now been inserted. In one of them the mortality of infants under one year of age is calculated in terms of registered births in 1901, and in the other the mortality of children under five years old is shown as a proportion of the population estimated to be living at that age in the middle of the year. These tables have been prepared to show the death-rates from several causes in each of the English counties but on examining critically the local mortality very great differences became manifest according as the areas selected are urban or rural in character. In another pair of tables the mortality in the urban and rural list of counties before referred to is shown, from which it appears that both among infants in their first year and among children of less than five years the mortality is considerably greater in the urban group of counties than in the rural, and this is true whether the total mortality or the mortality from all the specified causes (with one exception) is put in comparison. It is noteworthy that at ages under one year as well as at ages under five years, boys die more rapidly than do girls and this is the case with respect to the rural quite as markedly as to the urban districts.

In concluding our notice of this report we need only say that in its present greatly improved form it will be found a serviceable and almost indispensable addition to the library of the medical officer of health.

THE CHOLERA EPIDEMIC IN SYRIA.

(From the British Delegate to the Ottoman Board of Health.)

That a great part of the Syrian interior, and to a less extent the coast, has been and is still being seriously ravaged by cholera there is unfortunately no room to doubt. The probability of a still more extensive spread of the disease in the near East and of its ultimate appearance in Europe itself is so great that serious attention may be usefully directed to the course the disease has followed hitherto, and no apology is needed for giving in some detail what is known of its behaviour in Syria during the past few months. Before doing so it will be convenient to recall the history of the epidemic in the Turkish empire since it first appeared there some year and a half ago. This has been already given in detail in successive letters to The Lancet[1] and may be briefly summarised here.

Cholera broke out among the pilgrims to Mecca and Medina early in March, 1902. It caused a considerable but not excessive mortality among them, and at the end of the pilgrimage almost disappeared from the Hedjaz. At the end of May it appeared in the Yemen and through the summer and autumn was seriously prevalent in several places along this portion of the Arabian coast, as also at Yambo and elsewhere. It reappeared in Medina in September. The Assyr province has also been the scene of a rather serious outbreak. Cholera was first recognised in Egypt in July and caused a widespread, though not a remarkably intense, epidemic, which lasted through the autumn and the early part of the winter. From Egypt cholera was carried to Syria at the end of September. It was the cause of a considerable mortality on the coast and in the interior of Palestine; it appeared in the Hauran, and at the end of November it was reported from Damascus. It was epidemic here until the middle of February, when it disappeared only to break out again a month later. Through the later months of the winter and early spring the disease was confined to Damascus. Its subsequent course here has been as follows.

Throughout the month of April the number of cases of, and deaths from, cholera in Damascus varied from between *nil* and three each day. Towards the end of the month there were several days together during which no fresh case was reported. But occasional cases continued to occur through April and May, and towards the end of May it was officially admitted that the disease had appeared in several villages outside the town of Damascus itself. In the town the official figures would indicate that the cholera remained comparatively quiescent, causing only sporadic cases, until the second week in July, when it became more active, and that since that date it has been truly epidemic. The following are the figures published in the official bulletins since the beginning of the recrudescence of cholera on March 18th last:—

Cholera in Damascus.

Date.	Cases.	Deaths.
From March 18th to May 3rd	77	87
,, May 4th ,, ,, 11th	4	5
,, ,, 12th ,, ,, 17th	3	2
,, ,, 18th ,, ,, 24th	9	7
,, ,, 25th ,, ,, 30th	4	4
,, ,, 31st ,, June 7th	1	1
,, June 8th ,, ,, 11th	2	2
,, ,, 12th ,, ,, 20th	5	4
,, ,, 21st ,, ,, 28th	6	7
,, ,, 29th ,, July 4th	10	13
,, July 5th ,, ,, 12th	8	7
,, ,, 13th ,, ,, 18th	48	23
,, ,, 19th ,, ,, 26th	31	31
,, ,, 27th ,, August 1st...	29	19
,, August 2nd ,, ,, 8th	20	11
Totals	257	223

The totals are believed to be very considerably below the truth.

The first known cases of cholera outside Damascus during the present summer occurred at Katana, the centre of a district of the same name, situated some "three hours" (say, 15 miles) to the south-west of Damascus. On inquiry, it was ascertained that on May 24th a woman inhabiting Katana was attacked with symptoms of cholera but recovered Her father fell ill on the morning of the 25th and died at 11 o'clock the same night. Three other persons were attacked on the same day and died after illnesses varying from five and a half to 20 hours. Another death occurred on the 26th; the patient, a woman, had suffered from diarrhœa for several days previously. On the 27th a seventh person, a man, was taken ill at 6 o'clock in the evening and died seven hours later. Cases continued to occur here until June 26th, since which date Katana has disappeared from the bulletins. It is not, however, quite clear whether this indicates a complete cessation of the epidemic there.

On June 1st news was received of the appearance of cholera at Zebdani, some 20 miles to the north west of Damascus, and having a station on the line of railway from Beirût. The first case was that of a vegetable-seller who had left the village for Damascus on May 20th and returned to Zebdani on the 24th. He fell ill on the following morning with colic, diarrhœa, vomiting, cramps, and cyanosis, and died on the 26th. About the same time cases were reported from Douma, a few miles east of Damascus. Two men fell ill here with cholera on May 28th and died on the following day A third had suffered from vomiting and diarrhœa, but was convalescent when the other cases were reported

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[1] The Lancet, March 4th (p. 916), July 5th (p. 39), and Nov. 22nd (p. 1414), 1902, and Jan. 31st (p. 324), and April 11th (p. 1052) 1903.

On June 6th the appearance of cholera in Ideyde, a village of 500 inhabitants, four hours north east of Damascus and in the district of Douma, was announced The first known case was that of a man from Hedjani, a village in the neighbourhood of Ideyde, who died in a tent close to the latter village on May 28th, shortly after eating a hearty meal On the same day an old man, aged 60 years, and a child, aged three years, fell ill and died On the 31st the wife of a Bedouin died, apparently from cholera, in another tent near the village On June 2nd a man and a child, aged nine years, fell ill and died suddenly Two other persons were found to have suffered from choleraic symptoms and were convalescent at the time of the inquiry.

It is clear, then, that about the last week in May and the first week in June the cholera infection had begun to spread in all directions from Damascus as a centre Villages were already infected lying from 10 to 20 miles to the east, to the west, to the north west, and to the south east A little later the disease began to advance steadily northwards On June 8th it was reported that seven cases of cholera, of which three had ended fatally, had occurred in the village of Kara in the district of Nebik, 15 hours north (or north north east) of Damascus and 12 hours south of Homs Both Nebik and Kara are on the main line of communication which runs northwards from Damascus, through Homs and Hama, and ultimately to Aleppo This, as will be shown later, has been one of the principal lines along which the present epidemic of cholera in Syria has spread, a second route of importance being the valley of the Orontes river On June 12th news was received of a suspiciously high mortality in Hama itself. Hama, or Hamath Epiphania, is a town of some size situated about the thirty-fifth parallel of latitude and rather more than half way on the road from Damascus to Aleppo The first telegram from here reported numerous deaths in a short space of time in a certain quarter of the town A sanitary inspector was sent to inquire and he definitely announced that cholera existed in the Medina quarter of Hama The outbreak here has been one of considerable severity, as shown by the following figures —

Cholera at Hama

Date	Cases	Deaths
From June 8th to 12th	?	?
,, ,, 13th ,, 19th	23	12
,, ,, 20th ,, 26th	13	7
,, ,, 27th ,, July 2nd	29	34
,, July 3rd ,, ,, 10th	41	83
,, ,, 11th ,, ,, 17th	55	56
,, ,, 18th , ,, 24th	25	35
,, , 25th ,, ,, 30th	23	26
, August 1st , ,, 7th	15	25

Although Homs lies considerably to the south of Hama and between the latter and Damascus, it was not invaded by cholera until more than a month after the disease had well established itself in Hama The first known cases occurred here on July 15th and between that date and the 31st 34 cases and 21 deaths were reported From August 1st to 7th there occurred 67 cases with 64 deaths and from August 8th to 14th as many as 146 cases and 161 deaths

In the meantime cholera was continuing more or less actively in the places already named in the near neighbourhood of Damascus and spreading to others It is impossible to find on the best maps extant the names of many of the villages to which the disease is said to have spread and it would occupy too much of your valuable space to trace in detail the course of the epidemic in each of these obscure localities It will suffice to give their names, their approximate position, and the dates where known of the first cases This I have attempted to do in the table given on next column

The course and intensity of the outbreaks of cholera in these various villages have differed greatly It must, however, be remembered that the news received from many of them has been scanty and intermittent and the mention of only a few cases from time to time in any particular village is no evidence that these are all the cases that have occurred there The date of the first case or cases in any village has rarely been given with accuracy In many instances the name of a village has only appeared in the telegrams after the disease has been present for weeks and already caused a high mortality

Name of village	Approximate position and size	Date of first cases of cholera
Cadi rand	" Three hours south of Kira (? Kara)	June 13th
Dumashe	?	,, 13th
Beytaria	" Six hours east of Damascus, a village of 200 inhabitants and 11 houses	,, 6th
Karale	?	?
Sbene	" Half an hour south of Damascus	June 18th
Xal roud	?	,, 18th
Kemaria	?	18th
Adra	" Three hours north east of Damascus	Before , 20th
Molaka	?	,, 22nd
Rama	?	,, 19th
Tel Nehsan	" One hour from Ideyde	,, 6th
Telhab	In the Hamidié district	?
Deir Shemil	?	June 25th
Ghabagheb	In the Hauran 2000 inhabitants	, 19th
Djebal	Two hours from Ghabagheb, 1000 inhabitants	17th
Aïn karoun	In the Hamidié district	Before July 2nd
Mesayaf	,, ,,	,, ,
Der Ali	" Four hours south of Damascus, 250 inhabitants	June 17th
Kessoué	" Three hours south of Damascus	, 20th
Zobar	" In neighbourhood of Der-Ali	?
Merdjani	,, ,,	?
Shegrania	,, ,,	?
On el Koussour	, ,,	?
Boida	?	June 17th
Hadjira	" Half an hour from Boida "	?
Tel Mescas	?	June 25th
Hamidié	?	July 11th
Larmié	?	,,
Kouteipa	?	Before July 11th
Mahzania	?	,, ,,
Rehebe	?	,, ,
Doumer	?	,, ,,
Menyoud	In the Selimie district south east of Hama	,, July 14th
Dermana	?	,, July 15th
Michta	?	,,
Kariat	?	,, ,,
Khan Sheikhun	North of Hama and on the Hama Aleppo road	July 1st
Mervout	In the Selimié district.	Before July 17th
Saran	" Four hours from Hama (direction not stated)	, ,,
Tel Meskan	?	July 7th
Kat Elias	" South west of Maalaka	, 15th
Ghaza.	" Four hours south of Maalaka	Before July 18th
Haresta	In the Douma district	,, 20th
Maalaula	In the Nebik district	July 18th
Chedjara	In the Kuneitra district (Hauran)	Before August 2nd
Hauche Hala	In the Bekaa district	July 29th (?)
Nehir	In the Zebdani district	August 1st (?)
Kerdjela	" Four hours south of Damascus	In July
Zahla	In the Lebanon	August 4th
Nebik	Centre of district of same name	,

Thus, for example, the first news from the village of Beytaria was that 26 persons had been attacked and that 23 died within a week From Telhab the earliest announcement was that the mortality from cholera had already reached ten per day Still more striking was the first news from Der Ali. From this village, of only 250 inhabitants, it was reported on

July 5th that 51 deaths had occurred there since June 17th, that 15 fresh cases had been declared on July 4th, and that 43 Bedouins camped near the village had also died from cholera. In like manner it was learnt from a report received at the beginning of August from the medical officer of Nebik that the disease existed in many villages that had not been mentioned in the daily telegrams and that in those which had been mentioned the mortality had been much higher than was indicated by the daily returns. The following were the figures given in this report as the totals of cases and deaths from the beginning of the epidemic to August 2nd (all the villages mentioned are in the district of Nebik):—

Name of village.	Cases.	Deaths.	Name of village.	Cases.	Deaths.
Kara	55	35	Maadania...	49	28
Derative ...	18	3	Rehebé ...	350	316
Yabroud ...	150	100	Djeroud ...	40	35
Maaloul ...	3	3	Admir ...	150	120
Aintive ...	19	16	Nasria ...	1	1
Kouteiba ...	31	18	Outrié ...	2	1

The village of Rehebé mentioned in this report had scarcely been referred to in any previous telegram and almost the first notice of the existence of the disease there was the announcement of 350 cases with 310 deaths. A similar statement is true of Admir with its sudden announcement of 150 cases and 120 deaths.

It will be gathered from these facts—and the conclusion is abundantly confirmed from other sources—that the actual course of the present epidemic, the extent of country which it has covered, and its intensity in different places are matters upon which it is impossible to speak with exactitude. All that can be said is that the greater part of the Syrian interior—or hinterland, if the word be preferred—is more or less severely affected; that the disease has steadily progressed in all directions, but particularly northwards, from Damascus; and that in all probability could the total mortality be known it would prove to be a very high figure. That the disease is an acute form of cholera is clear from the very short duration of many of the cases. The figures are far too inexact to draw any conclusions from the proportion of deaths to reported cases.

The above figures and statements refer exclusively to the epidemic in the interior of the vilayet of Syria. Recently it has spread northwards to that of Aleppo and westwards to the shores of both vilayets. The first place invaded by the disease in the Aleppo vilayet was Djisri-Shagur, 12 hours south-west of Aleppo, a town of some importance, on the Nahr-el-Asi, or ancient Orontes, river. It is not quite clear when the disease first appeared there. On July 20th it was reported that ten cases had occurred there on the previous day so that presumably it had been present there for some little time before. The course of the outbreak there follows:—

Date.	Cases.	Deaths.
to July 25th	52	18
26th ,, August 1st	83	75
,, ,, 8th	36	27
,, ,, 15th	13	10

cases of cholera occurred at Idilp, some importance, three or four hours , and between it and Aleppo. The apparently not been a serious one, the the four successive weeks numbering four, and the deaths four, four, five, and two Other villages in which cholera has appeared vilayet have been the following: Kespan and both in the district of Djisri-Shagur, first July 21st; Maharah (position not named), first July 31st; Nahli, on August 2nd; Binieh, in the at the end of July; Muara (date not named); August 12th. Cases also occurred in the Sheikhun, this village lying on the frontier two vilayets of Syria and Aleppo. From above-named places, so far as they are known, it will be seen that the cholera has advanced well on the way towards both Antioch and Aleppo, but neither of these cities has as yet become infected.

Up to July 22nd the epidemic was confined to places in the interior. On that date the first case occurred on the coast in the important port of Tripoli. On the 24th a second case occurred and for several days only occasional sporadic cases were reported, but at the beginning of August the numbers began to rise considerably and on the 4th it was reported by telegram that the inhabitants were in a state of panic, that they were leaving the city by sea and land, and that scarcely half the population remained. The last statement appears to have been an exaggeration, but it is certain that a large number of refugees have fled from Tripoli in the last fortnight—in some instances carrying the infection with them. In Tripoli itself the official figures have been as follows:—

Date.	Cases.	Deaths
From July 22nd to July 26th	2	2
,, ,, 27th ,, August 2nd	18	9
,, August 3rd ,, ,, 8th	109	61
,, ,, 9th ,, ,, 15th	109	102
On the 15th	19	15
,, 16th	14	11

Finally, two cases of cholera have been reported in th last few days from Beirût, whither the disease has bee carried by refugees from Tripoli. The first case here was tha of a sanitary guard, placed on board a sailing ship tha had arrived from Arvat, an island near Tripoli, on August 6tl He developed symptoms of cholera on the 11th. Althoug the captain of this boat denied having touched at an infecte port, it was ascertained that he had not only called at Tripo but had taken in vegetables and water there. A second cas also occurred on the 11th. The patient was a young woma who was undergoing quarantine in the lazaret at Beirût. Sh had been a passenger on a sailing ship which arrived fro Tripoli on August 7th. She died on the 13th. She is sai to have lost several relatives from cholera in Tripoli and he fellow passengers, 220 in number (on a sailing ship so sma that the crew consisted of but three men), were mostly refuge from that port.

As already stated, it is extremely difficult to form a accurate idea of the total mortality that the present epidemi has caused. The official bulletins, down to the last one published on August 17th, have reported 3182 cases and 263 deaths since March 18th. But it is very probable that wer the truth known these figures would have to be doubled o even trebled. Even from the towns and villages the information received is imperfect, while almost nothing is know of what is occurring among the Bedouin and semi-nomad population.

Constantinople, August 19th.

PS.—Since writing the above, news has been received o the appearance of cholera in Biredjik, an important tow on the Euphrates river some 60 miles north-east o Aleppo. On August 16th there were four cases and thre deaths here, on the 17th one case and one death, and o the 18th two cases. It is noteworthy that the disease ha spread so far to the north and east as Biredjik withou appearing in Aleppo first, although the latter city is in direct line between the other infected places and Biredjik It is to be feared that cholera, having reached the Euphrate river, will now spread to Armenia on the one hand and t Mesopotamia on the other.

August 20th.

MEDICINE AND THE LAW.

A Garbage-monger Imprisoned.

CASES of the exposure for sale of food unfit for huma consumption have a certain amount of similarity in thei general features. The Exeter magistrates, however, o Sept. 25th dealt with a miscreant whose offence was eve more recklessly dangerous and more crudely disgusting tha is usual. A quantity of herrings had been consigned fro Grimsby to a fish merchant at Exeter who had *refused* t accept delivery of them. The Great Western Railwa

Company officials, being naturally unwilling to keep stinking fish at their station, in order to get rid of them sold them for manure to the defendant, a man named Crawley, who thus obtained six barrels containing 2800 herrings for 4*s.*, or between four and five dozen for 1*d.* In his purchase he had as a partner another man who went at once to try to find a purchaser of the herrings as manure, during which time Crawley obtained a hand-barrow and proceeded to offer them as food in one of the poorest parts of the city. Here a sanitary inspector found him trying to sell the putrid fish as "fresh herrings" at 3*d.* per dozen, and a boy who had been engaged to help to push the barrow gave evidence that some had actually been sold. An order was obtained for the destruction of the fish and Crawley received a well-merited sentence of two months' imprisonment, being perhaps lucky in having been so early detected in his attempt upon the health of his neighbours.

Another Garbage-monger Fined.

The herrings bought wholesale at Exeter as manure and retailed by their purchaser for human food might appropriately have been followed on the dinner table by certain meat of which 27 pieces weighing 154 pounds were seized recently at Manchester. Upon the prosecution of a butcher named George Thompson of Medlock-street, Hulme, for exposing the meat for sale, evidence was given which showed that he had bought about 300 pounds on a Saturday morning at 1½*d.* per pound, that on the evening of the same day when seen by an inspector of the markets committee it was turning green and was in an advanced stage of decomposition, and that it had been cleverly disguised by being mixed with better meat, a piece of sound frozen meat being in one case found skewered to a piece of the bad meat so as to cover and to conceal it. For the defence it was said that half the meat bought had been sold and that only one customer had complained of it, that it had been a bad day for keeping meat, and that the low price was due to the wholesale traders' desire to get rid of their stocks before Sunday. The magistrates ordered Thompson to be fined £20 and costs and expressed the opinion that better supervision at the slaughter-houses on Saturday morning was needed.

Evidence before Coroners.

At an inquest held before Mr. Wynne E. Baxter upon the body of a barmaid who was stabbed at a public-house a somewhat animated discussion seems to have taken place between the coroner and the solicitor representing a person arrested for the crime who was present in custody. The dispute was not upon a point of direct medical interest but so many medical men are appointed coroners that it may be useful to call attention to it. A medical coroner may have received some legal training and yet not have had the opportunity of rendering himself familiar by practice in the courts with the points which may be raised at any moment before him. In this instance it may be observed that the coroner whose mode of putting a question was objected to said that he had had 25 years' experience in his office, to which the objecting solicitor retorted that he on his side had had 40 years' practice in advocacy. The *Daily Telegraph* thus reports the matter. The coroner asked a witness, "Have you ever heard the prisoner threaten the deceased?" "Yes." Mr. Armstrong (the solicitor): "Is not that a leading question and hardly fair to the prisoner?" The Coroner: "There is no question of leading questions in a coroner's court." Mr. Armstong: "The law of evidence applies here, I suppose?" The Coroner: "Only to a limited extent." Mr. Armstrong: "It would not be accepted where they know [illegible] to have been perfectly right [illegible] and the form in which he put his question was not an unfair one. The law of evidence only applies in a limited sense to a coroner's court in that the inquest is held, or rather conducted, by the coroner only for the purpose of ascertaining the cause of death. There are no parties before him, no one intervenes in the interest of any person suspected or otherwise except by the coroner's permission, and the coroner is responsible for the eliciting of the truth. It is a court of inquiry merely. A leading question is one which suggests its answer and is objectionable on these grounds. That is to say, an advocate is rightly not allowed by the form of his question to put into the mouth of his own witness the answer which he desires to obtain. The coroner is not an advocate, nor is he a judge holding even the balance between two advocates; he is endeavouring to get at the facts in the interests of the public and very often has but little to help him in so doing. Consequently he not only may, but sometimes must, put questions in a form which would not be permitted in the case of a prosecuting counsel upholding a particular theory with regard to a crime as against that propounded by the defence. Moreover, the question put by Mr. Wynne Baxter was only to a very small extent a leading question. It suggested the idea of threats but there was nothing in the form of it to show that a particular answer was expected and the reply might have been "yes" or "no." Had he asked "Have you *not* heard the prisoner threaten the deceased?" he would clearly have suggested a response in the affirmative. Had he said, putting the words actually used into the witness's mouth, "Did you once hear the prisoner say 'I will put her light out'?" he would have caused the answer "Yes" to cover a detailed statement of matters with regard to which the witness should have given evidence spontaneously and to have done so would have interfered with the fairness of the inquiry. It is true that Mr. Wynne Baxter might have said to the witness "Have you ever heard the prisoner speak of the deceased?" and on obtaining the answer "Yes" might have followed up the first question by asking "In what terms did he do so?" and so on until he arrived at the words actually used. To do this would be open to no objection from the advocate appearing for a suspected person but under such conditions the coroner might not find it easy to get through his work in the time at his disposal and might also find it very much more difficult than it now is to arrive at any conclusion at all. The accused person is protected from any possible injustice by the fact that at his ultimate trial, if he be committed, a stricter practice prevails than that of the coroner's court.

MEDICAL SCHOOL DINNERS.

The Middlesex Hospital.—Adhering strictly to precedent the past and present students of the Middlesex Hospital and their friends assembled on Oct. 1st at the Trocadéro Restaurant to celebrate the commencement of the academic year. There was a good attendance, 141 sitting down to dinner, under the chairmanship of Dr. William Pasteur, physician to the hospital. The guest of the evening, the Hon. Mr. Justice Wills, had presided during the afternoon at the opening ceremony in the medical school, distributing the scholarships and prize swith much geniality and interest. Lord Sandhurst, K.C.S.I., having resumed his old position in the direction of affairs as chairman of the weekly board, was also present with other members of the governing body and of the consulting and active staff. After the royal toasts had been duly honoured that of "The Services" was proposed by Sir Richard Douglas Powell who referred to numerous officers in all branches of the public service who had received their medical education at the Middlesex Hospital. Lieutenant-Colonel M. W. H. Russell responded, alluding to the services of the medical department in the field during the recent war and acknowledging the appreciation of the *personnel* even if criticism had fallen on the former system of the Royal Army Medical Corps which had recently undergone extensive modifications and reforms. The toast of "The Middlesex Hospital and the Medical School" was then given by the chairman who dwelt upon the steady progress of both and referred to the recent additions and improvements which rendered the school not only complete in all essentials but placed it in the first rank in research and laboratory equipment. Lord Sandhurst replied on behalf of the hospital, mentioning his unbroken association with medical organisation, since the interval between his former and present tenure of the chairmanship had been devoted to the Presidency of Bombay in the period of plague and famine, where he had still further proof of the devotion and sympathy of the members of the medical profession. Mr. John Murray, the Dean, spoke on behalf of the medical school the full achievement of which he had given in the afternoon. The health of the past and present students was proposed by Dr. Sidney Coupland in an excellent speech full of reminiscences of an earlier phase of hospital work and was replied to by Dr. Edward Norton and Mr. W. A. Rees, representing respectively the former and present pupils of the school. The health of the visitors was proposed by Mr. Stephen Paget in a humorous and appropriate speech and was responded to by the Hon. Mr. Justice

Wills and by Mr. Wilhelm Ganz, under whose direction, with the assistance of Mr. Bovett, Mr. Hugh Peyton, and Mr. Charles Deacon, a most enjoyable musical programme was given. With the toast of "The Chairman," proposed by Mr. A. Pearce Gould and feelingly acknowledged, a most enjoyable gathering terminated shortly after 11 P.M.

Charing Cross Hospital.—Mr. C. Carter Braine presided on Oct. 1st at the annual dinner of the past and present students of the Charing Cross Hospital which took place at the Hotel Cecil, London. The toast of "The Hospital and Medical School" was given by Mr. Braine who spoke of the loss which the institution had sustained by the retirement of Dr. T. H. Green from the medical staff. He said that the name of "Tommy Green" was known throughout the entire medical world in connexion with clinical teaching. Although the medical school of Charing Cross Hospital must be always a small one they must make up for the paucity in numbers by the quality of the men. Mr. Braine made a short speech because, he said, that as an anæsthetist it was his duty to keep his eyes and ears open and his mouth shut. Dr. F. W. Mott in responding described the way in which Dr. Green's book on Pathology had stimulated him as well as others in their work. Mr. H. F. Waterhouse then gave the toast of "The Visitors" and told his audience how he had been charged by Sir Charles Wyndham to express his regret at his unavoidable absence from the dinner. Sir Charles Wyndham had also requested him to convey to the students of the hospital an invitation to come on any date they might fix to his theatre where he would be glad to welcome them. A telegram accepting the invitation was duly despatched to Sir Charles Wyndham. Mr. P. J. Freyer replied for the visitors. Mr. Stanley Boyd in a neat speech proposed the toast of "The Chairman's Health" and an enjoyable dinner was brought to a close by a very hearty acknowledgment being accorded to the two honorary secretaries, Mr. G. S. Welham and Mr. Sidney Boyd, for the manner in which they had carried out the duties of their office.

St. Bartholomew's Hospital.—The annual dinner took place on Oct. 1st in the great hall of the hospital. Mr. W. Bruce Clarke occupied the chair and 183 persons were present. In proposing the toast of the evening the chairman congratulated the hospital on having passed through the late crisis and referred warmly to the good feeling and close connexion between the hospital and the school. Mr. Alderman Alliston responded, the treasurer being unavoidably absent. He spoke heartily and cheerfully of the future and in behalf of the lay administration thanked the chairman for his cordial expressions of loyalty and goodwill. The toast of "The Guests" was proposed by Dr. S. J. Gee, who expressed the hearty desire of the school to contribute toward the success of the University of London. The Principal of the University, Sir A. W. Rücker, in responding, referred warmly to the energy and capacity shown by Mr. H. T. Butlin as Dean of the Faculty of Medicine and gave some remarkable figures to illustrate the increase in the number of undergraduates. Mr. Butlin then proposed the health of the chairman and with the usual vote of thanks to the secretary the dinner ended.

St. George's Hospital.—There was a record attendance at the annual dinner of the medical school held on Oct. 1st in the Whitehall Rooms of the Hotel Métropole. The chair was occupied by Dr. T. Clifford Allbutt, Regius Professor of Physic at the University of Cambridge, who in proposing the toast of the evening expressed his conviction that the time had come when more research work must be accomplished at the great hospitals of the metropolis. The ordinary clinical material should be used not only for the benefit of the patients attending the hospitals but for the purpose of guiding scientific thought and enriching medical science. In this way it would be possible to make medical discoveries which would inevitably promote the well-being of the general public. To their infinite credit the governors of St. George's Hospital had approved of the principle that the medical men who gave their entire time to the services of the hospital in positions such as that of medical registrar should do so free from financial embarrassment. That was a new departure and they were all agreed that it was eminently calculated to advance English medicine. The toast was responded to by the dean, Dr. Arthur Latham, who said he was glad to state that St. George's Medical School still stood at Hyde Park Corner. Success had attended their efforts in every department during the past year and the prospects of continued success were never greater. As Professor Allbutt had said, owing to the enlightened policy of the governors, St. George's Hospital Medical School was now in a position to offer greater facilities to men who wished to devote themselves to medical and surgical research after obtaining their qualifications than any other hospital in England. A number of other toasts were honoured. Professor G. Sims Woodhead, responding for the toast of "The Guests," said that he esteemed it a great honour to be allowed to dine with St. George's men. He congratulated the school on its well-deserved success and on its virility. During the evening it was suggested that a hearty greeting should be sent to Dr. E. A. Wilson who was icebound in the Antarctic circle on board the *Discovery*. The suggestion met with the approval of the chairman and the enthusiastic indorsement of everybody attending the banquet.

University College Hospital.—Dr. Walter Rigden presided on Oct. 5th at the annual dinner of the old and present students of University College Hospital, which was held at the Hotel Cecil. The first toast after that of "The King" was proposed by Dr. Frederick T. Roberts and was that of "The President of the Royal College of Surgeons of England." Dr. Roberts explained that Mr. John Tweedy, the President, had been called away from London and was unable to be present. He congratulated the Royal College of Surgeons of England on its choice and was glad to see it widening its electoral field by selecting for the first time an ophthalmologist to the honourable post of president. Dr. Rigden proposed "The Medical School and University College Hospital," which was responded to by the dean of the faculty of medicine, Dr. Sidney H. C. Martin, who discussed the question of proper endowment for the prosecution of higher research studies. The majority of men found it so hard to make a living that they had no time for research. Well-paid professorships were required of such value that men could live on them and then men would be found to investigate the processes of disease. Mr. Christopher Heath, in a eulogistic speech, proposed the health of the chairman, which Dr. Rigden acknowledged. An enjoyable evening was concluded by a speech from Dr. E. Rayner of Stockport in praise of the successful efforts of the two honorary secretaries for the dinner, Mr. Raymond Johnson and Dr. H. B. Shaw.

King's College Hospital.—The old students of King's College Hospital held their annual dinner at the Hotel Cecil on Oct. 1st. For the last few years this gathering has been more fully recognised as a means of reviving old friendships of student days and on the present occasion the average of attendances was well maintained. Dr. C. H. Allfrey of St. Leonards-on-Sea, a past student whose record dates back to the early "sixties," was in the chair and that his selection for the post was a happy one was evidenced by the number of personal friends and contemporaries who were present to support him and by the admirable manner in which he presided. The Rev. A. C. Headlam, the recently appointed principal of the college, was an honoured guest, and Sir John A. Cockburn, K.C.M.G., himself a former student, who had delivered the address and distributed the prizes at the formal opening of the medical session in the afternoon, also attended. The past members of the staff were represented by Dr. I. Burney Yeo and the majority of the existing staff were present in person. Lieutenant Colonel A. T. Sloggett, C M.G., R.A.M.C., responded to the toast of "The Services," proposed by Mr. W. Watson Cheyne, C.B. The toast of the evening, "King's College and King's College Hospital," was proposed by the chairman and responded to by the Rev. A. C. Headlam. Mr. Reid, Mr. Hughes, Mr. Turtle, and Mr. Dunkerton contributed an excellent selection of music. Greetings were exchanged with the Charing Cross Hospital dinner, which was being held in the same building, and altogether a very enjoyable evening was spent.

St. Mary's Hospital.—The annual dinner of the past and present students was held in the Whitehall Rooms of the Hôtel Métropole on Oct. 2nd, Dr. R. Farquharson, M.P., being in the chair. There was a good attendance, 175 being present, and the guests included Mr. Henry Harben, chairman of the hospital board, Sir A. W. Rücker Principal of the University of London, and Mr. F. G Hallett. The loyal toasts proposed by the chairman were duly honoured. The chairman in proposing "Prosperity to St. Mary's Hospital Medical School" said that the toast recalled old memories to him as a physician and former student of the hospital The progress of St. Mary's Hospital during the last 40 years had been extraordinary, and he attributed this to the strength of its staff and the high traditions of work and duty which it had established He recalled the services of the late Mr Samuel Lane and Mr James Lane to whom the hospital owed so much, and congratulated the school on retaining the services of the third generation in the person of Mr Ernest Lane The Dean, in replying for the teaching staff, referred to the growing numbers and increasing influence of their past students in every department of professional work. Captain Rogers, I M S, replied for the past students and Mr J R Rous for the present students Mr Page gave the toast of "Our Guests," coupled with the names of Mr Harben and Sir Arthur Rücker Sir Arthur Rücker, in replying, congratulated the school on the increase of its students this session He was glad to say that there had been a general increase in the university entries In June there were 700 more candidates and in September 400 more for matriculation than in the previous year The work of coördination had received an important stimulus from the work of Dr Waller in relation to the higher teaching in physiology, and similar advances had now been made in biology and in the faculty of arts Sir [illegible] the health of the chairman who [illegible] y years ago he had severed his [illegible] Hospital with great regret, and that was only atoned for by anything he might have done to promote the welfare of the medical profession

Looking Back.

FROM

THE LANCET, *SATURDAY*, OCT. 8, 1825.

THE INTRODUCTORY ANATOMICAL LECTURES DELIVERED IN LONDON ON THE FIRST OF OCTOBER, 1825

WE this week present out readers with the introductory addresses of all the anatomical lecturers of London, with the exception of those of Mr Carpue and Mr Mayo[1] The former of whom is not in the habit of delivering an introductory lecture, which, to use his own expression, he considers a *flash in the pan*, and the latter called at our office for the express purpose of stating that he objected to the publication of his lecture We did not attempt to inquire into the grounds of Mr Mayo's objection, but we are disposed to give him credit for having exercised a sound judgment. Posterity may, indeed, suffer from Mr Mayo's resolution, but as cruelty to posterity is not yet made an offence by the humane Mr Richard Martin we know not how to avert the threatened calamity, if Mr Mayo chooses to continue inexorable

Mr Mayo is a private lecturer, and he has a right therefore to exercise his own discretion with respect to the publication of a private lecture, but our friend Mr ABERNETHY stands, we maintain, in a very different situation, and we have no scruple, therefore, in publishing *his* introductory lecture in order to complete the series even though he may on this, as on former occasions, be inclined to recalcitrate As a Hospital lecturer, independently of the monopoly which he has procured for himself by the College Bye-law, he must abide by the consequences of his situation, we are anxious to bring this question to a fresh hearing, we are prepared to meet our friend, even though he should think fit to invade the retirement of Lord ELDON for a fresh injunction Mild and gentle as we know Mr Abernethy to be in all other respects, as a public Hospital lecturer we consider him as much *feræ naturæ* as the partridges which the Lord Chancellor, not having the fear of Richard Martin before his eyes is now bagging at Encombe

The order in which the lectures stand, has been adopted with a view to our convenience, and is by no means to be considered as a test of their respective merits

ASYLUM REPORTS.

Dundee Royal Asylum (Annual Report for 1902).—The average number of patients resident during the year was 436, comprising 176 males and 260 females The admissions during the year amounted to 201—viz 87 males and 114 females Of these 155 were first admissions Dr James Rorie, the medical superintendent, states in his report that the advanced age of many on admission still continues to be a prominent feature, one patient being 67, one 69, three 70, one 72 one 73 one 75, and one 81 years old Of the admissions 28 were paupers from other asylums The physical condition of the patients on admission has been very similar to that of former years The number of patients discharged as recovered during the year amounted to 59—viz, 25 males and 34 females, or 13 5 per cent of the average number resident The deaths during the year amounted to 40, or 9 1 per cent as calculated on the same basis Of the deaths three each were due to cardiac disease and cerebral paralysis, four to pulmonary tuberculosis five to senile decay, ten to general paralysis of the insane, and the rest to other causes "The principal feature in the mortality" says Dr Rorie, "is again the large number of deaths due to general paralysis, this and other organic brain diseases accounting for 55 per cent of the total number of deaths" The mortality has been chiefly amongst those recently admitted One patient, however, had been a resident in the asylum for over 54 years "For a considerable time he had been out on parole and had practically complete freedom Being in possession of a small annuity he was in the habit of taking his sister with him to various parts of the country for a fortnight's holiday yearly The delusions from which he suffered were of a harmless nature towards the end of his career but remained vivid to the last." In consequence of the recent serious accident by fire at Colney Hatch Asylum, London, the arrangements for extinguishing fire have been carefully inspected by the superintendent of the Dundee fire brigade and found equal to meet all contingencies The Commissioners in Lunacy state in their report that the patients were found to be in a satisfactory condition as regards clothing and personal neatness, that the care and treatment of the sick and of newly admitted patients continued to be skilful and efficient that all parts of the institution were in good order, and that the medical case books and registers were found to be accurately and well kept. The committee of management states in its report that arrangements are in progress for the purchase of a property and buildings at Westergreen to increase the capacity of the asylum The conditions of sale and purchase require the sanction of Parliament and a Bill authorising the purchase has passed through both Houses and only awaits the Royal Assent

Lincoln County Asylum, Kesteven (Annual Report for 1902).—The asylum was opened in June, 1902 The average number of patients resident during the year was 146 comprising 64 males and 82 females The admissions during the year amounted to 93—viz, 25 males and 68 females Of these 40 were first admissions Dr J A. Ewan, the medical superintendent states in his report that the chief event of the year was the removal of the patients accommodated at the temporary asylum at Grantham to the present building, which was accomplished without mishap on June 20th, 1902 Of the admissions 40 were brought directly from the unions of the county of Lincoln Of these "a large proportion consisted of the restless old and feeble, or paralysed, who undoubtedly require care and nursing, and for this class of case such attention at present, in country districts at least, can seemingly only be obtained in a lunatic asylum, although, perhaps, the workhouses would be a more fitting shelter" Only about 25 per cent of those admitted were deemed curable The number of patients discharged as recovered during the year amounted to eight—viz, four males and four females or 5 4 per cent of the average number resident. The deaths during the year amounted to 17—viz, 11 males and six females, or 11 6 per cent as calculated on the same basis Of the deaths two each were due to epilepsy and bronchitis three to general paralysis of the insane, four to cardiac disease, and the rest to other causes "It is satisfactory to note," says Dr Ewan, "that tubercular disease was again absent from the death list. The male wards are still in an unfinished condition but all those on the female side have been coated with duresco and five out of the seven are in full occupation One ward has been set aside for paying patients and it is intended to receive at the lowest possible remuneration consistent with a more liberal diet and extra nursing those whose means do not permit of their being sent to one of the more expensive private asylums. The grounds are already fairly well planted with trees and shrubs; the farm and orchard are not yet fully under cultivation, but it has been possible to grow enough potatoes, turnips, oats, and hay for the requirements of the institution. The weekly charge of maintenance has remained at 12*s.* 10*d.* per patient. The Commissioners in Lunacy state in their report that the asylum is designed to accommodate in the first instance 420, and ultimately, by the addition of two more blocks, 600 patients. The design, structure, and workmanship displayed in the building seemed to be excellent and the occupied wards were suitably furnished. They add that the condition of the patients was satisfactory and that the medical case books were properly kept. The committee of management states in its report that the making of roads and the planting and laying out of the grounds have been nearly completed and that the building is lighted throughout with electricity.

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[1] The addresses reported are by the following lecturers:—Mr Abernethy, Theatre of Anatomy St Bartholomew's Hospital Mr Brookes Theatre of Anatomy [illegible] Cooper, New Theatre Guy's Hospit[illegible] London Hospital Mr Grainger The[illegible] Maze Pond Mr Sleigh Theatre [illegible] Grosvenor square, Mr Dermott New [illegible] Windmill street Golden square, M[illegible] Anatomy, Great Windmill street and Mr Green Theatre St Thomas's Hospital

Earlswood Asylum, Surrey (Annual Report for 1902).—The average number of patients resident during the year was 515, comprising 336 males and 179 females. The admissions during the year amounted to 56—viz., 38 males and 18 females. Of these 49 were first admissions. Dr. Charles Caldecott, the medical superintendent, states in his report that 23 out of the 56 admissions showed a history of insanity or idiocy in the parents, while in 22 cases the cause of the illness was attributed to troubles connected with pregnancy and parturition. "It is gratifying," adds Dr. Caldecott, "to record a larger number of younger cases, many of whom already give promise of progress in the school or shop; on the other hand, a few must be classed as 'custodial or untrainable' and one or two will be chronic infirmary cases." The number of patients discharged as relieved during the year amounted to 34, or 6·6 per cent. of the average number resident. The deaths during the year amounted to 13—viz., six males and seven females, or 2·5 per cent. as calculated on the same basis. Of the deaths, one each was due to apoplexy, renal disease, intestinal obstruction, and influenza, three were due to epilepsy, and six to pulmonary and other forms of tuberculosis. Post-mortem examination was made in ten cases of death, or 77 per cent. The low death-rate is "a record for 44 years, with one exception, and appears little short of marvellous when allowance is made for the fact that six patients have been in residence over 50 years, 44 patients over 40 years, and no less than 102 [patients] over 30 years." 61 males and 31 females have had 7974 fits during the year. The general health of the patients has been good during the year and minor ailments such as coughs, colds, and chilblains have been less numerous than formerly, a fact attributable to the improved condition of the atmosphere of the buildings as a result of recent alterations in the lighting, heating, ventilating, and sanitary arrangements. The reports of the head mistress and head master of the schools and workshops and of the house steward state that good progress is being made by the patients who attend as pupils and workers in these two departments. The Commissioners in Lunacy state in their report that the large proportion of deaths from tuberculosis "emphasises the importance of some separate provision being made for the treatment of this class of disease which is now recognised as of an infectious character." All parts of the institution were found to be in good order at the visit, the rooms were bright and cheerful, the beds and bedding were in good condition, and signs of progress were visible everywhere. The committee of management states in its report that steps are being taken to increase and to improve the means of exit in case of fire at an estimated cost of £2000.

PUBLIC VACCINATORS AND THE VACCINATION ORDER OF 1898.—The departmental committee appointed by the President of the Local Government Board to inquire and to report with regard to the payments made to public vaccinators and vaccination officers under the Vaccination Order, 1898, heard on Oct. 1st the evidence of Mr. Joseph Brown, president of the Association of Poor-Law Unions in England and Wales, Mr. F. W. Dimbleby, senior vice-president of the association, and Mr. A. F. Vulliamy, a member of the association and clerk to the Ipswich board of guardians. The committee has already heard the evidence of the official witness, Mr. W. W. Conolly, principal clerk of the public health department of the Local Government Board

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Southampton Port Sanitary District.—The port of Southampton has within recent years increased enormously in importance and such expansion has been accelerated very materially by the fact that this port is now almost the sole centre of embarkation and disembarkation of troops leaving and returning to this country. Hence it comes about that the proper administration in a sanitary sense of the port of Southampton is a national matter. Some idea of the additional work which the late war in South Africa imposed upon the Southampton port sanitary authorities may be gathered from the fact that during 1902 no fewer than 472,927 persons arrived in Southampton by sea, this number being an increase of 123,000 over that of 1901. The efficient manner in which the duties of the port sanitary officials were performed may be inferred from the fact that no case of plague or cholera was introduced into the town during the year although a large number of vessels arrived from plague- and cholera-infected ports. As regards the introduction of non-exotic infectious diseases it is interesting to note that during 1902 as many as 127 cases of enteric fever were landed at Southampton and removed to hospital, and among other cases of illness which were landed we notice 145 of malaria, 16 of dysentery, 65 of venereal diseases, and 107 of pneumonia. Only one case of yellow fever was reported to have occurred on board a vessel bound for Southampton and this case was landed at Buenos Ayres. Of the 138 transports which arrived in Southampton during the year under review 118 were from South Africa and 12 were from Bombay. Of the total 4530 vessels of all kinds which arrived 4007 were British and 258 were German. The amount of work involved in dealing with all these transports and other vessels shows that the post of medical officer of health, which is at present filled by Mr. R. E. Lauder, is very far from a sinecure.

Metropolitan Borough of Poplar.—Mr. F. W. Alexander states in his current annual report that 14 cases of enteric fever were "directly traceable" to the eating of shell-fish, but in only two of these cases is any statement supplied as to the dates at which the shell-fish were eaten. The fact that in several instances the shell-fish (cockles) had come from Southend is presumptive evidence that the cockles were likely to have caused the disease, but in the absence of the dates even this is perhaps rather straining the logical position. One patient is stated to have eaten oysters a month previously and another had eaten cockles from Margate. Doubtless Mr. Alexander possesses all the needful information to incriminate both the cockles and the oysters but it is desirable, when possible, to furnish the dates as well as the sources of the shell-fish. As Dr. J. T. C. Nash of Southend has shown, cockles were in all probability instrumental in causing much enteric fever at Southend but it does not follow that everyone who subsequently develops enteric fever owes the attack to having eaten Southend cockles. Attention has been given in Poplar to the presence of preservatives in milk and during 1902 13·6 per cent. of the samples of milk examined contained either formalin or boric acid. The percentage of formalin present amounted to 0·02, while the amount of boric acid ranged from 0·2 to 0·01 per cent. In butter the boric acid ranged from 0·04 to 0·8 per cent.

The Port Sanitary District of Manchester.—The total tonnage of shipping borne to Manchester upon the waters of the Manchester Ship Canal is increasing year by year and with it there is, of course, also an increase in the amount of sickness introduced into the port. The work of the port sanitary officials has also been increased by virtue of the fact that the port sanitary authority has taken over the work of inspecting the canal boats within the port limits. When it is borne in mind that there are wharves and lay-byes where vessels can discharge their cargo throughout the 35 miles of the canal it is clear that the time of one medical officer of health and two inspectors must be often severely taxed. During 1902 there were 140 cases of sickness dealt with but only a small portion of these belonged to the communicable diseases concerning which precautions are taken in this country. Dr. A. M. N. Pringle, the medical officer of health, raises a very important general question in his

report as regards the sanitary condition of ships, a matter which should, in our view, receive the attention of the Local Government Board The construction of new vessels is governed entirely by the Merchant Shipping Act, under the provisions of which it devolves upon the Board of Trade surveyors to examine a ship and to give a certificate that the vessel complies with the requirements of the Board of Trade These surveyors have practically no training in sanitary matters and they are unable to exercise an adequate influence over the construction of vessels in a sanitary sense Now Dr Pringle alleges that it is by no means infrequent to find glaring contraventions of the Merchant Shipping Act on perfectly new ships The surveyor's attention is, perhaps naturally, turned more particularly towards the question of the seaworthiness of the vessel and he pays but small regard to its sanitary condition Although there is a minimum cubic space provided by the Merchant Shipping Act for each member of the crew, it is, we fear, true that the general sanitary condition of the forecastle is by no means sufficiently attended to and there is obviously a difficulty in insisting upon alterations in the case of a new ship provided with a quite recent certificate from the Board of Trade surveyor All those who are at all familiar with the sanitary condition of vessels will, we think, agree with Dr Pringle that there is need for reform and that this reform should take the shape of submitting the plans of new vessels to the port sanitary officials There should in a word, be just the same control over the construction of ships by port sanitary authorities as obtains on land in the case of new houses Dr Pringle's report furnishes a table which affords an admirable object lesson of the point which he urges Among the defects in connexion with the lighting of crews' quarters we find 78 cases in which the insuffici
window accommodation, a
94 cases were due to
apparatus provided On
during 1902 no fewer than 870 exhibited insanitary conditions in some form or other

Croydon County Borough —Dr H. Meredith Richards has been instrumental in introducing a system of voluntary notification of pulmonary tuberculosis into Croydon But he wishes it to be understood that he holds no extremist views as to the "infectiousness" of the disease We are glad to see that he agrees largely with Sir Hugh Beevor and holds with the views which we have recently given expression to in a leading article in our columns As Dr Richards remarks, it is a misuse of language to speak of the infectiousness of tuberculosis as in any way comparable with that of measles or small pox, and all epidemiologists will agree with him that the truest progress is to be made in promoting generally the resistance of the individual The system which is in vogue in Croydon of the notification of diseases which occur among school children should lead to valuable results, more especially with respect to those cases which are notified under the heading of "sore throat During 1902 there were 358 cases of ringworm and 360 cases of chicken pox notified It is to be hoped that the corporation of Croydon, now that it has become the educational authority, will under the advice of Dr Richards, set an example in the direction of thoroughly up to date school buildings and in the periodical examination of school children, not only as regards communicable diseases but as to the condition of their special senses and their general physical condition As Dr Richards observes, "most brilliant scholastic achievements would be dearly bought at the expense of permanently impaired health '

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 8067 births and 4424 deaths were registered during the week ending Oct 3rd The annual rate of mortality in these towns, which had been 15 8, 16 5, and 16 3 per 1000 in the three preceding weeks, further declined last week to 15 3 per 1000 In London the death rate was 14 1 per 1000, while it averaged 15 9 per 1000 in the 75 other large towns The lowest death rates in these towns were 6 3 in Handsworth 7 6 in East Ham, 7 8 in West Bromwich, 7 9 in Aston Manor, 8 2 in Willesden, 8 6 in Hornsey, 8 7 in Northampton, and 9 0 in King's Norton and in Wallasey, and the highest rates 20 2 in Swansea, 20 3 in Middlesbrough, 20 9 in West Hartlepool, 21 0 in Wigan and in Salford, 21 9 in Rotherham, 22 1 in Great Yarmouth, 22 6 in Merthyr Tydfil, and 25 1 in Newcastle on Tyne The 4424 deaths in these towns last week included 697 which were referred to the principal infectious diseases, against 924, 918, and 752 in the three preceding weeks, of these 697 deaths, 495 were referred to diarrhœa, 52 to diphtheria, 41 to "fever" (principally enteric), 38 to measles, 38 to whooping cough, 31 to scarlet fever, and two to small pox. No death from any of these principal infectious diseases was registered last week in Tottenham, Barrow-in Furness, or Tynemouth; among the other towns they caused the lowest death rates in Hornsey, Willesden, Brighton, King's Norton, Grimsby, Rochdale, and Halifax and the highest rate in Walthamstow, Southampton Great Yarmouth, Hanley, Coventry, Bootle, Burnley, Middlesbrough, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Warrington, from diphtheria in Reading, from whooping cough in York and Rhondda, from "fever" in Merthyr Tydfil, and from diarrhœa in Walthamstow, Southampton, Great Yarmouth Hanley, Coventry, Bootle, Burnley, Middlesbrough, and Merthyr Tydfil The mortality from scarlet fever showed no marked excess in any of the large towns One death from small pox was recorded last week in Hanley and one in Newcastle on Tyne, but none in any other of the 76 large towns The number of small pox patients remaining under treatment in the Metropolitan Asylums hospitals, which had been 46, 41, and 29 on the three preceding Saturdays, had further declined to 21 on Saturday last, the 3rd inst, one new case was admitted during last week, against nine, seven, and one in the three preceding weeks The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of last week was 1877, against 1772, 1803, and 1886 at the
were admitted
ie three pre-
the respira
tory organs in London, which had been 122, 128, and 134 in the three preceding weeks, further rose last week to 161, and were 12 above the number in the corresponding period of last year The causes of 42, or 0 9 per cent, of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in West Ham, Salford, Leeds Hull, Newcastle on Tyne, and in 54 other smaller towns, the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Manchester, Sheffield, Middlesborough, and Gateshead

HEALTH OF SCOTCH TOWNS

The annual rate of mortality in eight of the principal Scotch towns, which had been 14 4, 16 1, and 16 8 per 1000 in the three preceding weeks, further rose to 17 3 per 1000 during the week ending Oct 3rd, and was 2 0 per 1000 above the mean rate during the same period in the 76 large English towns The rates in the eight Scotch towns ranged from 13 7 in Leith and 14 3 in Greenock, to 18 6 in Perth and 18 8 in Dundee The 566 deaths in these towns included 42 which were referred to diarrhœa, seven to whooping cough, six to "fever," four to measles, four to diphtheria, and two to scarlet fever, but not one to small pox In all, 65 deaths resulted from these principal infectious diseases last week, against 77, 51 and 77 in the three preceding weeks These 65 deaths were equal to an annual rate of 2 0 per 1000, which was 0 4 per 1000 below the mean rate last week from the same diseases in the 76 large English towns The fatal cases of diarrhœa, which had been 52 19, and 44 in the three preceding weeks, declined again last week to 42 of which 21 occurred in Glasgow, five in Edinburgh, five in Dundee, five in Leith, two in Aberdeen, and two in Greenock. The deaths from whooping cough, which had been nine, 10, and nine in the three preceding weeks, further declined to seven last week, and included five in Glasgow and two in Edinburgh The deaths referred to different forms of "fever," which had been seven, five, and seven in the three preceding weeks, decreased last week to six, of which four were registered in Glasgow The fatal cases of measles which had been eight and five in the two preceding weeks, further declined to four last week and included three in Glasgow The deaths from diphtheria, which had been two, six, and eight in the three preceding weeks, declined again last week to four, of which three occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 52, 71, and 84 in the three preceding weeks, further rose last week to 88, and were slightly in excess of the number in the corresponding period of last year. The causes of 26, or nearly 5 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 18·7, 19·5, and 21·7 per 1000 in the three preceding weeks, declined again to 18·3 per 1000 during the week ending Oct. 3rd. During the 13 weeks ending on that date the death-rate averaged 18·9 per 1000, the rates during the same period being 14·1 in London and 14·5 in Edinburgh. The 133 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 25 from the number in the preceding week and included 5 which were referred to the principal infectious diseases, against 10, 17, and 16 in the three preceding weeks; of these, two resulted from "fever" and three from diarrhœa, but not one from small-pox, measles, scarlet fever, diphtheria, or whooping-cough. These five deaths were equal to an annual rate of 0·7 per 1000, the death-rates from the principal infectious diseases during the same period being 2·2 in London and 1·9 in Edinburgh. The deaths from diarrhœa, which had been seven, five, and 14 in the three preceding weeks, declined again to three last week. The fatal cases of "fever," which had been one, three, and one in the three preceding weeks, rose again last week to two. The 133 deaths in Dublin last week included 33 of children under one year of age and 34 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons showed a marked decline from the numbers in the preceding week. Six inquest cases and five deaths from violence were registered, and 42, or more than a third, of the deaths occurred in public institutions. The causes of five, or nearly 4 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

INDIAN MEDICAL SERVICE.

THE subject of the salaries of officers in civil employ, referred to in paragraph 19 of the Memorandum of October, 1903, is now under the consideration of the Government of India.

ROYAL ARMY MEDICAL CORPS.

Surgeon-General W. J Fawcett, Principal Medical Officer, 3rd Army Corps, is taken on to the establishment of his rank, A.M.S., in consequence of Sir William Wilson, K.C.M.G., having attained the age limit and being retained as a supernumerary. Captain H. N. Dunn has been selected for special employment with the Abyssinian contingent in Somaliland and is ordered to embark for duty at once. Surgeon-Captain R. H. Luce, A M R., has assumed medical charge of the station hospital and troops, Derby.

Lieutenant-Colonel A. Baird retires on retired pay (dated Oct. 3rd, 1903); Lieutenant-Colonel R D. Donaldson retires on retired pay (dated Oct. 3rd, 1903); Captain A. C. Lupton, from half-pay, to be Captain, with precedence next below M. M. Lowsley (dated Sept. 5th, 1903); Lieutenant D. D. Paton is seconded under the provisions of Article 349 of the Pay Warrant (dated Oct. 1st, 1903); Lieutenant-Colonel R. W. Mapleton retires on retired pay (dated Oct. 7th, 1903); Captain A. F. Heaton retires from the service, receiving a gratuity (dated Oct. 7th, 1903).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 3rd Kent (Royal Arsenal): Surgeon-Major A. H Robinson to be Surgeon-Lieutenant-Colonel (dated Oct. 3rd, 1903). 1st Monmouthshire: Surgeon-Captain W. E. James resigns his commission (dated Oct. 3rd, 1903).

Royal Engineers (Volunteers): 1st Gloucestershire: Surgeon-Captain G. H. Ward-Humphreys resigns his commission (dated Oct. 3rd, 1903).

PRIZE DAY AT HASLAR.

The session for the surgeons of the Royal Navy under special instruction at the Royal Naval Hospital, Haslar, terminated on Sept. 30th when the prizes were presented by Admiral J. Durnford, C B., D S.O., one of the Lords of the Admiralty. The Director-General of the Medical Department of the Royal Navy, Sir Henry F. Norbury, K.C.B., was also present. The following is a list of the marks gained by the respective officers:—

Name.	Marks.	Name.	Marks.
A. W. Iredell	4238	E. S. Wilkinson	3128
F. C. Robinson	3993	R. Kennedy	3053
C. E. C. Child...	3892	E. A. G. Wilkinson ...	3039
M. T. Malo	3826	J. H. L. Page	3017
C. H. Dawe	3661	W. E. Ormsby...	2984
R. Thompson	3620	J. J. H. Rooney	2979
W. K. D. Breton	3545	A. F. Fleming...	2678

The prizes were awarded to F. C. Robinson (gold medal), A. W. Iredell (silver medal and books), and C. E. C. Child (microscope). Sir Henry Norbury, after reading the report of the professors of the medical school, complimented the officers who had been under instruction on their marked application to their studies and their general good conduct which reflected very great credit on them all. He deplored the untimely death of one of their number, Surgeon Illingworth, which had taken place during the session, and then referred to the honour which was being done to them by the presence of Admiral Durnford who had kindly consented to give away the prizes, an officer to whom the Naval Medical Department owed a deep debt of gratitude. He had during his term of office as a Lord of the Admiralty worked hard to understand its requirements and had made untiring and successful efforts for its improvement and he was sure that they were all pleased to see him there that day. Admiral Durnford then distributed the prizes. He said that the report which had been read was a most satisfactory one and two things at once struck him, first, the credit that reflected on the officers concerned, who had worked well and whose conduct throughout the course had been so satisfactory, and, secondly, the credit that was due to his old friends, Fleet Surgeon G. Kirker and Fleet Surgeon P. W. Bassett Smith, whose capacity and teaching ability were well known and very much appreciated. The Director-General had alluded to the great interest that he (the speaker) had taken in the medical department since he had been associated with it. To this he could say that among his various duties no other had been so interesting and that in his endeavours to deal with the many questions relating to the medical, hospital, and nursing service, he had been most willingly and ably helped by the Director-General and his department and that it was a good deal due to their steady work that the various proposals had been brought to a satisfactory conclusion. He said that the medical profession was second to none and that it afforded special opportunities of doing good which were attached to no other. Looking back to the time when he first went to sea—about 40 years ago—no reminiscence, he said, was more vivid than his recollection of the medical officers' work in his first ship on an occasion when, cut off from nurses, hospitals, and their professional brethren on shore, they successfully combated a serious outbreak of small-pox with a simple devotion to duty which all admired. He had also seen them with the same satisfaction on active service and alluded to the heroic conduct of Staff Surgeon W. J. Maillard who was awarded by his Sovereign the coveted distinction of the Victoria Cross and whose death recently they had to deplore. He was a fine young and distinguished officer with high professional attainments who showed a true devotion to duty. The surgeon in a ship held a unique position of friend and adviser and very much depended on him. There were many little things he could do in the matter of his duty in connexion with the health and comfort of the ship's company, and a captain who had a good adviser in the medical officer was materially helped in conducting the service efficiently. A number of changes and considerable improvements had taken place during the last few years and others were in hand. It was desirable that in accordance with the permission recently promulgated surgeons should qualify for staff surgeon after five years' service in order to obtain early advancement. After a vote of thanks to Admiral Durnford, proposed by Inspector-General R. W. Coppinger, the proceedings terminated by a luncheon.

Surgeon-Colonel J. Richardson, retired, I.M.S., has been appointed Honorary Physician to the King in place of Surgeon-General W. R. Rice, C.S.I., deceased.

Correspondence.

"Audi alteram partem.

A NOTE ON THE PRACTICE OF DIRECT OR "IMMEDIATE" AUSCULTATION.

To the Editors of THE LANCET

SIRS,—The practice of auscultation in the minds of not a few members of our profession is inseparably associated with the use of the stethoscope Direct or "immediate" auscultation by the application of the ear itself to the chest finds, indeed, respectful mention in text books but in practice it is generally either ignored or regarded as an imperfect substitute for stethoscopy Accident led me some 12 years ago to perceive that the direct method possesses some special advantages of its own , further observation confirmed that belief and for the last ten years I have employed this method systematically and almost exclusively in the examination of the bases and back of the chest, using the stethoscope in those regions save in infants, for supplementary purposes only So familiar, indeed, had this practice become to me that I only lately realised how little it was in general use or the advantages of it were recognised A note upon the subject may, therefore, not be altogether useless

The conditions of auscultation at the back of the chest, particularly at the bases, differ materially from those in the front and at the sides The greater thickness of chest wall that sounds originating in the lung and pleura have to traverse before reaching the surface of the back necessarily tends to greater dispersion and greater loss of audibility than is the case elsewhere The lesions affecting the bases are, moreover for the most part lesions of wider extension than those for which the apices have to be searched In auscultation of the back and bases, therefore, exact localisation of signs is, generally speaking, matter of less concern than certainty of detection The flexible external ear, which admits of being exactly applied to any part of the back can be used to collect vibrations from a much wider area than is covered by the rigid chest-piece of the stethoscope, the practicable size of which is limited by the curves of the thoracic surface while the avoidance of the interposing conductor at the same time reduces the loss of sound in transmission As the area to be explored can be covered by the ear with fewer shiftings of its position than the stethoscope requires, the method has the further incidental advantage of saving the physician's time and sparing fatigue to his patient.

Of the application of the method there is little to be said that is not obvious The patient sitting up in bed or standing or sitting with the shoulders bent forwards, a napkin or fine towel may be placed over the back of the head and chest and held in position with one hand while the ear of the same side is passed rapidly over the regions to be examined The tactile sensibility of the ear is generally sufficient for purposes of localisation, but it may be supplemented, if necessary, by the fingers of the disengaged hand By directing the patient to lift his arm over his head and moving the napkin to cover the axilla direct examination may be extended to the side of the chest Even if the patient is too ill to sit up it can be conducted without much difficulty if he is made to lie first on one side and then on the other

The accident which drew my attention to the method was the discovery that in a stout patient the subject of pneumothorax amphoric breathing could be plainly heard over a wide area by the unassisted ear though it was hardly discernible by the stethoscope I have not again repeated this observation in so marked a form, but a few years' practice of the method was sufficient to convince me that the greater number of auscultatory signs at the back, both respiratory and vocal, are more easily detected, better defined, and more clearly to be discriminated from each other by this method than when the stethoscope alone is used More particularly I have found this the case —1 In cases of acute pneumonia when inflammatory consolidation commencing in the deeper parts of the lung is approaching the surface 2 In other cases of deep seated consolidation 3 In the detection of cavernous signs, particularly in the case of cavities of bronchiectatic origin situated in the bases 4 In the detection of asthmatic sibilus 5 In the detection and discrimination of moist sounds at the bases, especially those due to œdema of the lungs I have repeatedly found the fine crepitations indicative of the onset of œdema audible over a considerable area by the ear directly applied when nothing was discernible by the stethoscope At all stages of œdema I find the character of the rales and crepitations due to it more precisely defined by direct auscultation, so that it is possible more certainly to separate them from the râles and crepitations of bronchitic or pneumonic origin by which they may be accompanied 6 Most markedly in the diagnosis of pleural effusions and the determination of indications for paracentesis In some of the most recent works on diseases of the chest I find it stated that over the seat of considerable accumulations of fluid in the pleural cavity, besides dulness, immobility, and absence of vocal fremitus, we should expect to find a diminution or total absence of the breath and voice sounds In children, it is added, tubular breathing and bronchophony may be heard, but only exceptionally in adults If so uniform an account may be taken to represent the general experience of clinicians I am forced to infer that the more customary methods of examination fail to reveal all that may be detected by direct auscultation Over the area of any considerable accumulation of fluid in the adult chest, be its origin inflammatory or dropsical, the unassisted ear, according to my own experience seldom or never fails to discern a more or less distant but quite distinct tubular breathing and bronchophony, commencing at or about its upper margin and extending to the base

The tubular sounds thus heard, except in some extreme accumulations, have a special quality of their own which is characteristic, which after a little practice it is not easy to mistake, and which enables them to be distinguished without much difficulty from the similar sounds produced by pneumonic consolidation The difference is not merely one of "distance" or faintness , it is as markedly one of pitch The pitch of both sounds is always high, much higher than is usual in inflammatory consolidation of the base, though a similar pitch is not rarely found in apical pneumonia The breath sound is always "dry," never broken by crepitations The bronchophonic sound is not to be confounded with ægophony I have for many years regarded and pointed out these sounds as the most trustworthy signs we possess of an accumulation of fluid and the most definite indication for paracentesis should the circumstances of the case otherwise suggest it.

As a practical diagnostic criterion I have found them of no small value The diagnosis of a fluid accumulation, when it has reached such a degree as to distend the side of the chest, to deflect the mediastinum, to raise the ribs, and to cause the intercostal spaces to bulge, is usually a simple matter, but in the treatment of pleurisy we cannot afford to wait till these extreme results develop and paracentesis may become desirable while the quantity of fluid is still far short of that necessary to produce them 30 ounces of fluid or even more may be present in the chest and recoverable by tapping without any of these obvious signs of its presence being available and the distinction between an accumulation of fluid and a fibrinous pleurisy, apart from the signs I have described, is in such cases not free from difficulty So great, indeed, is the difficulty that many experienced clinicians profess to regard an exploratory puncture as the only certain means of decision unless the aid of radiography happens to be available A loose fibrinous layer of moderate thickness may cut off not only the vocal fremitus but the respiratory and voice sounds as effectually as a layer of fluid Measurement of the chest cannot be relied on , few chests are quite symmetrical and the side containing a fluid effusion may show no greater, or even a lesser girth than the sound side Minor degrees of displacement of the heart cannot, for many reasons, be always certainly determined Neither the rate of respiration nor the patient's symptoms give trustworthy guidance The rate may be rapid and the breathlessness severe in a purely fibrinous case On the other hand, I have removed 40 ounces of fluid from the chest of a patient whose respiration rate was only 24 and over 30 ounces from one who complained of no trouble of breathing at all The area of vertical extension of a pleurisy may, moreover, be seriously deceptive, especially when fluid has accumulated between the lung and the diaphragm On one occasion I took 37 ounces of serous fluid from a patient in whom the signs of effusion extended no higher than the ninth dorsal spinous process behind and the seventh rib in the mid axillary line In such a case one would have expected to find the action of the diaphragm seriously interfered with, but a fair amount of abdominal respiration was actually present. I was guided to the operation solely by the presence of the distant tubular breathing and bronchophony of the quality I have attempted to describe.

It would be vain to claim an absolutely invariable significance for any group of physical signs found in the chest, but as far as my observations go these signs possess as constant a significance as can be predicated of any that we know. I have never failed to find abundant fluid in performing paracentesis where they were present; I can scarcely recall an instance in which an exploratory paracentesis yielded more than a few ounces of fluid unless they were to be heard. If these facts alone should be found to be of general application I shall, I think, need no further excuse for having invited a more systematic attention to the practice of direct auscultation than it obtains at present.

I am, Sirs, yours faithfully,
ISAMBARD OWEN, M.D. Cantab., F.R.C.P. Lond.
Sept. 29th, 1903.

THE TRANSMISSION OF YELLOW FEVER.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of August 1st, p. 345, in the letter of your special correspondent in New York, mention is made of me as one of the physicians who are not entirely in accord with the conclusion of the United States Army Yellow Fever Board of 1900 that "the female mosquito of the species stegomyia fasciata is the only and exclusive conveyor of yellow fever from one person to another." What I consider scientifically vulnerable points in the series of experiments carried on by the Yellow Fever Commission of 1900 in the island of Cuba are the following, some of which your correspondent has quoted. The house in which the experiments were made was an artificial house, under completely abnormal conditions never to be found in a living Cuban house. It was more in the nature of an autoclave than a dwelling-place. This house was not located in the city of Havana, as it should have been, but outside in the country, nine kilometres away to the south west, and at about four kilometres from the sea coast, where the recognised dangerous sea air could not reach it. There was not due care in the selection of the non-immune persons with whom the infection experiments were made, probably some already immunes to yellow fever being among them. These individuals experimented with did not remain all day in that house but only went in there to sleep after dark and early in the morning came out of the house and with changed clothes remained all the rest of the day in the open air in tents placed at a distance. I call this unsteadiness, this ebbing and flowing of the experiments, a sort of Penelope's work. Besides, it is a well-known physiological law that during sleep the human organism is at its minimum of energy and activity, the nearest to death. The time selected to try the infection experiments, therefore, was precisely when the organism of those experimented with was the least liable to contract the disease. In spite of all those favourable circumstances the statistics presented (44·4 per cent.) are not, in my opinion, sufficiently convincing.

A few facts which demonstrate that hygiene, sanitary reforms, isolation of the sick patients, the absence of the large number of poorly nourished, poorly clad, and generally neglected Spanish soldiers, and the immigration department and observation hospital in connexion with it established by the United States Government have been more powerful factors in the eradication of yellow fever from the island of Cuba than the mere protection of sick patients from the bites of mosquitoes, are the following. In the city of Havana alone mosquitoes have been killed and crude petroleum has been used in their breeding places to extirpate yellow fever. In no other city or town of the island has this measure been put into practice and yet yellow fever has disappeared not only from Havana but equally as well from Santiago, Matanzas, Cienfuegos, Cárdenas, Sagua, Manzanillo, Gibara, and all the other cities and towns of the island, no matter how great the distance from Havana With the American occupation of Cuba from 140,000 to 160,000 Spanish soldiers went immediately out of it and were sent back to their native country. The large number of the Spanish Government civil employés who every month used to go to Cuba, all of them non-immunes to yellow fever, do not go now any more to that island. This immense amount of human flesh, which constituted before the fuel that kept burning the funeral pile of yellow fever victims, has completely been put out of the island. In consequence of the cleanliness, the sanitary reforms, the considerably better hygiene public and private, and the prophylactic measures instituted by the United States Government in Cuba and continued by the present Cuban Government, not only yellow fever, but also small-pox, both of which diseases were there formerly epidemic, have been eradicated and the general death-rate in each and every city all over the island has considerably decreased. The newly established immigration department and its stringent laws have also greatly contributed to the eradication of yellow fever in Cuba.

I am, Sirs, yours faithfully,
A. M. FERNANDEZ DE YBARRA, B A., M.D.,
Medical Biographer of Christopher Columbus.
New York, August 15th, 1903.

THE MEDICAL REGISTER.

To the Editors of THE LANCET.

SIRS,—In the interests of the profession may I ask you to be good enough to draw attention in your next issue to the importance to practitioners of keeping their addresses correct in the Medical Register. The chief points to which attention should be called are:—

1. The Register should not be confused with the Medical Directory as is so often done. Changes should be notified to this office by practitioners themselves and they should be careful to notice that a postcard is received in acknowledgment.

2. The present system is to send a circular of inquiry to one-third of the practitioners on the Register residing in the United Kingdom, *from whom no communication has been* received during the past 12 months, in each successive year during the period when there is no election of Direct Representatives. This year circulars were sent to practitioners from A to G inclusive and any person within those letters who has not received a circular should communicate with this office at once.

3. Anyone who is doubtful if his address is correct should inquire at the office without delay.

In past years you have kindly done your best to assist me in my efforts to save practitioners from the grave inconvenience of finding that their names do not appear on the Register because their whereabouts cannot be ascertained and I hope, therefore, that you will continue to give us the benefit of your valuable assistance in the matter.

I am, Sirs, yours faithfully,
H. E. ALLEN, Registrar.
229, Oxford-street, London, W., Oct. 2nd, 1903.

THE PREVENTION OF HORSE-DUNG IN THE STREETS.

To the Editors of THE LANCET.

SIRS,—With all the hygienic improvements hitherto effected no attention seems to have been paid to the prevention of the streets of towns from being contaminated by the dung of carriage horses. It is true that a great deal of money is expended in sweeping up the dung but it is never effectual, for part of the fluid and semi-fluid constituents adhere to the ground and by decomposing, especially in warm weather, diffuse an offensive smell through the whole atmosphere which people have to breathe, whether in the streets or in their own houses. Add to this the nuisance of clouds of dust, consisting to a great extent of fine particles of dried dung-laden with an abundance of microbes of various kinds, blown about and taken into the mouth and lungs at every breath or eaten up with the provisions exposed for sale in the shops.

All this cannot be without injurious effects upon the health of the inhabitants of a town and it might even be the means of disseminating certain diseases in man as well as in animals. It is no less objectionable from an æsthetic point of view. It being therefore undeniable that the existing state of things is a great nuisance and is put up with simply because no effectual remedy had hitherto been proposed, I have tried for some time to solve this sanitary problem in a radical manner and think I have succeeded.

I have constructed a simple apparatus which I call "an automatic dung trap" for carriage horses which entirely prevents any of the droppings and even the urine from falling on the roads. I inclose a photograph of a horse and carriage to illustrate the apparatus as applied for actual use. On slightly magnifying the parts become very clear. It consists of a suitable receiver or dung trap fixed to some convenient part of the vehicle, as the axle of the front wheels for example, and of a shoot or collector of some flexible waterproof material, attached at one end to the breech strap or its equivalent and at the other end to an outlet tube extending from the top of the receiver in the direction of the animal's breech. The receiver or dung trap contains an open-topped drawer or removable lining, which can be withdrawn and replaced by its handle at the back of the receiver. The shoot or collector has an expanded trough-like shape near the breech just large enough to catch the dung, but narrows down to the diameter of the inlet tube. The inlet tube is pivoted to the top of the receiver in such a manner that the shoot will always adjust itself to extend in a straight line from the breech strap, notwithstanding the variations in the heights of different horses.

Whether the animal is standing or running, its dung (and its urine in the case of a mare) is caught by the shoot or collector and travels by gravity along the same into the removable drawer, which can be removed, emptied, and cleaned periodically. With regard to the urine of a male animal, if desired, a funnel-shaped receptacle may be arranged in the proper position to catch the urine and convey it by means of a rubber tube into the dung trap or separate receptacle. There is also a valvular arrangement at the inlet tube of the receiver to allow the dung and urine to pass freely into the receiver, but to prevent any smell coming out. The shoot and receiver are permanently fastened together and to the carriage. When a horse is put to the carriage, all that is required is to attach the shoot by means of clamps or straps and buckles, which can be done in a couple of minutes. It will be seen that, with the exception of the receiver which is placed quite out of the way, everything is soft and flexible, and as no part of it touches the horse there is nothing in the least to frighten the most timid animal.

The only possible objection that I can see is its unusual or novel appearance. A glance at the photograph will show that it is not very obtrusive or ugly, and I think, considering its great utility, people will soon get used to its appearance as they have to the splashboard or any other necessary part of a carriage. I am convinced that if this apparatus were universally adopted the streets of towns would become almost as clean and as wholesome as a garden walk, disease and mortality would diminish, and the comforts of town life would considerably increase. I do not enter into the economical question for that will at once suggest itself to municipal authorities, the enormous expense of scavenging the streets being necessitated mainly by horse dung.

I am, Sirs, yours faithfully,
J. A. CALANTARIENTS, M.D. Edin.
Scarborough, Sept. 29th, 1903.

⁂ The apparatus as shown in the photograph is not at all obtrusively noticeable.—ED. L.

WHAT IS SCIATICA?

To the Editors of THE LANCET.

SIRS,—Dr. W. Bruce, in his letter in THE LANCET of Sept. 12th, p. 785, shows that he has not quite grasped either the substance or the spirit of my letter of August 29th, p. 633. I, like many other general practitioners, scan weekly the columns of THE LANCET to keep myself acquainted early with any new light thrown on disease or injury, and a paper like Dr. Bruce's professing to revolutionise our conception of sciatica is well calculated to attract the attention of the general practitioner. Sciatica is a common and frequently an intractable complaint, and if Dr. Bruce has given us a clue to its more effectual treatment he is worthy of our gratitude.

Having read Dr. Bruce's paper I was prompted to give details of a case on which his theory had direct bearing. A man with double arthritis deformans affecting the hip-joints is a martyr to sciatica; he sustains an intracapsular fracture of the left femoral neck, union is not good, but the sciatica on that side is cured. Three years later he gets an intracapsular fracture of the right femoral neck and comes into my hands. He is treated with extension; union is fair and the sciatica is cured this side also. I ask if the sciatica was cured by the long rest or the long stretching of the sciatic nerve? I cannot believe that an intercapsular fracture with a few weeks' rest will cure old-standing arthritis deformans of a joint and if it will not, surely the cure must be attributed to the stretching. I believe it is an accepted pathological doctrine that the group of toxins which produce an arthritis deformans may also produce a neuritis and the facts of the case seem to me to warrant the opinion that while the sciatica was no doubt in the first place excited by the joint disease there was an actual neuritis of the sciatic nerves which was benefited, as other cases of sciatica have been benefited, by stretching.

Dr. Bruce in his letter confesses that he may have put his case too strongly and thereby relieves me of the onus of suggesting that he has fallen into the common temptation of the man who has a new truth to tell, the temptation of overstating his case for the sake of emphasis. I may be wrong, but it seems to me also that he has not kept quite clear of partisanship in the strife between consulting physician and surgeon which prompts the one to declare that surgeons are prepared to use the knife for every complaint under the sun and the other to refer to the post-mortem room as the "physician's operating theatre." Therefore, to return to Dr. Bruce's use of the term "barbarous" as applied to an operation, I can only repeat that unless he has an alternative to offer he has no right himself to apply the term but should leave it to futurity. Dr. Bruce assumes, without any ground for the assumption beyond my not mentioning the fact specifically, that the first fracture in my case was not treated by extension. I did not think it necessary to mention its treatment, but as a matter of fact it was not treated by a prescription but by extension, as is customary, the bad result being ascribed to the man's constant restlessness from the sciatica in his other leg.

In concluding let me once more assure Dr. Bruce that his paper has provided me with most interesting and suggestive reading which I have no doubt will be of great use to me practically. I am not presuming to pit my knowledge and experience against his but have written purely from the point of view of the general practitioner, to which class of the profession his paper mostly appeals. Few of us care to under- [illegible] ic nerves or, *a* [illegible] it the responsi- [illegible] the physician [illegible] ored a success for the physicians.

I am, Sirs, yours faithfully,
Hampstead, Sept. 21st, 1903. J. S. MACKINTOSH.

THE PROBABLE ACTION OF CANCER PARASITES ON THE HUMAN BODY.

To the Editors of THE LANCET.

SIRS,—Virchow's artificial histological classification of tumours into homologous and heterologous growths has obscured the intellects of medical men with regard to cancerous and *other malignant disease for a considerable* time. But of late years there has been a tearing away from dogma and there is at present a strongly growing belief that malignant growths are caused by protozoal parasites. I believe that most of the evidence we at present possess, without conclusively proving this to be the case, strongly points that way. Allowing for the moment that cancer is a parasitic disease how can its peculiarities be explained? The most valuable theories are those which connect all the known [illegible] will not fit in with [illegible] in the following [illegible] eases fit. The [illegible] lial cells. Under [illegible] these cells, live with them symbiotically, dominate them, and stimulate them to increase and to multiply abnormally and thus is formed the primary tumour. Under the malign influence of the parasites the epithelial cells turn arrant traitors to their commonwealth and, like all renegades, become the bitterest foes of that to which they owe allegiance. After a time the dual semi-alien settlement sends forth colonies through the lymph streams which form other settlements wherever they can succeed in getting a foothold—secondary growths. The renegade epithelial cells and their guests prey on the tissues of the body and poison the sources of life by their combined excreta and lead to the destruction of the commonwealth—the human organism. The stroma of *cancer is the results of the efforts* made by the connective-tissue cells to combat the invaders after the latter have gained a lodgment. The species of parasites which cause sarcoma attack only the connective-tissue cells which become the renegades. Their colonies are despatched through the blood stream.

Is it possible to cultivate the parasites outside the human body? The answer to this question is: Probably the only possibility of cultivating a cancer or sarcoma outside the living body would be by placing an aseptic living section of a tumour in a constantly changing nutritive medium containing oxyhæmoglobin maintained at the body temperature. The difficulty of this undertaking, if not insuperable, would be extremely great. Where the parasites exist outside the human body is hard to surmise, but judging by analogy some insects, possibly flies or water animalcula, have something to do with their transmission.

It may seem premature to theorise about the parasites of malignant disease before they are definitely proved to exist but it is probable that their existence will never be mathematically proved according to Koch's data, yet most of us are morally certain that they are there. Action, it is said, must be based on theory. Sir Thomas Watson, long before the bacteriological age, held that tetanus was caused by the gradual manufacture of a strychnine like poison within the body. Sir Patrick Manson, long before it was proved by Ross, was convinced that the malarial parasites were carried by mosquitoes. A year before the malarial flagellated bodies were proved to be spermatozoa I suggested that they were such from their peculiar movements.

I am, Sirs, yours faithfully,
J. H WHELAN, M.D. R.U.I.,
Oct. 1st, 1903. Fleet Surgeon, R.N.

THE CARDIAC REFLEX OF ABRAMS.

To the Editors of THE LANCET.

SIRS,—Anent a recent annotation in THE LANCET[1] on the Cardiac Reflex of Abrams, one is constrained to conclude that the reflex in question can be elicited without the aid of the Roentgen rays. The latter observation, however, is only partially true, for the very evident reason that the cutaneous irritation necessary to produce the heart reflex will contemporaneously induce the lung reflex of dilatation which of itself will reduce the area of superficial cardiac dulness. The lung reflex being of shorter duration than the cardiac reflex, persistent reduction in the area of superficial cardiac dulness after a space of two minutes (a time exceeding that necessary for the lung borders to recede) would indicate that the diminished cardiac dulness was due to reduction in the heart volume and not to lung dilatation. In soliciting the aid of the cardiac reflex in diagnosis, prognosis, and treatment I almost invariably place sole reliance on the Roentgen rays with the fluorescent screen approximating the anterior chest wall. Unless one is specially skilled in mapping out the deep or relative cardiac dulness the Roentgen rays and not percussion should be our guide. You mention in your annotation that Merklen and Heitz of Paris have extended my observations and I beg to direct your attention to further facts concerning this reflex which I have elaborated since the publication of my original contributions on the subject. I have studied the reflex as an index to the condition of the myocardium and find in brief that when the cardiac muscle is beyond restitution in myocarditis and valvular diseases the cardiac reflex cannot be elicited. Heretofore this reflex was only observed in the transverse cardiac diameter, but it may also be noted in the sagittal diameter. The recognition of the heart reflex will often aid us in excluding the murmurs of a relative insufficiency. Here vigorous rubbing of the præcordium will temporarily dispel the latter murmurs. The principle involved in the latter manœuvre is essentially this: in relative insufficiency of the valves they have undergone no anatomic change but are no longer able to close the enlarged orifices of the heart, therefore vigorous friction of the præcordium by inducing the heart reflex will contract the myocardium and the orifices and will allow closure of the latter by the valves, at least temporarily. One may elicit the heart reflex by irritation of more remote regions. Thus one may easily observe by aid of the rays that when ammonia is inhaled there is decided recession of the cardiac ventricles (heart reflex), especially the left, and that this reflex may be more pronounced than when discharged through the skin of the præcordium. Ether and chloroform produce a similar though less pronounced effect. With the nose closed a similar though less pronounced effect of the vapours may be obtained, presumably by their action on the pharyngeal and laryngeal mucosa. In a few instances the vapours produced a veritable heart inhibition. I could observe no diminution in the intensity of the heart tones during the inhalation of the vapours, although sphygmograms showed a decided difference in the output of blood into the general circulation before and after the inhalation of ammonia. These observations suggest the wise expedient of cocainising the nasal mucosa before using an anæsthetic and further suggest the cogent necessity of anæsthetising the pharyngeal and laryngeal mucosa.

I am, Sirs, yours faithfully,
San Francisco, Sept. 18th, 1903. ALBERT ABRAMS.

TAKA-DIASTASE IN GOUTY DYSPEPSIA.

To the Editors of THE LANCET.

SIRS,—Every practitioner has under his care at various times very troublesome cases of dyspepsia associated with the gouty diathesis and the difficulty of keeping patients to a suitable dietary is well known. The stomach seems to digest well up to a certain point and appears to assimilate proteid matter far more readily than fats and carbohydrates; in fact, it is the faulty digestion of the latter, together with the sustained irritation caused by the decomposition of their by-products, that prevents the organ returning to a healthy tone. On the other hand, it is unquestionable that a diet almost exclusively composed of milk and farinaceous products is the one most suitable to produce permanent amelioration of the effects of uric acid saturation, and it is essential to put the stomach in a condition fit to receive and to use such foods. I have used salicylate of bismuth before meals for this purpose with good results as to relief of symptoms so long as its use was continued, but its curative action is practically *nil* and the mucous membrane reverts to the same irritable and atonic state when the drug is discontinued. Some samples of taka-diastase (Parke, Davis and Co.) were sent to me with notes on its value as a diastatic ferment with powerful action on starch. I tried it in two and a half grain tablets with a patient who had long suffered from this form of dyspepsia, with very gratifying results, and have since ordered it to be taken regularly after meals in this class of case until a satisfactory condition has been re-established. I should be glad to hear if my opinion on the value of this preparation is borne out by other practitioners and can heartily recommend a trial from my own experience of it.

I am, Sirs, yours faithfully,
L. WHEELER, M.B., B.Ch., B.A.O. R.U.I.
London, Sept. 30th, 1903.

FEVER AND CONVULSIONS DUE TO ASCARIDES.

To the Editors of THE LANCET.

SIRS,—Round worms in children of the poorer class are very common in the district round St. Day, near Redruth, and I have seen several cases of fever and convulsions, a few cases of incontinence of urine, and one case of chorea which could be traced to this condition. The children frequently vomit the worms and they are passed per rectum often in clusters. I used to put the cause down to the celebrated Cornish pasty which is the main food of the lower class. The outer covering of the pasty is often very lightly baked, while the contents are of various materials from underdone meat to cabbages and rotten potatoes. I imagine most medical men in practice in Cornwall have seen many peculiar symptoms which they have credited to the ascaris lumbricoides and it would be interesting and instructive to hear what, in their opinion, is the cause of this endemic disorder in the extreme south-west of England.

I am, Sirs, yours faithfully,
Streatham, S.W., Oct. 4th, 1903. E. H. WORTH.

To the Editors of THE LANCET.

SIRS,—Surely "worm fever" is not a complaint of extreme rarity, even though, as you note in THE LANCET of Sept. 26th (p. 898), "it is not recognised by British writers." Two cases, both of much interest at the time, have occurred in my short experience. Of these, one was that of a child six or seven years of age whom I admitted to the wards of a children's hospital as a case, probably, of typhoid fever, a diagnosis which was contradicted on the next morning by the finding of a large round worm in the cot, together with a remission of the symptoms. The other was that of a boy, aged 16 years, whom I admitted into the Great Northern Hospital in a comatose condition from which he could be with difficulty roused. The reflexes were markedly increased, Babinski's sign was present, and the temperature was raised. So ill did he seem that his friends were summoned on the following day. A few hours after they had settled themselves mournfully at the bedside both of them, uttering shrieks, fled down the ward. A nurse who investigated the cause of this alarm found a round worm struggling out of one of the nostrils of the patient who from that hour had no further symptoms. Were the latter produced by toxins, as suggested by Dr. Wettendorff, such rapid recovery would hardly have been expected.

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[1] THE LANCET, August 29th, 1903, p. 619.

I am, Sirs, yours faithfully,
London, Oct. 7th, 1903. A. E. CARVER, M.B. Cantab.

A CASE OF LEPROSY.

To the Editors of THE LANCET.

SIRS,—With reference to the case of leprosy recorded in THE LANCET of Feb. 19th, 1898, p. 501, it may interest some of your readers to know that the patient died about nine months ago, apparently as a result of pulmonary complication of a few days' duration. This I learnt on making a recent inquiry, as the case came under my notice as well as that of others.

I am, Sirs, yours faithfully,
GEORGE PERNET.
Upper Gloucester-place, N.W., Oct. 2nd, 1903.

MEDICAL DOCTRINES OF HEREDITY.

To the Editors of THE LANCET.

SIRS,—Dr. J. Wiglesworth says that parental intemperance occurred in one sixth of his cases of insanity. I do not doubt him, but I think he will find it is quite as frequently an antecedent of sanity—among the inmates of a workhouse for instance. He adds that neither side in this discussion is capable of supplying definite proof of its contention. He is always so courteous, so obviously inspired by a right scientific desire to get at the truth, whatever it may be, that I am sure he is unconscious that he is a little unfair. The onus of proof rests with the side that makes a positive assertion. All that can reasonably be expected of their opponents is that they shall shatter any evidence brought forward. They cannot prove a negative. If I, for instance, declared that a dragon resided in the moon Dr. Wiglesworth would find it very difficult to disprove. Not an iota of evidence has been tendered for us to deal with though medical works are full of statements that parental disease and alcoholism affect offspring, though at the Swansea meeting speaker after speaker declared that he had seen any number of cases of it, and though I appealed to some of these gentlemen by name. Dr. Wiglesworth mentions Professor Cossar Ewart's pigeons. May I call his attention again to [illegible] were [illegible] cells which left the diseased male body and took up their abode in the healthy female body are supposed by Professor Ewart to have been incapable of recovery. Our experience of syphilis, for example, is similar. People recovered from that disease produce apparently healthy children. Nay, even while they are suffering they produce healthy offspring, provided the developing embryo is not affected with the actual virus. As an accurate scientific observer Professor Ewart is above suspicion, but his observations on this point were too few in number to constitute proof, especially in the face of a vast amount of contradictory evidence. Dr. Wiglesworth will remember Brown-Séquard's experiments on guinea-pigs. Brown-Séquard announced that by injuring parents he had produced defects in offspring. He thought that he was arguing for the transmission of acquirements As a fact he was maintaining the much more rational doctrine upheld by Dr. Wiglesworth. Not a single observer of the many who tried was able to repeat his results.

Dr. C. E. Scudamore thinks me too dogmatic. The quality of my dogmatism is by now apparent. In common with the majority of the scientific world I have refused to accept other people's dogmas when unsupported by any evidence and contradicted by a great deal of it. He says that I have "manipulated" his figures. If the readers of THE LANCET will turn to my last letter they will learn exactly what Dr. Scudamore means by manipulation. I must reserve the question as to whether "infectious diseases evolve and die out like higher species of animals, only with far greater rapidity," for future discussion.

The hair slopes in different parts of the human body in a number of different directions which are definite for the whole species. Dr. W. Kidd thinks that in each instance the slope is such as would naturally be produced by external influences and he wants us to believe it has become inborn in the race through the transmission of parental acquirements. In other words he wants us to believe that influences which have brushed the hair in one direction on the great toe, in another direction on the back, in a third direction on the head, in a fourth direction on the eyebrows, and so on, have each and all so separately affected the germ cells, situated far distant, that the traits which the parents acquired have become inborn in the descendants. And he wants us to believe this in spite of the facts (1) that no machinery for this amazing process has been discovered; (2) that the plant and animal kingdoms have been ransacked and no instance of the transmission of acquirements has yet been proved; and (3) that the tremendous and long-continued effects of use and disuse and of disease and hardship, as well as the amputation of dogs' tails and Jews' prepuces and the destruction of women's hymens have been without effect.

Dr. C. Mercier retires offended from this discussion. He declares that he has been misrepresented and he declines to deal with adversaries whose methods are so unscrupulous. Well, let us examine the two instances alleged by him. 1. In THE LANCET of August 22nd, p. 559, Dr. Mercier wrote: "By a parity of reasoning, if a long neck in a giraffe led to increased length of neck in the offspring every giraffe would now carry his head as high as the cross of St. Paul's. So easy is it to procure a *reductio ad absurdum* by ignoring essential conditions—in this case counteracting circumstances." In THE LANCET of August 29th, p 630, I wrote: "As to the necks of giraffes, certainly, if giraffes stretch their necks and the stretching is transmitted, I see no reason why their necks should not grow as high as the cross of St. Paul's. In fact, considering his beliefs—perhaps I should say his faith—I am lost in wonder that Dr. Mercier is not lost in wonder that they are not already higher." In THE LANCET of Sept. 5th, p. 731, he replied: "He asks me what the counteracting circumstances are which prevent a giraffe having a head as high as the cross of St. Paul's. There are many. One is that the weight of the neck would crush the animal." In THE LANCET of Sept. 12th, p. 785, Dr C. R Niven wrote: "With regard to the giraffe's neck and Dr. Mercier's 'parity of reasoning,'" if it be true, as Dr. Mercier holds it to be true, that acquired traits are transmissible and that the long neck of the giraffe is due to former giraffes stretching their necks, I agree with Dr. Reid in "seeing no reason," if Dr. Mercier demands it, "why their necks should not grow as high as the cross of St. Paul's." It is clear that Dr. Niven and I had both been led by Dr. Mercier's language to credit him with the belief that the giraffe's neck had grown long through the transmitted effects of stretching—a surprising belief which is an ordinary article of the creed of the school of thought which supposes that acquired characters are transmitted and to which Dr. Mercier belongs. Hitherto Dr. Mercier had done nothing to correct us; but the scent was growing hot and in THE LANCET of Sept. 19th, p. 844, he wrote: "In your next issue I expect to see that Dr. Niven credits me with the belief that ...... giraffes lengthen their necks by stretching." It must be admitted that Dr. Mercier's expectation was pre-eminently reasonable It was immediately gratified for in the same issue both Dr. Niven and I made the expected assumption *Hinc illæ lacrimæ.* 2 I raised a discussion by declaring that parental disease did not render offspring degenerate. Dr. Mercier vigorously attacked. Naturally I assumed that he did not agree and by way of beginning a passage wrote: "He asserts that alcohol, diseases, &c., affecting parents cause offspring to be degenerate ...... We have given reasons *for believing that the evidence is* unsatisfactory. In all humility what is the nature of the information he asks?" Dr. Mercier retorted: "If he will refer me to any such assertion of mine I shall be obliged to him. I deny I have made it." In astonishment I asked, "What then is his position in this discussion?" But Dr. Mercier is too deeply shocked to reply. He thinks that I ought to have apologised. Accordingly, he withdraws "from a discussion conducted by such methods" and indignantly asks, "What is to be thought of a cause that needs such expedients for its support?" The humour of the whole thing is that Dr. Mercier had persistently misinterpreted clear meanings and had declared that he had scalped Dr Niven and that Dr. H. Laing Gordon and Dr. A. Mearns Fraser had agreed with me only because we were all Scotsmen. It is unfortunate, moreover, that his exceedingly delicate sense of propriety awoke only at the precise moment when his scientific objections had been crushed, when he had been convicted of not knowing the elementary difference between an acquired and an inborn character without which all clear thinking on this subject is impossible, and when he had been invited to supply evidence of some remarkable discoveries in evolution which he said he had made.

I daresay it will be thought that I have pursued Dr. Mercier with unnecessary heat and cruelty. But, as he says, he has had previous experience of me, which implies that I have had some previous experience of him. I hope to appeal to the readers of THE LANCET on a future occasion and I am anxious to put an end, once and for all, to the petty evasions, personalities, impertinences, and irrelevancies which constitute his controversial stock-in-trade. I shall still be glad to deal with any scientific points he may raise, but I hope that any discussion that may occur in the future will be conducted rather in the spirit of Dr. Wiglesworth whom from the first I have recognised as a formidable opponent—formidable because, seeking truth only, instead of setting before me tasks which needed only a little paltry dialectic skill to overcome he was liable to confound me at any moment with facts beyond my knowledge and arguments beyond my power to refute. I am, Sirs, yours faithfully,

Southsea, Oct. 4th, 1903. G. ARCHDALL REID.

⁂ This correspondence must now be closed.—ED. L.

THE PATHOLOGY OF MISGOVERNMENT.

To the Editors of THE LANCET.

SIRS,—The sporadic atrocities of autocratic governments are occasionally explained away on the grounds of the temporarily diseased state of the absolute monarch reigning at the time. "Nature," quote the apologists, "being oppress'd, commands the mind to suffer with the body." King Asa was "diseased in his feet until his disease was exceeding great," and he it was who induced Ben-hadad to send "the captains of his armies against the cities of Israel; and they smote Ijon, and Dan, and Abel-maim, and all the store cities of Naphtali." But apparently Asa's disease was not contemporary with his moral delinquency and perhaps was an effect rather than a cause of it. On the other hand, a French writer[1] has recently advanced the hypothesis that the enormity known as the revocation of the Edict of Nantes, by Louis XIV., was the more or less direct result of disease and was brought about, not so much by evil counsels, as by an evil condition of the king's antrum. The king's physician, D'Aquin, relates that His Majesty suffered from very bad teeth which caused him constant pain. In 1685—the year of the revocation—dental caries was complicated by caries of the left maxillary sinus. All the teeth in the upper jaw on the left side were extracted and an enormous hole in the antrum resulted. This opening, although good for drainage, did not improve His Majesty's table manners, as every time he partook of a drink the fluid gushed from his nose "comme d'une véritable fontaine." Added to this, a marked fœtor developed, owing to the septic condition of the parts, which further increased the discomfort to himself and his environment. "Madame," said Louis one day to Madame de Maintenon, "je suis fatigué de supporter votre mauvaise humeur." "Sire," she retorted, "je supporte bien, moi, votre mauvaise odeur." Later in the year the actual cautery was extensively applied to the diseased area and the king made a tardy recovery. If we can divest ourselves of the belief that the revocation was the consummation of a definite policy we may think, What might the Protestants of France not have owed to a good dentist? I am, Sirs, yours faithfully,

Manchester, Oct. 5th, 1903. E. S. YONGE, M.D. Edin.

FOOD PRESERVATIVES.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to a paragraph in THE LANCET of Sept. 12th, p. 798, in which one of your New York correspondents draws attention to Dr. Wiley's experiments upon food preservatives and in which he says that two facts have been proved. This is not correct and I feel sure that Dr. Wiley would be the first to ask you to contradict this statement, as in his lecture before the National Association of Food Commissioners, which I have carefully read *in extenso*, he states repeatedly that although his experiments are practically completed he was unable then to make any announcement as to the conclusions which might be drawn from them. He further states that the large amount of data which had been accumulated would require several weeks of careful study before a report could be furnished by the department and therefore it seems very desirable that one should wait for the official report from the United States Bureau before Dr. Wiley is quoted as being either in favour of or against the use of preservatives. The paragraph in inverted commas is correctly reported except that he gives it, not as the summing up of the results of his work, but as the opinion which might be formed at the present time from the work of others, and your readers will have noticed that this opinion does not go further than expressing the desire that a declaration should in all cases accompany the use of preservatives.

The fact that he was about to visit England, France, and Germany to study the question shows that he still regards the problem as an open one, with the exception of the above proviso. I think it is exceedingly probable that he would have taken exception to the total prohibition motion which was brought forward and accepted at the recent meeting at the Congress of Hygiene and Demography at Brussels. I am, Sirs, yours faithfully,

SAMUEL RIDEAL.

Chemical Laboratory, Victoria-street, Westminster,
London, S.W., Oct. 5th, 1903.

OBSERVATIONS ON MASTICATION.

To the Editors of THE LANCET.

SIRS,—In reference to the remarks of Dr. Harry Campbell in THE LANCET, his theory, like many other theories, is good until compared with the results of practice. I personally have used a perfectly antiseptic and deodorant mouth wash at least once daily for over 20 years with the most beneficial results and have never noticed adverse reasons for discontinuing it. My digestive powers and my general health are decidedly better than they ever were at any time previous to the last five years. I think the prejudicial effects of diseased teeth and an unhealthy mouth upon the general health more than counterbalance the evil effects, real or imaginary, of the tooth brush and antiseptic mouth washes. The artificial life which the struggle for existence compels most of us to live must be taken into consideration and compared with the mode of living adopted by most savage races who, as a rule, have splendid teeth, but who go to bed and rise with the sun, live mostly in the open air, and use their teeth, as they should be used, for breaking down and masticating their food and to whom knives and forks are unknown or at least not used.

I have had the opportunity of examining the teeth of many natives in their more or less uncivilised state, from the Red Indians of North America, the négroes of Africa, to the more civilised Chinese, Japanese, and Indians of the East, and I have usually found them possessed of sound teeth, but so soon as they come under the influence of civilised life in Washington, Montreal, London, Paris, and other cities their teeth begin to degenerate, though their general health may remain good. As an instance amongst many that I could give, some years ago I had an opportunity of examining the teeth of three highly intelligent, well-educated West Coast negroes. When they arrived in this country for the purpose of study they had perfect sets of teeth in well-developed and well-shaped maxillæ; before these young men left this country on the completion of their studies I filled several teeth for them and prescribed an antiseptic mouth wash and tooth powders with beneficial results. Yet they had always used artificial means for cleaning their teeth. Many even of the most uncivilised natives employ artificial means for cleaning their teeth and yet are possessed of perfect dentures. I consider an antiseptic preparation for the teeth distinctly beneficial and in many cases a necessity.

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[1] "Sinus et Sinusites Maxillaires." Par J. de Croës. Paris. 1902.

I am, Sirs, yours faithfully,
DENS.
Sept. 26th, 1903.

THE MEDICAL DIRECTORY.

To the Editors of THE LANCET.

SIRS,—May we ask you to help us again in our desire to have the Medical Directory as up to date as possible by reminding your readers that all information for the 1904 issue should be sent to us without any further delay. It will not be safe for any member of the profession to rely on an alteration being possible after Oct. 24th.

We are, Sirs, yours faithfully,
J. & A. CHURCHILL.
Oct. 7th, 1903.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Mortality from Wild Animals and Snakes in India.—The Epidemic of Plague.—The Dangers of Indian Fairs.—The St. John Ambulance Association.

A RETURN recently issued by the Government gives the mortality from wild animals and snakes. Although not so numerous as in 1901 the deaths last year caused by wild animals totalled 2836 and those by snakes 23,166. Tigers caused 1046 deaths, more than half of which occurred in Bengal. In one district the increase of deaths from 31 to 63 is reported to have been due to the depredations of a man-eating tiger and in another district (Palama) an even larger number fell victims to a man-eater. Wolves caused 377 deaths, chiefly in the United Provinces. Snake-bites were, as usual, most numerous in Bengal—11,150 deaths in this province being recorded, 3258 of which occurred in the Patna division. In addition to this destruction of human life the number of cattle killed by wild animals was enormous—80,796 being reported for 1902 and 9019 more from snake-bites. In Bengal the destruction was greatest. The animals killed by tigers are returned at 30,555, by leopards at 38,211, by wolves 4719, and by hyenas 2387. To combat the annual destruction of life rewards are offered and 14,983 animals were killed for these rewards which amounted to over a lakh of rupees. The total number of snakes killed was 72,595. As the number of new licences issued free of cost under the Indian Arms Act for the destruction of wild animals was 9066, and as the total number in force amounted to 37,933, it can hardly be said that the holders were particularly active. Nearly three licences were in force for one wild animal killed.

There has been a pause in the hitherto rising mortality from plague, but 7748 deaths occurred throughout India last week from this cause. Of this total 4753 deaths were returned from the Bombay Presidency, 1330 from Central India, 473 from Hyderabad, 441 from Mysore, 350 from Berar, 117 from Madras Presidency, 107 from the Central Provinces, 88 from Bombay city, 38 from the Punjab, 18 from Calcutta, and 36 from Bengal. Plague has broken out again at Karachi and at Poona, it continues mildly at Ootacamund, it shows signs of increasing in Bombay city and Calcutta, and it has broken out in Broach. The published returns give no idea of the ravages of the disease at certain places During the past month, for example, plague has raged at the military station of Mhow with great severity. With a population of only 37,000 the deaths have risen to nearly 100 a day. At this rate the whole city would be destroyed in a little over a year. A popular rumour states that the British people had lost so many soldiers in the Boer war that they could not send out enough to control the large native population so they were trying to equalise numbers by the introduction of plague. Inoculation is, unfortunately, in abeyance and disinfection seems to be the only measure adopted. And what a broken reed. The course of the outbreak in Mhow is only one more proof of its uselessness. Epidemiologists have now the opportunity of watching the unimpeded course of plague in all the infected parts of India.

Indian fairs and pilgrimages which at different seasons attract so many thousands are a source of great danger in the spread of cholera, dysentery, and small-pox, but apparently not of plague. The great Hurdwar fair, for example, had 400,000 people assembled at one time and a daily average probably of 200,000, yet during the three weeks of its existence only 15 deaths from plague occurred and there was no evidence that the disease was subsequently disseminated. Cholera, on the other hand, broke out towards the close of the fair and the pilgrims in dispersing seem to have spread it over the Punjab and the United Provinces, thousands of deaths occurring within the few weeks ensuing. Were it not for the excellent sanitary arrangements made by the Government these fairs would probably be attended by a very high mortality. The greater facilities of travel by rail make these fairs larger and larger with each succeeding year.

The work of the St. John Ambulance Association in imparting instruction in first aid to the injured is being actively pushed, especially in the west of India. The railways fortunately are taking the matter up seriously and large numbers of classes have been held. The latest move is a competition open to Indian railway companies for the challenge shield and prizes offered by the association in the year 1904. Teams of five men, *bonâ-fide* servants of the railway company and holding first-aid certificates, will compete. I am sorry to hear that although a centre was formed in Calcutta there has been very little done for nearly two years.

Sept. 18th.

THE ELEVENTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

THE FOURTH SECTION.

Debate on Ankylostomiasis.

UNDOUBTEDLY one feature of the Congress was the question of ankylostomiasis. It is but comparatively recently that general attention has been called to this disease, though it has spread to an alarming extent in Westphalia and other parts of Germany and in the Liège coalfields of Belgium. In Hungary, also, as many as 90 per cent. of the miners in certain districts suffered from this worm. It is present in some coal-mines of France and has made its appearance among the tin-mines of Cornwall. Consequently I need not apologise if I describe at length the debate held on this subject. It was the first question in the Section on Industrial Hygiene and in respect to factory legislation Belgium is undoubtedly much behind the times. Consequently some of the warmest discussions arose in this the Fourth Section. Conflicting interests came into play and it was no easy matter for the man of science to steer clear of party politics and financial influences. Some medical men were placed in the very awkward position of having to keep silent or of having to speak against the financial companies by whom they are employed and this in the presence of the directors of such companies. Six reporters had been appointed to deal with the question of ankylostomiasis and four lengthy printed reports were in the hands of the members of the congress before the section met. Dr. KUBORN, President of the Belgium Royal Society of Public Medicine, who occupied the chair, proposed that these reports should be taken as read and the discussion was at once opened by M. HARZÉ who is the "honorary director-general of the mines of Belgium." He explained that in 1899 the administration of mines desired to make regulations so as to check the spread of this disease but 12 out of 23 mining constituencies rejected such measures, qualifying them as "vexations and useless." The spectre of a general strike was even evoked. It seemed as if a word of command had gone round, for the opposition was simultaneous and similar in its arguments and phraseology. M. Harzé thought that much ignorance prevailed and that at universities there should be a chair on professional or trade diseases. He did not, however, believe that individuals could, by taking precautions, do much to check the malady. Several mining [illegible] gentlemen of [illegible] took every [illegible] but it was more important to examine under the microscope the dejecta of every miner. People still, and in spite of all that had been said, continued to spit in railway carriages or tramcars, so also the miner did not wait till he got home to relieve himself and when in the mine he would not give himself the trouble to go to the sanitary pail.

Dr. BREMONT agreed with M. Harzé and thought that though it was most necessary to teach the workmen, still the medical men must themselves first be taught and therefore he cordially approved of the creation of chairs on trade diseases.

M. HABETS, who is the manager or director of the Bonne-Espérance and the Bonne-Fortune coal mines, followed so as to describe what his company had done to combat the epidemic. Undoubtedly it was an advantage to hear what the mine owners themselves had to say; but, on the other hand, their presence might also have a deterrent effect on the freedom of discussion. In any case M. Habets explained that his engineers, acting under medical guidance, made the first analyses attempted in Belgium. They had a dispensary and employed a trained nurse to watch and to help in the analyses. As a result they found that about 60 per cent. of their miners were infested by the worm. Thereupon they drew up a set of rules which at first the miners showed some disposition to observe. Among other things, those who ate in the mine were not to touch their food with their fingers but to hold their bread with a piece of paper which was to be thrown away immediately. He could not find that any particular class of men were especially susceptible and some of the pit-brow workers, notably young women, had contracted the disease. Some cases had also been detected among phosphate workers and farm labourers. Last year the miners seemed to be tired of taking precautions and neglected them. So far M. Habets had trod on safe ground and the information which he gave to the section was welcome but when he continued by giving what he imagined were the reasons for the present negligence of the workmen he soon raised a storm. He said that when the workmen saw on the one hand that the infection did not produce very severe sickness and on the other hand that they would receive an indemnity which had been voted by the Liège County Council they had become careless. He thought workmen should be made to feel the evil consequences of their conduct. Dr. TERWAGNE (Antwerp) here exclaimed, "This would suppress public hygiene"; but M. Habets denied this, pointing out that here were mine-owners who had foreseen the danger and had done their best to cope with it.

Dr. BARBIER rose and insisted that the provincial government or county council of the province of Liège had been the first to act in the matter; he did not think that the amount of help given to the victims was enough to make them careless; they much preferred health, work, and the larger sum they could earn. As Dr. Barbier concluded it was evident that others were eager for the fray and wanted to attack or to defend M. Habets's aspersions on the miners but Dr. JORISSENNE intervened with a purely medical or therapeutic question. He claimed that the difficulty could be met if they had a treatment to efface the illness that was easy, cheap, and could be given even without the patients knowing that they were being treated. He then described a very bad case which had resisted all the usual methods of treatment. The man looked double his age, his brain was affected, he had albuminuria, and was on the point of death. Dr. Jorissenne thought of treating the patient with sulphur but sulphur alone would not kill the worms. It, however, produced some improvement. He found that the larvæ of flies could not resist terebene and therefore gave doses of terpene, sulphur, and as a stimulant to facilitate digestion some condurango. This treatment had restored his patient in spite of his desperate plight. In the case of many other sufferers from ankylostomiasis it had proved to be an infallible cure. As it was a perfectly inoffensive remedy and could do no injury to healthy persons he proposed that it should be given indiscriminately to every miner, whether in good or bad health, and thus the disease could be stamped out. After eight days of such treatment no more ova of the worm would be found in the dejecta.

M. CAVROT, who represents a constituency of miners in the Belgian Parliament and is vice-president of the Superior Council on Labour, followed with an energetic speech. As a simple workman he apologised for his audacity in addressing an audience of distinguished men of science. But if he was lacking in scientific education he had the practical education derived from actual work done in the mine and from personal suffering. The Superior Council on Labour was a State institution and in spite of the pressure brought to bear by the workmen who were admitted to that body, like other Government bodies it moved slowly. It had been said as an excuse that 12 out of 23 mining constituencies had objected to precautionary measures as "vexatious and useless" but this was the opinion of the mine-owners—the working miners were not represented. The miners, like other members of the community, required some educating, yet he would venture to affirm that in the central coalfields of Belgium not 5 per cent. of the pitmen would object to reasonable precautions. But first of all the necessity of cleanliness must be taught. Baths should be provided at every pit-brow. This had been done at Mariemont-Bascoup since 1883 and now the miners were proud of being clean. They would be ashamed to be seen in their soiled black clothes and nothing would induce them to leave the mine without first taking a bath and putting on respectable and clean clothes. It was absurd to imagine that the miners would expose themselves willingly to the risks of a serious disease. They set a higher value on health than the paltry 1*s.* 3*d.* per day given to some among them when it was proved that they had been seriously ill for more than a month. He concluded by hoping that the disinterested opinions of those present would awaken the Belgian Government and that at last something effective would be done to prevent the spread of this very terrible and wasting disease.

Dr. PERRONCITO of the University of Milan congratulated M. Cavrot on his declarations. Dr. Perroncito had studied ankylostomiasis in 1880 when it afflicted the workmen engaged in making the St. Gothard tunnel. Toxins were sometimes found in the urine but the worm was the main difficulty and evil. He agreed that cleanliness was the first necessity and the experience acquired in Hungary proved that by sanitary measures the disease could be overcome. For treatment he advocated the use of male fern.

Dr. HERMAN of Mons objected that it was impossible to disinfect a coal mine. The larvæ survived. No chemical method could be applied to a mine.

Dr. PERRONCITO replied that that was true only with regard to certain chemicals; mercury, for instance, was of no use. Carbolic acid was more effective.

M. GREGOIRE now rose to defend the action of the provincial government of Liège, he being a *député permanent* or member of the executive committee of that county council. He energetically protested against the idea that because his authority had helped the sufferers the workmen no longer took precautions. A benefit society had first denounced the evil as it found so many of its members on the sick list. Then it was that the Liège county council had appointed a medical commission to investigate, had organised a series of lectures, and had appealed to workmen's organisations to help. He found that the workmen readily accepted the advice of outsiders but looked upon the advice of their employers with suspicion. As for the subsidies, they found the disease so severe that many men had been unable to work for months and great distress prevailed; they only gave relief to the extent of one and a half francs per day after a man had been incapacitated for more than a month. It was a manifest exaggeration to say that men would seek sickness to secure such a pittance. He urged that the medical service organised by the employers was deficient in many respects. At Liège money had been voted to create a special and independent dispensary for the treatment of the disease.

Dr. DEJACE, who practised in the affected district, argued that expensive measures must not be taken too hastily. In any case, it was always useful to enforce cleanliness but they were not yet well informed as to the life-history of this worm, nor were they quite positive as to the nature of the disease which it produced. The symptoms were not always the same. At first they were very severe; now they were not so serious and nobody knew why there had been this diminution of intensity.

Here the first day's debate terminated but it was resumed with renewed ardour on the morrow and continued through the whole of the second day.

Dr. TÖTTS, of the Selmeczbanya coal-mines in Hungary, explained that in his district no less than 90 per cent. of the miners were afflicted by the disease. Very vigorous sanitary measures were enforced. Under the penalty of a fine the miners were compelled to use only the sanitary pails provided. The workmen themselves helped energetically to carry out the rules, denouncing those who were careless or indifferent. In time the disease completely disappeared.

Dr. TENHOLT, of the Bochum coalfields in Germany

Government medical adviser and chief medical officer of the
had had
thought
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not propagated by water or by dust. In Westphalia every miner was examined before he was allowed to work in a coalpit. When numerous cases were reported from a coalfield the Government caused statistics to be drawn up and if it then appeared that the epidemic was serious a general examination of all the miners was ordered.

Here a French member of the Congress observed that many things were possible in Germany but not elsewhere. Germany with its system of compulsory insurance had all the necessary machinery and the financial means. The debate now became somewhat discursive and confused. It was asked whether the dejecta of every miner were to be examined before he was allowed to enter a mine. A case was mentioned of a miner who had presented the dejecta of his wife so as to avoid detection. To this it was answered that special closets must be made for the collection under efficient control of genuine specimens. Thereupon it was pointed out that such suggestions had already supplied the subject matter of many coarse caricatures and some ridicule.

M. WATTEYNE, mining engineer and delegate of the Belgian Ministry of Industry, said that there were three radical means of checking the epidemic: (1) so to improve the sanitation of mines as to render the development of ankylostomiasis impossible; (2) to prevent workmen who had contracted the disease from descending into the mines; and (3) to prevent the deposit of dejecta in the mines. For this it would be well to offer special privileges or rewards to the owners of the most sanitary mines. Great care must be taken that the sanitary installations provided for the miners were thoroughly clean and accessible. Special scavengers should be appointed for this purpose. But in all these matters sanction was required and therefore rules should be officially adopted such as already existed in Germany.

There then followed a great deal of discussion as to what should be the duties of colliery surgeons and as to the necessity of notifying all cases of ankylostomiasis. There was much division of opinion in regard to the person, the employer or the medical attendant, who should be responsible for such notification. Mr. ADOLPHE SMITH here rose observing that medical men had to earn their living and it was not fair to impose upon them duties which, if conscientiously performed, would be displeasing to those by whom they were employed and paid. Notification should be *rendered obligatory by law and paid for out of the public* purse, and any neglect to notify should be so punished that no one employing medical men could expect or request them to shirk this duty. In the performance of their public duties medical men should not be exposed to any pressure from those by whom they were employed, whether the employers were the mine owners or associations of workmen It was on this principle that the compulsory notification of certain diseases was enforced in England. Many of the Belgian colliery surgeons present were well pleased by this suggestion but did *not venture to press it* forward in the presence of the directors of the mining companies by whom they were employed. Indeed, what seems to be especially needed in Belgium is a staff of medical men holding an absolutely independent position.

M. CAVROT, speaking on behalf of the pitmen, brought forward a proposal demanding that baths and closets should be established close to the pits; that the mud that accumulated in the pits should be removed; that plenty of fresh air and pure water should be supplied; and that general *cleanliness should be rendered obligatory* on the part of employers and employed.

Dr. DELBASTAILLE (Liège) urged that baths, though beneficial, did not prevent ankylostomiasis.

At last the section agreed to adopt the following motion:—

> Miners can only be admitted into the mines after a complete medical examination held in view of ankylostomiasis.
>
> The notification to the competent authorities of all cases known to the chiefs of the mines is obligatory.
>
> It is necessary to establish suitable and comfortable water-closets at the *surface* and *recipients* at the bottom of the *mines*.

After carrying this motion the section adjourned at a late hour for lunch. It afterwards re-assembled and resumed the discussion with undiminished eagerness and interest. A great number of recommendations were made and the question of the dryness of the mines arose. As moisture favours the spread of the disease and dryness helps to produce explosions, which is the lesser of the two evils? In regard to baths it was shown that the disease had been known to prevail in mines where there were model douches established. Sometimes water from the mine was used for bathing purposes and the douche was then the means of spreading the disease instead of preventing it. So here as elsewhere a pure water-supply was one of the first requisites. M. CAVROT said that the mines of Belgium yielded from 40 to 60 million francs net profit per annum, yet there was a great reluctance to incur a small expense so that cleanliness might be enforced. To this it was replied that the mine owners had spent 10,000,000 francs to improve the ventilation of the mines and had thus not only reduced the frequency of explosions but checked the prevalence of anæmia among the miners. After further discussion and some recriminations the debate was at last brought to a close and this is the final motion adopted:—

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BIRMINGHAM.

(*FROM OUR OWN CORRESPONDENT.*)

Boarding School for Feeble-minded Children.

UNDER the Elementary Education (Defective and Epileptic Children) Act, 1899, education authorities are empowered to build and to maintain boarding schools for mentally deficient children and to permit them to remain therein until the age of 16 years. A school of this kind has been provided for Lancashire and Cheshire children in which the cost of maintenance and education is found to be about £27 per head per annum, towards which the Government will contribute between £4 and £5 per head per annum. The late school board appointed a committee of its own number with several medical men to report upon the best method of dealing with this class of child. The committee reported in favour of the *provision* of a boarding school for the reception of some of the worst cases—those with exceptionally bad homes and those whose feeble-mindedness was of a moral character. In addition to this the committee also made the following recommendation:—

> That while recognising that the powers of the board cease when the children attain the age of 16, yet in view of the fact that most of
>
> colony.

This report having been received by the late school board a short time before its dissolution was never adopted or acted upon. It was again brought up at the last meeting of the education committee and a recommendation was laid before that body that inquiries should be made as to sites and plans prepared for the ere
children. This
and the prelimi
with. A perusal of the report of the subcommittee for special schools certainly *leads one to think that* in thus acting the education committee has taken a most desirable step, though it needs a subtle mind to distinguish between the cases which are to be sent to one of these schools until the age of 16 years and then let loose upon the public and

those other and to all appearances very similar children who are shut up in the imbecile wards of a public asylum till the end of their days.

Sanitary Conference in Birmingham.

A provincial meeting of the Sanitary Institute has recently been held in this city. The members visited the new crematorium which will be opened shortly and also the works of the Tame and Rea district drainage board, where they were conducted over the sewage farm. A lengthy discussion on methods of treating sewage took place at a meeting held in the medical theatre of the University over which Dr. Alfred Hill presided.

Vaccination Case: Personal Service of Summons.

A case of more than local interest was decided a few days ago in the Birmingham magistrates' court. Mr. Cave, for the prosecution, explained that in the first place a notice was given by the vaccination officer to the defendant to have his child vaccinated. This notice was disregarded; a summons was issued and an order was made that the child should be vaccinated within 14 days. That order was served by being left by a police constable at the defendant's house with a woman who was presumed to be the defendant's wife. The order was not obeyed and upon a subsequent occasion the present summons was issued. When it came before the court an adjournment was asked for in order that Mr. Schultess-Young should be instructed. Mr. Cave stated that the point to be decided was whether, as a matter of law, the service of the order, having been left with the wife in the man's house, was a good service. Mr. Schultess-Young pointed out that other cases had been tried in the Birmingham courts on this very point and dismissed. Mr. Carter, the magistrate's clerk, admitted that this was so. In these previous cases officers had stated that the summons was not served personally. He thought, in the circumstances, that the evidence was not sufficient and he advised the magistrates to dismiss the cases. The anti-vaccination people saw an opening and they had made the most of it ever since. He had, however, come to the conclusion that his opinion in regard to the previous cases was wrong. He took the view now from the Act that the order should be served upon the defendant, not necessarily personally. There was no provision with regard to the service of the order. It was not prescribed that there should be personal service—it was enough for the magistrates to know that the order had come to the knowledge of the defendant. In this case he believed that they were satisfied that it had come to the defendant's knowledge. Mr. Schultess-Young argued that Mr. Carter's first opinion was more correct than his second and pointed out that some London stipendiaries had taken the view that they could not go against the well-known principle of law that orders must be served personally upon defendants. A number of other legal arguments brought forward by counsel did not convince the magistrates who decided against the defendant and found that the order was properly served. Mr. Schultess-Young thought they were unique in their decision but the defendant was fined 10*s*. and costs (including 2*s*. 6*d*. for the vaccination officer) or 14 days' imprisonment in default.

"Beef Lard."

At Wednesbury police-court a short time ago a local shopkeeper was summoned for selling dripping containing 20 per cent. of cotton-seed oil. An inspector visited the shop and was shown a substance which he was told was supplied to the defendant as "beef lard" but which she sold as dripping. The defendant stated that she believed it to be dripping and the stipendiary in imposing a fine of £2 expressed his belief that she was acting unwittingly. After this case had been decided upon Andrew Clement and Sons, produce brokers, Greenwood-street, Manchester, were charged with selling beef lard which was not of the nature, substance, and quality demanded by the purchaser. The material supplied under this name to local shopkeepers was found to contain 50 per cent. of cotton-seed oil. The county analyst said he expected to find beef lard to consist of beef fat of the consistency of lard. He agreed that there was no standard fixed for beef lard but it seemed to him to be a name to deceive. The manager to a local firm said he had been purchasing beef lard from the defendants for two years and was under the impression that it was the waste or rough fat of the ox. He had asked the defendants whether it was beef dripping and had been told that it was not—that it was beef lard. For the defence a number of witnesses were called to show that beef lard was a well-known article of commerce and was understood to be composed in part of cotton-seed oil. One witness stated that he was formerly in Aberdeen with various American lard importers and that he sold beef lard as long as 14 or 15 years ago in Scotland. It was used for frying purposes and also for confectionery, these being the objects for which it was specially intended. Beef lard was not quoted upon any of the markets but customers knew perfectly well what its ingredients were. Lewis Maclellen, oil importer and refiner, Glasgow, said that an extensive trade was done in this substance in England, Scotland, and Ireland, the trade in England having been developed in quite recent years. It was used for purposes for which beef fat was too hard and the cotton-seed oil was used to reduce it to the consistence of lard. A member of a firm of biscuit manufacturers at Wigan said that he had used beef lard for 15 years, buying it in tons at a time. He should think that nearly all biscuit manufacturers used it. He quite understood that it contained cotton-seed oil; unless it did it would not answer its purposes. Other witnesses gave evidence that beef lard was in common use in the north of England and that the term was well understood. The stipendiary magistrate said the case arose because of the unfortunate name given to the compound. He would not say it was invented to deceive the public but there was no doubt that the name lent itself to deception. He, however, must find that it was a well-known article on the market and that no standard had been fixed for it. It was sold as beef lard and the purchaser received it as beef lard. In these circumstances he dismissed the case.

Opening of the Medical Session of the University.

The opening of the medical session of the University took place on Oct. 5th, when a conversazione was held in the medical buildings. The Dean, Professor B. C. A. Windle, F.R.S., received the visitors who numbered over 250. The principal feature of the evening was the address which was delivered by Sir Victor Horsley, F.R C.S. Eng., F.R.S., the Dean of the Faculty being in the chair. Sir Victor Horsley's address was a vigorous reply to Sir William Anson's speech at Manchester and an earnest demand for a larger measure of State aid for university institutions and for medical education. Under the present Government, he said, the Education Department had been placed in the hands of those whose ideas are regulated by the sterile training in dead languages and somewhat moribund system of philosophy, unfortunately characteristic of an old University like Oxford. Apparently it had not occurred to the Parliamentary Secretary of the Board of Education that to the ordinary person the obvious way of obtaining an intelligent population was to provide it with the highest and best means of educating itself and to increase those means in the midst of every populous district. Alluding to the chaotic condition of medical education and medical examinations and referring specially to the difficulties which have arisen between the General Medical Council and the Royal Colleges in England the lecturer earnestly advocated the establishment of a "one-portal" system. When this had been attained the universities would be free to pursue their proper policy of imparting the highest knowledge to their students and would be freed from the task of giving a mere qualification. He suggested that the degree of M.B should be abandoned since it was really only a kind of licence to practise, that universities should give no degree to any student who had not previously obtained a medical qualification to practise, and that the degree then given should be that of doctor of medicine. He admitted that at the present time want of funds made it almost impossible for any university to adopt such a policy, but that such a reason could be put forward was an eloquent testimony of the need for further and generous endowments of medical as well as other branches of university education. It was unjust to expect the parents or guardians of students to bear the heavy expenses of professional education. The alternative was State aid. He suggested that while the British Association was endeavouring to educate public opinion on the necessity of making university maintenance a prominent political question, the universities should coöperate and agree upon a definite programme of State aid. A vote of thanks to the lecturer proposed by Principal Sir Oliver Lodge and seconded by Professor H. G. Barling was warmly accorded.

Oct. 6th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Royal Albert Asylum and Tuberculous Patients.

THE seventh quinquennial festival of the Royal Albert Asylum, Lancaster, was celebrated on Sept. 23rd. Sir J. T. Hibbert presided. He said that Lancaster, including Lord Ashton's donation of £15,000 for the new wing, had contributed no less than £36,321 and, in addition, through Sir Thomas Storey it had given the Storey House for 40 trained feeble-minded girls at a cost of between £7000 and £8000. Since it was started in 1864 no less than £467,000 had been given by men and women living in the seven northern counties. The report stated that a large number of patients suffered from tuberculosis, but Sir J. T. Hibbert hoped that by the aid of benefactors and out of their own funds they would make some attempt to deal with these patients. Dr. W. S. Paget-Tomlinson of Kirkby Lonsdale emphasised the importance of definite action being taken to deal with tuberculous cases and suggested the erection of a small wooden annexe or bungalows, towards which, if the idea were taken up, he would subscribe £100. Dr. W. W. Wingate-Saul of Lancaster also announced that he would erect a chalet in the asylum grounds for the treatment of tuberculous patients. This generous action by members of our profession was much appreciated by the meeting The after-care of those who have training at the asylum has been a matter causing anxiety. It is difficult for a person of feeble intellect to find employment after leaving the institution and some have had to return to the workhouse they came from. At the luncheon the Earl of Derby said there was a great want of provision for the care of the feeble-minded and an effort was being made to rouse the Government to a sense of the importance of the question. "Custodial asylums were much needed and also homes for those who had undergone training but had no friends able or willing to look after them " In the census of 1901 the number of imbecile or feeble-minded persons was returned as 48 882, or one for every 665 of the population. In the United States the proportion is said to be one to every 600 of the population.

The Use of Patent Medicines.

On Sept. 23rd Mr. E. A. Gibson, the Manchester coroner, concluded an inquest on a child, five months old, who had been treated by the parents with a quack medicine called "Jackson's febrifuge." Dr. Ashby made a post-mortem examination and found that the child had broncho-pneumonia. After seeing the analysis of the medicine he said that it would do no good and no harm, but would take the place of more efficient remedies. Mr. Estcourt, the city analyst, "found that it contained ammonium chloride, potassium chloride, potassium sulphate, sodium sulphate, sugar, ipecacuanha, camphor, cloves, ginger, liquorice, and probably rhubarb, and a small quantity of chloroform"—a fine sample of poly-pharmacy. Dr. Ashby, in reply to a question, said "he was very much surprised to learn that last year 2184 gallons of the medicine, equal to 87,360 shilling bottles, had been sold." The defendant's solicitor said: "It is used by a number of members of the Manchester city council, ministers of religion, and magistrates." Dr. Ashby: "Ministers of religion will do anything. I don't know about city councillors." It is curious that among the former class there is so strong a leaning to quackery in all its forms. The coroner said there was nothing connecting either the febrifuge or Jackson with the death of the child but that death was probably due to lack of treatment owing to the ignorance of the parents and their reliance "on this worthless stuff." Upon this summing up there followed the verdict of "Death from natural causes." The coroner added that it was a public misfortune that such an article as "Jackson's febrifuge" should be in the market and have such a wide circulation.

Bolton Infirmary.

The honorary treasurer of the Bolton Infirmary has received a cheque from the chairman of the Hospital Saturday Fund for £2780. This is a little more than last year's contribution.

A Faith-Healer.

The case of a man charged with wilfully ill-treating and neglecting his daughter was tried at the City Sessions on Oct. 1st. It illustrates the marvellous absence of commonsense displayed by some of the fanatical followers of the so called Dr. Dowie. The child on Sept. 3rd fell down some steps and broke her right collar bone. On returning home the father was told of the accident and the mother wished to send for a medical man, but he would not allow it and instead knelt down and prayed. So things went on, though the mother again tried to get his permission to take the child to a medical man, till Sept. 8th when he allowed her to be taken to a druggist. The druggist said that the bone was broken and advised her being taken to the infirmary. But the father would not allow this. On the 11th an inspector of the Society for the Prevention of Cruelty to Children interposed and the father took the child to the place where his sect held their meetings, apparently to enable the elders to pray over her. It was not till Sept. 21st that by an order of the court an inspector of the society took the child and she was properly attended to. The defendant gave evidence on oath and said that one of the principles of his Church was that "all cures were effected by means of faith and prayer." He is said to have sent a telegram to "Dr. Dowie" at Zion City asking for his prayers but had had no reply. If he *prayed without replying* "it was quite certain," as the prosecution said, "that the prayer was not answered" till the child was medically attended. It is curious that in these days anyone can believe the pretensions of Dr. Dowie or of people like him, but this man no doubt believes in him. He said he had believed in [illegible] 18 years of age he heard [illegible] —about the medical pro- [illegible] *Afterwards he took up* hydropathy. "Now he had got the divine truth—a truth of God " He is not alone in his notions, for several witnesses expressed their belief in "faith healing." The recorder said the question was, had the defendant wilfully neglected the child so as to cause her unnecessary suffering or to be a disadvantage to her health? The jury found that he had and he was sent to gaol for a month with hard labour. *Probably from his fellow fanatics he will receive* honour and glory as a martyr and will retain his faith, but society, and more particularly children, who are the chief sufferers, must be protected from the consequences of pernicious doctrines leading to cruelty, even if they are held honestly.

Oct 6th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

University of Liverpool: Opening of the Winter Session of the Medical Faculty.

THE first public function associated with the University of Liverpool took place on Oct. 1st, when, in the Arts Theatre of the University buildings, the winter session of the medical faculty was opened by a distribution of prizes by Sir Dyce Duckworth. In the absence of the chancellor (the Earl of Derby, K.G.), the vice-chancellor (Principal Dale) presided over a large and representative assembly. As is customary on such occasions academical costumes were worn. Those present included the Lord Mayor, the Lord Bishop of Liverpool, Sir William M Banks, Professor Bradley (Oxford), Major Ronald Ross, C B., F.R.S., late I.M.S., Professor R. W. Boyce, F.R.S, Professor Moore (dean of the medical faculty), and Dr. James Barr. At the onset of his introductory address, as your readers will have seen, Sir Dyce Duckworth remarked that they must try to imagine the feelings of one who, having been born in Liverpool and having begun his preliminary studies in the humbler days of the Liverpool School of Medicine, returned after the lapse of so many years to take part in a ceremony memorable as that truly was that day, when they formally met for the first time as the newly constituted faculty of medicine of the University of Liverpool. He offered his warm congratulations to his fellow citizens on their wisdom and energy in seeking and securing the charter for their University. Lancashire men generally knew what they wanted, and what they wanted they commonly contrived to get; and, further, with what they got they were proverbially generous. Sir Dyce Duckworth made a complimentary allusion (for their prescience and untiring energy in promoting not only the welfare of that faculty but the establishment of the University itself) to his fellow graduates, Sir William

Banks, Dr. A. Davidson, Dr. Richard Caton, and Mr. Edgar Browne. He paid them this small tribute without any disparagement to the loyal and generous support afforded by others in the school, or to the munificent benefactors amongst their wealthy and enlightened fellow citizens. The Lord Mayor proposed a vote of thanks to Sir Dyce Duckworth for his able address, which was carried with acclamation.

Oct. 6th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Monmouthshire Health Report.

ALTHOUGH the Monmouthshire county council has not thought fit to appoint a county medical officer of health there has been issued for several years past an annual "review of the general sanitary condition of the county" founded mainly upon the annual reports of the district medical officers of health, with abstracts of, and comments on, those reports by the sanitary committee of the county council. The review for 1902 is signed by Dr. T. H. Redwood, the chairman of the sanitary committee, who is also medical officer of health of Rhymney urban district, and among the members of the sanitary committee are other district medical officers of health. The birth-rate for the county during 1902 was 17·8 per 1000 and the death-rate was 17·8 per 1000. The lowest death rate was 11 per 1000 in Risca and the highest was 22·8 in Tredegar. The infantile mortality rate for the county was 142 per 1000 births; in Pontypool this rate was as low as 74 per 1000 births and in Abergavenny as high as 209 per 1000. The zymotic death-rate was 2 8 per 1000 in the county and in Bedwellty it was 6·9 per 1000. Monmouthshire is well known to have a low mortality from tuberculosis; it is of interest therefore to learn that in 1902 the death-rate from this disease was 0 74 per 1000; in the urban districts, however, the rate was 0 61 per 1000 and in the rural districts it was 1 per 1000. There are still ten of the 25 sanitary districts without isolation hospitals and the sanitary committee advises the county council to insist on the provision of means of isolation in these districts. There is only one district (Abercarn) provided with a steam disinfector; it is not at all surprising, therefore, to find that diphtheria and scarlet fever were prevalent in the populous urban districts during 1902. In Bedwellty, with a population of 11,000 persons, there were 203 cases of diphtheria, and in Ebbw Vale, where there is a population of over 23,000, there were 269 cases of scarlet fever. There does not appear to be any refuse destructor in the whole county, household refuse being disposed of on land or collected on tips. The sewage from most of the districts discharges into adjoining rivers, though in one populous part that is known as the Western Valleys there is now being constructed a main trunk sewer which will terminate in the Bristol Channel.

The Cost of Pauperism.

The statistical returns recently issued by Mr. E. B. Wethered, Poor-law inspector to the Local Government Board, are of considerable interest and show that in 34 of the 44 unions in his district there was an increase in the cost of maintaining the poor during the year ending Lady-day, 1903, compared with the previous 12 months, although the number of persons actually relieved on the first day of January, 1903, was in many instances lower than on the same date in 1902. In Gloucestershire the cost was £135,000, compared with £129,000 in the previous year, and in Bristol the cost was £66,700 compared with £64,000. The cost per head of the census population varied in Gloucestershire from 3*s.* 2*d.* and 4*s.* in the Gloucester and Bristol unions to 5*s.* 7*d.* and 5*s.* 10*d* in the Cirencester and Wheatenhurst unions.—At the annual conference of the Plympton union parish council and parish association held at Yealmpton (Devon) on Sept. 30th Mr. Preston Thomas, inspector to the Local Government Board, stated that when he first went to the western district in 1896 he found that the Poor-law had not been very much looked into and he therefore took the course of continually bringing the subject before the boards of guardians. There were now 10,000 fewer persons in receipt of relief and upwards of £20,000 less spent in out-relief than when he first went to the district.

Glamorganshire Education Committee.

Dr. T. H. Morris, surgeon to the Tylorstown collieries in the Rhondda Valley, has been elected chairman of the education committee of the Glamorganshire county council.

Rent of Cottages in Newport.

It is stated on the authority of the local trades council that two roomed tenements (of which there are not many) may be rented in Newport (Mon.) for 3*s.* 6*d.* per week, four-roomed cottages for 5*s.* 9*d.* per week, and larger cottages from 6*s.* 6*d.* to 10*s.* 6*d.* per week. Artisans are said to pay 25 per cent. of their wages in rent and labourers 35 per cent. During the past six years rents have increased in Newport about 2½ per cent.

A Coroner on the Holding of Inquests.

On Sept 28th the coroner for Haverfordwest held an inquiry into the cause of death of a man, aged 59 years, who arrived in Haverfordwest from Llanelly on Sept. 25th and died on the following day. The medical man who was called to see him gave a death certificate, stating the causes as pleurisy and peritonitis, but on Sept. 28th a solicitor, on behalf of the relatives, telegraphed from Llanelly to the coroner demanding an inquest and post-mortem examination and adding that the deceased had upon him a considerable sum of money which had disappeared. The coroner therefore held an inquest and ordered a post mortem examination which confirmed the diagnosis set forth in the death certificate. The jury returned a verdict of "Death from natural causes" and the coroner severely condemned the hasty action of the relatives, saying that the solicitor should have gone to Haverfordwest and made inquiries before causing an inquest to be held.

Enteric Fever at Merthyr Tydfil

At the meeting of the Merthyr Tydfil urban district council, held on Sept. 30th the medical officer of health, Mr. D. J. Thomas, reported that there were 66 cases of enteric fever under treatment at the isolation hospitals. Owing to pressure of work upon the medical officer of health the council decided to provide him with an assistant for one month.

Bristol University College.

The inaugural lecture of University College, Bristol, was delivered on Oct. 5th by Professor R. M. Ferrier who gave an interesting address on Steamships—Past, Present, and Future. Mr. P. J. Worsley, J.P., presided and there was a large attendance Professor Lloyd Morgan, in proposing a vote of thanks to the lecturer, remarked that undoubtedly if England were to keep her high position they must rise to the responsibility of their position intellectually and they must do their best for the higher education such as for years they had striven to give in the University College of Bristol—the embryo, he hoped, of the university for the west of England that was to come.

Oct. 6th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Is Insanity Increasing?

DR. J. CARSWELL, certifying physician in lunacy to the Glasgow parish council, has issued his annual report on the certification of lunatics for the year ended May 15th, 1903. He states that 840 applications were made to the inspector of poor on behalf of persons supposed to be insane. Of these, 549 were certified as insane while 291 were not certified; but a very important fact is brought out showing that of the uncertified cases 242 (the majority of whom were men) were treated in the temporary observation wards at Barnhill; 193 of these were discharged recovered, the patients being, as a matter of fact, nearly all "alcoholics," while only 36 were subsequently removed to an asylum. There is sufficient evidence here to show the advantage of such wards and there can be no doubt of the wisdom of the parish council in making further provision for these unconfirmed and incipient cases of insanity in the new mental hospital which is a part of one of the two general district hospitals at present being erected in Glasgow. This mental hospital is the first of the kind in the kingdom and will supply for Glasgow a means of treating incipient cases without the necessity of certifying the patients as insane and sending them to an asylum. The number of cases certified as insane this year—549—is exactly equal to the average number for the three years 1901–03 and represents as certified 65·4 per cent. of the total applications; 162 had suffered from previous attacks of insanity and the remaining 337 represent the actual number of persons who became insane for the first time during the year. This is 19 less than last year and the proportion per 100,000 of the population is 65·5 compared with 70 last year. This is taken as indicating a satisfactory movement as regards the actual production of insanity. Dr. Carswell further expresses his views very strongly, and they are new, regarding the general impression that there is an increase of insanity. The steady increase in the numbers resident in asylums would indicate that there was such an increase but he holds that while there are more registered lunatics there is not necessarily more insanity. He produces tables showing the age and sex distribution of first attacks of insanity and the rate of production per 10,000 persons living at each age period during the years 1901–03, examination of which proves (1) that the rate of production at ages below 45 is tolerably constant, that it is almost identical for males and females, and that it shows no tendency to increase (on the contrary, during last year there was a decided decrease); and (2) that there is a decided increase in the rate of production above 45 years of age and this most marked in males. By reference to the fortieth annual report of the Commissioners in Lunacy Dr. Carswell shows that throughout Scotland during the ten years period 1887–96 some influences had been in operation which had the effect of increasing the number of admissions to asylums at ages above 40 years at a much greater rate than at ages between 20 and 40 years and had the further effect of changing the age period which produced the highest number of admissions (omitting the periods under 20 and over 70 years) per 100,000 of population from 30–40 to 40–50. The figures relating to Glasgow reveal the operation of those influences common to the whole of Scotland though varying in their effects according to local circumstances. These influences are connected with the social and the industrial conditions which have prevailed during the last half century, associated as they have been with the great philanthropic movement which has so profoundly influenced local government in all its branches. During the young and active period of life the industrial classes in Glasgow have practically no struggle for existence. Employment for them is abundant and with prudent habits their health, which is their capital, is almost completely protected by public authority. Consequently the production rate of insanity during the earlier periods of life is not increasing and is not too high relatively to existing conditions. The real struggle for existence among the working and labouring classes only begins in middle life and towards later years. The competition then begun finds the drunken and incompetent unequal to the new conditions and insanity is one of the forms in which such incompetence is expressed. A person who cannot find work on account of mental deficiency or disorder becomes a financial burden upon some one, and as the increasing competition makes it increasingly difficult for persons so afflicted to find employment the tendency is to take advantage of asylums for their custodial care. Asylums being rate-supported, it is only reasonable that the public should increasingly use them for the care of persons who might be otherwise cared for under easier and simpler industrial and domestic conditions. Whatever explanation may be adopted regarding the causes that underlie the production of insanity, such explanation must take account of the stability of the sex and age distribution of cases under 60 years not only in Glasgow but all over Scotland, and it would seem that the above explanation fulfils this condition. On the other hand, while intemperance, for example, is a factor of great importance in the question of the cause of insanity, yet such a cause coming into operation would show considerable fluctuations in the sex and age distribution over a series of years, the very thing which does not occur; so with the other so-called primary causes. Dr. Carswell's conclusion, then, is that certain influences, mainly social and economic, have been in operation during a period of over 50 years which have had the effect of improving the condition of the people and at the same time of filling the asylums. The contradiction is only apparent and the increase is an increase of lunatics under public control but not an increase of insanity. An obvious practical conclusion drawn is that existing conceptions of the character of the accommodation required for the care of the insane stand in need of revision. The recovery-rate of asylums has gone down coincidently with the changes in the character of admissions. There is consequently an accumulation of incurable lunatics and the need that now exists for merely custodial care for a considerable proportion of the patients is more apparent than when the existing asylums were built.

Oct. 6th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Local Government Board and the Granard Guardians.

THE quarrel between the Granard board of guardians, their medical officer, and the Local Government Board of Ireland, maintains its professional interest. A sealed order removing the master of the workhouse was duly received with a letter calling upon the board of guardians to take steps for the appointment of a suitable person in his stead. After a long discussion a motion was passed unanimously that he be appointed to the temporary mastership of the workhouse until the next meeting on Oct. 5th. On that day a letter was read from the Local Government Board authorities requesting the guardians to make suitable arrangements for the discharge of the duties of master of the workhouse and pointing out that if the guardians persisted in retaining the late master they would themselves feel constrained, under the powers vested in them, to nominate a master. The guardians forthwith passed a motion to "hold on" to the master "no matter what the cost might be, as they had strong opinions he was not getting fair play."

St. Vincent's Hospital, Dublin.

The address introductory to the medical session was delivered at St Vincent's Hospital, Dublin, on Oct. 6th by Mr. R. F. Tobin who chose for his subject the present position of the Irish Poor-law medical service. The lecturer could not have selected a topic of more vital importance to Irish medical men. The claims of the Irish Poor-law medical service are urgent, as all your readers know.

Some Questions about the Public Health of Belfast.

Since the publication of Professor Lorrain Smith's "Report on the Occurrence of Typhoid Fever in Belfast" considerable discussion has taken place in the city upon the many matters of vital importance, medically and socially, which have been brought into prominence. The chairman of the water commissioners has submitted his criticism[1] and on Oct. 1st the local papers published a manifesto from the chairman of the public health committee who, apart from several minor details, is generally in agreement with the results and recommendations embodied in Professor Smith's report. Speaking of hospital accommodation the chairman of the public health committee says that his committee for the past 15 years has been labouring to convince the corporation of the necessity for hospital accommodation for the respectable poor of Belfast who do not wish to have the stigma of pauperism attached to their names. Year after year this subject has been brought forward and has met with very strenuous opposition in the most unexpected quarters, and it is only within the past year that all the difficulties of the case have been overcome and the contract signed for the erection of a first-class infectious diseases hospital in one of the healthiest sites in Ireland (Pur [illegible] ago, [illegible] shou [illegible] in. [illegible] the c. [illegible] any time during those 15 years the chairman of the public health committee, finding that the recommendations of his committee were not attended to by the rest of the corporation, had resigned his post and had given his reasons to the public, his position would have been indorsed and years ago Belfast would have been provided with a modern fever hospital. In the meantime the chairman of the public health committee appeals to the guardians to convert the workhouse fever hospital into a district hospital—a policy that seems to clash with his statement which I have quoted that hospital accommodation is particularly required unconnected with the stigma of pauperism. The guardians declined when first asked by the public health committee to take any action in the matter. Will they take a more public-spirited course now? There seems to be little real attempt made to face any difficulty or emergency in public health. Belfast at the present time has not an available bed for persons of the middle classes suffering from infectious disease who are willing to pay for their reception, and this anomalous state of affairs will continue for three years until the new hospital is ready. To meet the difficulty the public health committee might have taken over the old Royal Hospital which was offered to it or it might have advised the erection of temporary iron buildings at Purdysburn as it was compelled to do for cases of small-pox. In taking either of these courses the committee would have satisfied public opinion but instead of this it intends to ask the guardians to reconsider the idea of a conversion of the workhouse fever hospital. Will this course remove the reproach from Belfast of having "the highest typhoid death-rate of any city in the world"? It is announced that the public health committee is still considering Professor Smith's report and will bring it before the council. There will be discussion, but will it be followed by action?

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[1] THE LANCET, Oct. 3rd, 1903, p. 983.

The Lord Mayor of Cork and the General Superintending Medical Officer of Health.

Some weeks ago vacancies occurred for two sub-sanitary inspectors in Cork and it was decided that the candidates should be examined by Mr. D. D. Donovan, general superintending medical officer of health, and by Mr. O'Keeffe, executive sanitary officer. The report of the examiners showed that one of the three candidates had scored 55 marks out of a maximum of 75 and was far ahead of the other two. The public health committee, however, with the report of the examiners before it appointed the two men who had comparatively failed in the examination. When the minutes of the committee came before the town council there was an animated discussion and the Lord Mayor strenuously indorsed the action of the committee on the grounds that the examination was the merest farce, a statement which he repeated in emphatic terms. However, a large majority of the council viewed things differently from his lordship and the candidate who had been successful in the test was very properly appointed to one of the vacancies. The Lord Mayor's references to the examination have been very severely criticised and have provoked much indignation, especially as Mr. Donovan is a very active medical officer of health and enjoys the esteem and confidence of his fellow citizens. On Oct. 3rd there was a meeting of the medical profession to consider the matter when the following motion was passed unanimously:—

> That we, the members of the Cork medical profession, view with the greatest indignation the unjust observations which were recently made in public by the Lord Mayor with regard to the examination held for the post of sub sanitary officer by our medical officer of health, Dr. D. D. Donovan, and we wish to express our entire confidence in the skill and integrity of our medical officer of health and in the manner in which he has on all occasions faithfully discharged his duties.

Oct. 6th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

After the Plague.

NOW that the epidemic is quite over the sanitary administration has begun to be severely criticised with the object of profiting in the future by the experience which it has just undergone. The chief criticism is concerned with the lazaretto at Frioul in which passengers coming by ships from foreign parts and suspected of plague are kept. As soon as the recent epidemic was notified the municipal administration very naturally wished to isolate its suspects in this lazaretto which is situated upon an isolated island where surveillance is easy and which was erected for this very end. To the surprise of everybody the sanitary authorities refused to receive these patients, declaring that the Frioul lazaretto was entirely under the maritime authorities and that its object was the reception of patients before their landing on French soil, and, moreover, that the establishment had not sufficient room to receive patients from the town and that means for revictualling (*ravitaillement*) were scanty. That was the reason why the municipal administration of Marseilles had to lodge its plague patients in some buildings kindly lent for the purpose by M. Salvator, which were transformed into a special hospital. It is very probable that the lazaretto of Frioul, which has already been the subject of lively criticism at the sittings of the Academy of Medicine, will in a very short time be discussed again. On the other hand, the town of Marseilles has appealed to the Minister of Foreign Affairs to ask that the divers Powers which have just put into force severe quarantine measures against merchandise coming from Marseilles should recall these measures. The Marseilles municipality argues that these measures are due to an exaggerated view of the danger and are apparently inspired by commercial rivalry which has seized upon the occurrence of plague as a pretext. Italy, Spain, Greece, Turkey, and Uruguay have signalised themselves by formulating very severe quarantine laws. As it appears that there is no doubt that the Marseilles plague was brought from Constantinople this seems somewhat odd.

The Old School of Medicine and the Old Academy of Medicine.

Some years ago the municipal authorities of Paris bought up the ancient buildings which belonged to the first school of medicine founded in Paris. These buildings had been scheduled as *monuments historiques* and it was intended to turn them into a museum of medicine and surgery. However, this idea had to be given up, for when the repairs were begun it was found that the buildings were on the point of collapsing and that it would be dangerous for the public to visit them. So the Paris Society for the Protection of Ancient Buildings (Commission du vieux Paris) is going to inquire into the possibility of preserving a portion which seems capable of repair or else of pulling down the whole structure. The old buildings of the Academy of Medicine have also been put into the restorer's hands and they have found how singularly insanitary was the small hall where the council used to meet. On the carpet being taken up no less than ten others were found, one on the top of the other underneath the first. They were all very old and thick with dust. No very vivid imagination is required to conceive of the number of microbes existing therein.

Obituary.

Dr. Fochier, professor of clinical obstetrics in the Lyons Faculty of Medicine, died suddenly on Oct. 2nd in the rector's antechamber.

Public Health of Madagascar.

At the meeting of the Academy of Medicine which was held on Oct. 6th M. Kermorgan read a long report upon the sanitary work which has been accomplished in Madagascar by General Gallieni. Once more are evident the admirable results which can be arrived at when an energetic administrator who is given a free hand works with a will. When General Gallieni arrived in Madagascar the island was decimated by malaria, alcoholism, small-pox, and syphilis. General Gallieni set to work with vigour and has founded a native school of medicine, a Pasteur institute at Tananarivo, a vaccine farm at Diego-Suarez, 20 hospitals containing 1300 beds, four lazar houses containing 1200 lepers, and two more in process of construction. Besides these, stations where medical relief can be obtained are being multiplied. To these works must be added the colonial hospitals and various institutions supported by private charity, one maternity hospital, two lazar houses for 900 lepers, and two ordinary hospitals. The total expenses for sanitary service during the year 1902 amounted to nearly 1,000,000 francs, which sum has been partly obtained by a tax of three francs per head of inhabitants, called the medical aid tax. The number of patients in the ordinary hospitals was 11,134, the number of lepers in the lazar houses was 2540, the number of vaccinations performed was 150,056, and 749,485 patients obtained advice and medicine. Owing to the admirable exertions the death-rate has gone down and the birth-rate has gone up in a notable fashion. Small-pox has almost completely disappeared from the central table-land, although it still exists in some provinces. Severe measures have been taken to put down alcoholism and no native is allowed to keep a drink shop. Leaflets have been distributed and medical advice with medicine has been given with the result of already diminishing syphilis in a very marked manner. The Governor is actively engaged with the question of leprosy. The central table-land contains over 4200 lepers, of whom 2540 are in the various lazar houses while some 1800 live with their families or wander from place to place. The new lazar houses which will be ready this year will reduce this number to 800. When it is remembered that three out of every 1000 inhabitants of Madagascar are lepers it will be seen that the time for action had arrived.

The Inoculation of Syphilis in the Monkey.

Three chimpanzees, two females and one male, have been successfully inoculated with syphilis by M. Roux and M.

Metchnikoff The first female inoculated has died, not from syphilis, but from a throat affection characterised by the formation of membrane which was, however, not true diphtheria. The disease was contracted from another monkey which is also dead The syphilitic lesions were quite characteristic and included chancres, secondary rashes, and mucous plaques, together with the typical glandular swellings Doubt has been thrown on the value of these experiments, but it would appear to be certain that if a chimpanzee can be infected with syphilis by inoculation it will be able to be proved that if inoculation with attenuated virus does not infect the chimpanzee it will also not infect human beings, and such an experiment has been impossible to make heretofore.

Oct 6th.

Medical News.

UNIVERSITY OF GLASGOW.—The following candidates have passed the first professional examination for the degrees of Bachelor of Medicine (M B) and Bachelor of Surgery (Ch B.) in the subjects indicated (B , botany ; Z , zoology ; P , physics ; C , chemistry) :—

Robert Govan (Z ,

C *), James Robertson Mitchell (Z ,* C) Hugh Walker Muir (B), Robert Charles Muir (B), Archibald Campbell Munro (B , P *), Arthur Alexander Murison (C) Isaac Papiermeister

The following have passed the second professional examination for

Bachelor of

anatomy ; P

peutics) :—

*George Allison Allan (M *) George Victor Anderson (P)* James Henderson Baird, B A (M), Hugh Barr (M) George Duncan Morrison Beaton (A P), George Thomson Bogle (A), Charles Burns (A.), Donald Livingston Carmichael (A), John Paterson Carmichael (M) Charles Game Angus Chislett (P , M), Donald Clark (P) Thomas Goodall Copestake (A), Andrew Donaldson Cowan (P), Harold Windley Dempster (A.) John Shaw Dunn M A (M), Eric John Dyke (M), Hamilton William Dyke (M), Edward John Fitzgerald (A , P), Thomas Henderson Forrest (P), Joseph Glaister (A , P), Alexander Graham B Sc (M) John Isdale Greig M A (A , P), William Grier (M), Charles Francis Dyer Hammond (A , P ,* M), John Hammond (M), Saul Hyman Harris (A), James Duncan Hart

The following have passed the third professional examination for the degrees of Bachelor of Medicine (M B) and Bachelor of Surgery (Ch B) in the subjects indicated (P , Pathology , M , Medical Jurisprudence and Public Health) —

Scott Campbell Adam (P , M), Andrew Blair Aitken (P), Henry Graeme Anderson (M) James Richard Sumner Anderson (P), Robert Daniels Bell M.A (P , M) Thomas *Brodie (P , M)* Robert Buchs William Davidson (P) Thomas), Hugh M'Millan Donaldson (M), Hugh Harvie Fulton (M), M) George Munn Gray (M *), (P , M) Archibald Yuill Hutchi James Rutherford Kerr (P , M) *l Cabe (M) Donald* Carmichael M (P) Tom Duncan M'Ewan (M) n M Farlane (M), Alexander St) Milne M'Intyre (M), Charles Gordon Mackay (P , M), Roderick MacLeod (M), James Marshall (P , M) *David Robertson Mitchell (M), Gavin* Denholme Muir (M), John Murdoch (P , M) Frank Anderson Murray (P , M), Thomas Orr (M) Howard Henderson Patrick Pollok (P), Andrew Murdoch Rae Richmond (M), John ert Wilfrid M), James David Alexand Watson P)

Women — (M), Ethel L rgaret Walker), and Annie May Yates (P , M)

* Passed with distinction in the subjects indicated

MEDICAL MAGISTRATE —Mr Arthur C. J Wilson has been placed on the commission of the peace for the West Riding of Yorkshire

DEATH OF A CENTENARIAN —John Lenin, who was 102 years of age, died recently at St Austell (Cornwall) Workhouse and the master reported the fact to the guardians at their meeting on Oct 2nd.

THE ROYAL COLLEGE OF PHYSICIANS OF IRELAND. —At a stated meeting of the College held on Oct 2nd Mr Thomas Greenhalgh, L R C P Irel , 1868, was admitted to the grade of Member of the College

LITERARY INTELLIGENCE.—The Walter Scott *Publishing Company, Limited, are just adding* a notable work to their "Contemporary Science Series"—namely, "Morals A Treatise on the Psycho Sociological Bases of Ethics" It is a translation of Duprat's famous book, "La Morale," made by W J Greenstreet, M A., headmaster of Marling School

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on Oct. 2nd, when Dr Leslie Durno delivered the presidential address on "A 25 Years' Postgraduate Course in Sepsis and Antisepsis" He said that Lord Lister first declared that fermentation in wounds was due to the presence of bacteria and later prevented that change by the use *of carbolic acid solution Noting the* changes that had taken place in the methods of antiseptic dressings from the early days to the present time, Dr Durno reviewed the various agents by the use of which power over organisms was exercised, classing them as (1) exclusive ; (2) inhibitive ; (3) attenuative ; (4) neutralising of ptomaines ;

(5) mechanical; (6) dehydrating; (7) oxygenating; and (8) deoxygenating. The various infecting sources were reviewed and mention was made of several processes in the treatment of wounds, of instruments, and of the hands. The address was heartily applauded.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Richard Pott, professor of children's diseases in the University of Halle.—Dr. M. D. Chaussoff, professor of anatomy in the University of Warsaw.—Dr. James F. Hibberd, formerly professor of physiology and general pathology in the Ohio Medical College, Cincinnati. —Dr. Marenghi, *privat-docent* of general pathology in the University of Pavia.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—Mr. John Wyatt Pratt, M R.C.S. Eng., L R C.P. Edin., L S.A., who has practised for several years at Wiveliscombe, Somerset, has been presented with a purse containing £98 as a mark of respect and esteem by his friends and patients in the district.—The Newton Abbot (Devon) division of the St. John Ambulance Brigade on Sept. 28th celebrated its team's success in winning the challenge cup offered as a prize to be competed for by the ambulance teams of Devon and Cornwall at Redruth on Sept. 26th, and after dinner Mr Richard Henry Grimbly, M.R.C.S. Eng., L.S.A., was presented with a silver-mounted cane in appreciation of his honorary services as instructor to the successful team.

GLASGOW SOUTHERN MEDICAL SOCIETY.—The first meeting of this society for the session 1903-04 was held on Oct. 1st, when the following gentlemen were appointed office-bearers:—Sir J. Halliday Croom, honorary president; Dr. Thomas Richmond, president; Dr. J. Fraser Orr and Dr. A. E. Maylard, vice-presidents; Dr. Thomas Forrest, treasurer; Dr. Andrew Wauchope, secretary; Dr. James Weir, editorial secretary; Dr. G. H. Edington, seal-keeper; extra members of council—Dr. M. Dunning, Dr. R. T. Halliday, and Dr. Kelly; court medical—Dr. D. Macgilvray, Dr. H. L. G. Leask, Dr. T. K. Monro, Dr. John Stewart, and Professor R. Stockman. Dr. C. E. Robertson was reappointed a governor of the Victoria Infirmary. It was arranged that the annual dinner should be held on Oct. 15th.

THE VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.—The winter session of this school commenced on Oct. 5th at the headquarters of the London Rifle Brigade which have kindly been placed at the disposal of the senior medical officer by Lieutenant-Colonel Lord Bingham. There was an excellent muster of all ranks in both the advanced and junior classes and Brigade-Surgeon-Lieutenant-Colonel P. B. Giles announced that no more would be taken in either class after the next lecture. The officers who have been selected to take part in the instruction are Surgeon-Major W. Culver James, Surgeon-Major R. R. Sleman, Surgeon-Captain E. M. Callender, Surgeon-Captain E. W. St. Vincent Ryan, Surgeon-Captain C. S. de Segundo, Surgeon-Captain A. D. Ducat, and Surgeon-Captain J. A. Masters. The competition for the challenge bowl presented to the school by the late Surgeon General J. B. Hamilton will take place on Dec. 7th.

CHARING CROSS HOSPITAL.—On Oct. 1st Sir Charles Wyndham presented the prizes won by the students at the hospital during the past year and delivered an address, an abstract of which will be found in another part of our present issue. The dean, Mr. Herbert F. Waterhouse, in his annual report stated that the hospital was completely closed for extensive building operations on July 18th and would reopen on Oct. 5th when it would be found that a complete transformation had taken place and that Charing Cross would in a few months, when all the buildings were completed, have with its convalescent home a service of 300 beds and a hospital as nearly approaching perfection in construction as was possible considering its position in the very centre of the greatest city in the world. It is understood that on Oct. 12th the governors of King's College Hospital will be called upon to decide whether or not their hospital shall be moved to the south side of the Thames. If, as seems almost certain, their decision be in the affirmative, there will then be no general hospital nearer to Charing Cross eastwards than St. Bartholomew's. The bulk of the patients who now seek advice at King's College will therefore probably go to Charing Cross Hospital and this, though throwing a further strain on the resources of the hospital, will greatly increase its usefulness as a field of clinical observation and research.—The following entrance scholarships have been awarded: The Epsom scholarship (100 guineas) to Mr. N. G. H. Salmon, the Livingstone scholarship (100 guineas) to Mr. R H. H. Jolly, and a Universities scholarship (72 guineas) to Mr. W. D. Keyworth. Entrance scholarships have also been awarded to Mr. P. E. Stibbe (60 guineas) and to Mr. C. H. F. Atkinson (30 guineas).

UNIVERSITY OF CAMBRIDGE.—Mr. Howard Marsh, the new Professor of Surgery, was on Oct. 5th elected surgeon to Addenbrooke's Hospital.—The office of assistant surgeon is vacant by the resignation of Mr. Hubert Higgins. —Mr. R. C. Punnett, of Gonville and Caius College, has been appointed Demonstrator of Comparative Anatomy.—The chair of Physiology is vacant by the resignation of Sir Michael Foster, K.C B., on Sept. 30th.—Under the will of the late F. J. Quick, B.A., of Trinity Hall, his trustees are directed, when several conditions are fulfilled, to transfer to the University an estate which eventually, when several annuities have determined, will amount probably to £70,000, "for the furtherance of study and research in the sciences of vegetable and animal biology."

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BALLANTYNE, T., M.B., Ch.B. Glasg., has been appointed Junior House Surgeon to the Blackburn and East Lancashire Infirmary.

BRIGGS, WALTER, M.B., Ch.B. Vict., has been appointed Senior House Surgeon to the Blackburn and East Lancashire Infirmary.

BRUCE, R. H. G., M.B., M.S. Aberd., has been appointed Certifying Surgeon under the Factory Act for the Friockheim District of the County of Forfar.

DUNCAN, A., M.B., M.S. Glasg., has been appointed Certifying Surgeon under the Factory Act for the Moorfields District of the County of Antrim.

EDWARDS, R. T., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon and Secretary to the Aberystwyth Infirmary.

HARDY, FRANCIS A., M D., C M. Edin., has [illegible] Officer and Public Vaccinator for the [illegible] Newark Union and Medical Officer and [illegible] Leadenham District of the Shelford Union.

HARRISSON, E. H, M B., M.C., B.A. Cantab., has been appointed Certifying Surgeon under the Factory Act for the St. Neot's District of Huntingdon.

KENNEDY, A. D., M.B., Ch B. Glasg., has been appointed Certifying Surgeon under the Factory Act for the Ballachulish District of the County of Argyll.

ROBERTSON, J. MCGREGOR, M.B., Ch.B. Glasg., L.M., has been appointed Assistant Master of the Coombe Lying-in Hospital, Dublin.

THOMAS, EDWIN R., L R C.P. & S. Edin., L.F.P. & S. Glasg., has been appointed Medical Officer of Health of the Borough of Beaumaris.

PEARSE, T. FREDERICK, M D., F.R.C.S. Eng., D.P.H. Camb., M.R.C.P. Lond, has been appointed by the Government of Bengal Lecturer on Hygiene at the Medical College, Calcutta.

POOLE, J. S., M.D. Canada, has been appointed Clinical Assistant to the Chelsea Hospital for Women.

UNWIN, W. H., M.B. Lond., F.R C.S. Eng., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

WHITELEGGE, B. A., M.D., C.B., His Majesty's Chief Inspector of Factories, has been appointed President of the Epidemiological Society.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BILLINGSGATE HOSPITAL MISSION.—House Surgeon (Lady).

BRIDGNORTH AND SOUTH SHROPSHIRE INFIRMARY.—House Surgeon. Salary £100, with board and lodgings.

CAMBRIDGESHIRE, &c., LUNATIC ASYLUM, Fulbourn.—Second Assistant Medical Officer, unmarried. Salary £120, with board, lodging, and attendance.

CARDIFF INFIRMARY.—Assistant House Surgeon. Also Assistant House Physician. Each for six months. Salaries at rate of £75 per annum, with board, washing, and apartments.

CARLISLE, CUMBERLAND AND WESTMORLAND ASYLUM, Garlands.—Senior Assistant Medical Officer. Salary £150 per annum, rising to £180, with board, lodging, and washing.

DARLINGTON HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary £120, with board and lodging.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—House Physician and House Surgeon. Salary £60 respectively, with board, residence, and washing. Also Assistant House Surgeon. Salary £70.

GREAT [illegible] Salary £90 per annum [illegible]

GORDON [illegible] bridge-road, S.W.—House Surgeon. Honorarium £10 10s. for six months or £40 for twelve months, with board and residence.

GOSFORTH CITY ASYLUM, Newcastle-upon-Tyne.—Assistant Medical Officer, unmarried. Salary £140 a year, rising to £160, with apartments, board, and laundry.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—House Surgeon, unmarried, for six months. Salary £20, with board and residence.

HOSPITAL FOR WOMEN, Soho-square, London, W.—House Physician for six months. Salary £30.

KIRKMAHOE PARISH COUNCIL, Dumfriesshire, N.B.—Resident Medical Officer and Vaccinator. Salary £30 per annum.

[illegible] —Assistant House Surgeon for [illegible] board and lodging.

[illegible] HOSPITAL.—Resident Surgeon [illegible] m for first six months and £120 per annum for second six months, with board and residence.

MIDDLESEX HOSPITAL, W.—Second Assistant in the Clinical and Bacteriological Laboratories. Salary £100 per annum.

NEWCASTLE-UPON-TYNE, UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.—Demonstrator of Anatomy. Salary from £120 to £150.

NOTTINGHAM CHILDREN'S HOSPITAL.—House Surgeon, unmarried, for six months. Salary at rate of £100 per annum, with board and residence.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Surgeon. Salary [illegible]

PA[illegible] se Phy[illegible] ate of 50 [illegible]

RO[illegible] Salary [illegible]

[illegible] s Inn road, W.C.—Resident House [illegible] House Surgeon (female), Assistant [illegible] Surgeon (male), Casualty House [illegible] provided [illegible] House Surgeon [illegible] washing [illegible] Also Assistant [illegible]

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Clinical Assistants.

SMYRNA MISSION AND HOSPITAL (CHURCH OF SCOTLAND JEWISH MISSION).—Medical Missionary. Salary £250, with dwelling house.

STAFFORD, COTON HILL LUNATIC HOSPITAL.—Assistant Medical Officer. Salary £125 per annum, with increase, board, lodging, and washing.

SUSSEX COUNTY HOSPITAL, Brighton.—House Surgeon, unmarried. Salary £140 per annum, with board and residence.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—Resident Assistant [illegible] Salary at rate of £50 per annum, [illegible]

TOR[illegible] Surgeon. Salary £100 per [illegible] washing [illegible] ologist and Curator of the [illegible]

[illegible] GENERAL HOSPITAL.—House [illegible] with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

EYRE.—On Sept. 30th, at Wandle House, Wandsworth Common, to Dr. and Mrs. Eyre, a son.

HIL[illegible] P. T [illegible]

MA[illegible] John [illegible]

PO[illegible] the [illegible]

PIM[illegible] Pim, [illegible]

MARRIAGES.

DAY—GORDON.—On Oct. 3rd, at St. Luke's, Nightingale-lane, S.W., James John Day, M.R.C.S. Eng., L.R.C.P. Lond., D.P.H., of Preston House [illegible] Grace, second daughter [illegible]

[illegible] Catherine's, Old Colwyn, [illegible] M.R.C.S., L.R.C.P., to [illegible] e John Kellett and of Mrs. Kellett.

LANGMORE—JENKINS.—On Sept. 30th, at St. Luke's Church, Tideford, Cornwall, by the father of the bride, Herbert Richard Langmore, M.B., B.C. Cantab., to Sonia, elder daughter of the Rev. D. Jenkins.

DEATH.

DUBIG.—On Sept. 30th, 1903, at Little Langtons, Hornchurch, Essex, John, the son of David John Dubig, aged four months.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

SIX YEARS OF MEDICAL JOURNALISM—A RETROSPECT.

THE October number of the *Scottish Medical and Surgical Journal* contains a lengthy and amusing article under the above heading written by an American, Dr. James C. Johnston, recently editor of the *Journal of Cutaneous and Genito-Urinary Diseases*. In this lifting of a corner of the journalistic veil it therefore happens that the phraseology and some of the allusions give evidence of their Transatlantic origin. Several of Dr. Johnston's paragraphs we can only mention, as considerations of space forbid quotation. Among these are criticisms on over-production in medical journalism, on anonymous correspondence, on reports of societies, and on the "publisher's department." This last is an unfortunate feature of some American medical journals and consists of puffing notices of pharmaceutical products. This portion has usually, if not always, a separate pagination from the rest of the journal so that there should be little risk of the paragraphs being taken for editorial opinions, but as far as possible editorial style or the style of original communications from medical authors is imitated. Dr. Johnston also gives a pathetic description of editorial troubles caused by the shortcomings of authors, such as verbosity, incorrect quotations, incorrect references, and unwillingness to conform to special usages of phraseology, spelling, and so forth. Let us now hear the editor himself, with the reservation that sentences are omitted here and there and with the reminder to our readers that our own experiences, though they tally in some respects, differ in others.

Original articles.—Two motives, in the main, lead a man to present his views to the public. They are that he wishes to add a mite to the sum total of knowledge, or that he wishes to gain a reputation, vulgarly speaking, to advertise himself in the only way legitimately open to him. Both are entirely worthy, but both are subject to perversion. In the first case he may not be able to judge of the value of his own work, he may be so young that enthusiasm betrays him into error (this type of youth has been known to last for 50 years), or his experience may not be sufficient to justify a hearing at all. Few workers' activities are perennial like Virchow's and it is not too much to say that medical men do their best work before 50. This is the point at which the editor should appear as counsellor and friend and advise a postponement or a touch here, an amplification, verification, or condensation there. His efforts are often taken amiss and the manuscript is withdrawn by the indignant author for publication elsewhere. My experience is that nothing occasions an author more annoyance than the return of his article, but when the thing is hopeless, it must be done. Let me say that the editor gathers no great pleasure from the proceeding, in fact, it is the most difficult thing he does. A nice editorial discrimination is required in the case of a man who writes for reputation. If he has something worth hearing, by all means let him have his opportunity no matter what his reputation for advertising. If he dashes madly into print with the result of a Bottini operation before the knife is cold, or because he has found a few cell inclusions, and thinks they prove parasitism as the cause of cancer, plead with him as a brother. If he will not listen, pass him on to another editor. His feelings cannot be hurt. His next dash will be wilder, if possible. Killing is altogether too good for the man whose object is to puff a proprietary preparation under the guise of a contribution to science or who sends his article to all the journals he knows of at once and prays for an immediate hearing. Fortunately the game can never be played but once even when the culprit is a genius like the one who recently secured admission to 20 journals. It is possible for an editor to joke about these things when his race is run, not before.

Perhaps the worst of the lot is the thief (no need to mince matters) who steals another's work, his cases, his methods, even his photographs. The editor knows nothing of the matter until he hears from the victim, of course the harm is done, for the article is printed. He makes what amends he can, knowing himself innocent, but the wrong seems without redress. No one pays any attention to the owner's claims after the fact. They are laid to jealousy and dismissed. Sub-varieties of this genus are those [illegible] works [illegible] els [illegible] ke [illegible] the first and may be dealt with gently and firmly.

A word as to titles. Let the author remember the unfortunate whose evil state forces him to make the volume's index and, remembering, not make his title a synopsis of his communication. It is enough to tell a reader whether the subject attracts him. If one or two words will do so much the better, but it is entirely possible for the caption to be misleading when the error is on the side of brevity.

Book Reviews.—There is one desideratum in a book review, and that is to tell the truth about the book. When it comes to the editor's desk he does *one of two things* with it—he reviews it.

himself if he has time, or he sends it to someone he thinks fitted for the task. If he selects the latter course he does so in fear and trepidation. Time goes on and no review materialises. After a few months the publishers politely request to know if there is any likelihood of a notice ever appearing. After several notes, interviews and telephone conversations, the review is sent. It is evidently written from the preface, is perfunctory, and winds up with: "This work deserves a place in every library." It goes in and the editor hates himself.

Occasionally he gets a surprise and the reviewer makes his comments in fine style. The author is never pleased, but that is beside the issue. The best reviewer is one who not only knows the subject but has written on it, if possible, a book. His justice is then tempered with mercy and he writes with authority as well as infinite sympathy. What he says may go a long way if he signs the review, a good practice in most instances. The average critic thinks his work done when he has picked all the flaws he can find. If there are mistakes, misprints or omissions, by all means let them be pointed out, because these points are helps in preparing a new edition, but it is not possible that any work on medicine is wholly composed of error. Destructive criticism is about the easiest of literary pyrotechnics, and, while it may be a choice spectacle, there is nothing left but acrid smoke. Indiscriminate praise is no better. When the work is a monograph on one topic a good plan, instead of reviewing it in the ordinary sense, is to give the gist of its contents with a comment or two.

Abstracts.—I served my time, five years, in the making of abstracts, and there is nothing, except the index, for which I have greater loathing. Someone must do it. The question is, Who? We must abstract from Russian, Polish, and Scandinavian tongues if we can; must be able to winnow wheat from chaff, make it readable, and compress the work of ten years into not more than 500 words. It is not too much to say that every abstract, properly done, represents from two to three hours' time. Count up the years contained in the single issue of the *Philadelphia Medical Journal* of Dec. 13th. If an article is worthless it can be dismissed in two lines but the mind that weighs it should be judicial. The polyglot genius with medical training who can weigh evidence and sum it up does exist. There are several of him in my ken, but so far as my experience goes he works when he lists, sometimes for glory, sometimes for the love of it, and sometimes for money or the journals. Whatever the motive the reader is his debtor but his word should not be taken as gospel. Quite as useful as the man who pursues original lines of investigation is he who presents an able critical summary of the results of that work. Small thanks he ever gets for it.

I have not touched upon the department of news, for presenting that is a function of the medical newspaper and not of the special journal. The same I hold to be true of editorial writing. It may not be entirely well to tell professional secrets, but there are many difficulties in the making of a magazine which its subscribers seem not to appreciate. I shall have accomplished my object if there comes that better understanding between them and the gentlemen in editorial chairs of which I have spoken.

We have read Dr. Johnston's editorial experiences with interest.

THE DISAPPEARANCE OF MISS HICKMAN.

We have been asked by Mr. Hickman to state that he does not believe his daughter to be confined in a house of ill-fame but rather in some institution like a convent. With regard to the suggestion of opening a subscription among medical men with a view to increasing the reward offered for the discovery of Miss Hickman we have received from a correspondent writing above the initials "A. E. W." the following letter:—

"There must be many who, like myself, would welcome the opportunity to subscribe towards such an object. A far larger reward than at present offered might result in most important information, and especially would this be likely if the informant was assured of free pardon on giving 'King's evidence.' Apart from humane considerations we must remember that if efforts are relaxed to solve the mystery of a suspected heinous crime it is a victory for the criminal classes and consequently a menace to society at large. In this case it would especially constitute a menace to the safety of the medical profession."

Our correspondent offers to send a subscription of one guinea and to double his contribution when £100 have been promised.

SWEDISH EXERCISES.

To the Editors of The Lancet.

Sirs,—I shall be much obliged if one of your correspondents would kindly favour me with the address of the institution where a course of Swedish exercises and gymnastics can be carried out.

I am, Sirs, yours faithfully,

Oct. 6th, 1903. X. Y. Z.

PRECOCIOUS MISCHIEF.

A correspondent writes: "I have been attending a little boy who is a veritable demon for mischief of every description. He is only two years and seven months old but stronger and more intelligent than children usually are at that age. Recently he dismembered a harmonium in order to convert the keys into playing-bricks, utterly ruining the instrument. His last exploit was to strip his baby sister naked and to daub her all over with green paint from a pot which had been incautiously left within his reach. 'When I came in and saw the poor child,' said the mother, 'I sat down and cried.' She scrubbed the paint off the infant with soap and water. The infant must have suffered great agony for most of her epidermis had accompanied the paint. The bodily temperature of both the children is peculiar. In health it does not exceed 97° F. When the boy had pneumonia it rose to what we are accustomed to call normal. The pulse in both infants is unusually slow. Can there be any connexion between his low temperature and the boy's mischievous disposition? The little girl has not as yet shown herself to be abnormally destructive. The parents, a young couple, are in no way out of the common."

MOTOR-CARS FOR MEDICAL MEN.

To the Editors of The Lancet.

Sirs,—I shall be glad if some of your correspondents would give me the benefit of their experience in the use of the motor-car for working a country practice. What make of car is most suitable at a moderate price? Are motors reliable for medical work? And is the expense heavy connected with running them? The roads in my district are fairly good in the summer but decidedly heavy and somewhat rough in the winter months, with few hills.—I am, Sirs, yours faithfully,

Oct. 5th, 1903. General Practitioner.

⁂ The subject of motor-cars for medical men has been much discussed in our columns, but as after all the motor manufacturing trade is in its infancy and constantly undergoing developments it will perhaps be well to invite correspondents to make replies. "General Practitioner" may thus obtain the latest information in answer to his questions.—Ed. L.

THE PUMICE FILTER TOBACCO PIPE.

Since we inserted a description of this pipe in The Lancet of Sept. 19th, p. 860, several correspondents have written to know where it can be obtained. We shall be obliged if the makers will kindly send to us their address.

WANTED—A SCHOOL.

To the Editors of The Lancet.

Sirs,—Can you or any of your readers kindly inform me if there is a school where the daughters of a medical man (who having died and left a widow and two daughters unprovided for) could receive free education or where they would be taken at reduced fees?

I am, Sirs, yours faithfully,

Oct. 5th, 1903. Lideria

◆

Enquirer.—Our correspondent should apply to the honorary secretary of the Society for the Study of Inebriety, Dr. T. N. Kelynack, 120, Harley-street, London, W., or to the honorary secretary of the British Medical Temperance Association, Dr. J. J. Ridge, Carlton House, Enfield, Middlesex.

Bicycle.—Bicycling, unless carried to an injurious degree, has no bad effect upon the menstrual periods. If indulged in, however, during the period it tends rather to increase the amount of the flow. Any standard work on gynæcology gives details as to the treatment of amenorrhœa.

Ignoramus.—The change of address can be advertised with discretion once or twice, while a circular letter to all patients on the books at the time of removal is in order.

Old Student.—Our correspondent had better communicate with the secretary of the Sanitary Institute, Margaret-street, Regent-street, London, W.

X. Y. Z. (Ipswich) has not inclosed his name and address. In doing so he should also forward the rules of the association.

X. Y. Z. (Castle Cary).—We will endeavour to be of use. We presume that the assistant was unqualified.

Delta.—We should think that the books mentioned would be quite sufficient.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

The Lancet Office, Oct. 8th, 1903.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Oct. 2	29·75	W.	...	106	65	54	54	56	Cloudy
" 3	29·67	S.W.	0·01	109	68	56	60	62	Overcast
" 4	29·65	W.	0·20	103	65	56	59	61	Cloudy
" 5	29·53	S.W.	0·46	77	63	56	60	61	Overcast
" 6	29·70	S.W.	0·25	66	64	54	55	58	Raining
" 7	29·84	W.N.W.	0·19	89	64	55	54	57	Cloudy
" 8	29·60	S.W.	0·04	88	64	57	60	61	Overcast

During the week marked copies of the following newspapers have been received: *Western Daily Mercury, South Western Star, Battersea and Wandsworth Advertiser, Eastern Daily Press, Tyldesley Weekly Journal and Atherton News, Cork Constitution, Belfast News Letter, Birmingham Post, Aberdeen Free Press (Weekly), Brighton Gazette, Surrey Advertiser, Bristol Mercury, Dublin Express, Morning Post, Hereford Mercury, Daily Graphic, Sanitary Record, Local Government Chronicle, Mining Journal, Hertfordshire Mercury, Burton Chronicle, &c.*

Medical Diary for the ensuing Week.

OPERATIONS

[illegible]

(2 P M), St George's (Ophthalmic 1 P M), St Mary's (2 P M), [illegible]

[illegible]

(2 P M)

SATURDAY (17th) —Royal Free (9 A M) London (2 P M), Middlesex (1.30 P M), St Thomas's (2 P M) University College (9 15 A M) Charing Cross (2 P M) St George's (1 P M) St Mary's (10 P M), Throat Golden-square (9 30 A M), Guy's (1 30 P M)

At the Royal Eye Hospital (2 P M) the Royal London Ophthalmic 10 A M), the Royal Westminster Ophthalmic (1 30 P M) and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES

MONDAY (12th) —MEDICAL SOCIETY OF LONDON (11 Chandos street, Cavendish square W)—8 P M General Meeting 8 30 P M [illegible] Opening and Com [illegible] Rooms of [illegible] avendish [illegible] ussion on [illegible] William Collins)

MEDICO LEGAL SOCIETY (20 Hanover square W)—9 P M Annual Meeting

WEDNESDAY (14th) —SOUTH WEST LONDON MEDICAL SOCIETY (Bolingbroke Hospital Wandsworth Common)—8 45 P M Dr P J Freyer: Some Practical Points in the Treatment of Enlarged Prostate

DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish square W)—5 15 P M Demonstration of Cases of Interest

HUNTERIAN SOCIETY (London Institution Finsbury circus E C)—8 30 P M Dr W Hale White: Some Clinical Considerations con [illegible]

LECTURES, ADDRESSES, DEMONSTRATIONS, &c

TUESDAY (13th) —POST GRADUATE COLLEGE (West London Hospital [illegible] Church Medical [illegible] Epileptic (Queen [illegible] Rheumatism and [illegible] London Hos [illegible] and Practical [illegible] London Hos [illegible] ley Hernia (First Lecture)

SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone-road N W)—3 P M Dr Roberts Cases from the Wards

CHARING CROSS HOSPITAL —4 P M Mr S Boyd: Surgical Cases (Post-Graduate Course)

NORTH EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital N)—4 30 P M Dr R M Leslie: The Value of Symptoms in Thoracic Disease

[illegible] W C)—

FRI [illegible] Hospital, Electro-Therapeutics

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square Bloomsbury)—3 30 P M Dr Collier Methods of Examining Cases

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ABSTRACT OF

An Address

ON

THE IMPORTANCE OF POST-GRADUATE STUDY.

Delivered at the Opening of the Winter Session of the Post-Graduate College, West London Hospital on Oct 13th, 1903.

By Sir WILLIAM SELBY CHURCH, Bart, K C B, M D Oxon,

PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON

[In the introductory portion of his address Sir William Church gave an outline of the evolution and history of the Medical Acts He said that in the year 1834 a committee of the House of Commons, with Mr Henry Warburton as chairman, was appointed to inquire into the laws, the regulations, and the usages relative to medical education and practice in the United Kingdom This committee, however, did not present any report. In 1844 a Bill was brought in by Sir James Graham which was practically the same as that which was passed in 1858 as the Medical Act Sir William Church then continued]

It is almost impossible for us to conceive the state of, I will not say the medical profession, but of medical practice in the country at the time when the select committee took evidence Apparently anyone could call himself surgeon or apothecary and could obtain equal advantages with those who held diplomas from the corporate bodies like the Royal Colleges and had undergone an examination and possessed a certain amount of education One of the questions which most deeply moved the mass of the profession then as now was, Should there be penal laws which gave a monopoly of practice to those who held qualifications and prevented their being interfered with by the unlicensed? In my opinion our fathers acted wisely and I feel sure that in our day our legislature will be equally sensible, to me it appears that it would be a most unwarrantable interference with the personal liberty we all value so highly for the State to say that you shall not receive advice as to your health and well being from any person from whom you think you may obtain benefit We who are conversant with disease and its nature and the pathological conditions on which it depends can hardly place ourselves in the position of the laity, their complete ignorance causes them still to consider disease as something foreign to the body which can be driven out by sufficiently powerful means and they fail to recognise that the majority of the chronic ailments they suffer from are due to changes and degenerations in their own tissues which it is beyond the power of physicians to remove

There is no subject on which the general public is so ignorant and credulous as medicine and this is not to be wondered at when we consider the history of our art and how it arose The earliest medical practitioners of whom we have any knowledge the family of the Asclepiads, claimed to be descended from a god and that something divine was attached to them Although in the brightest times of Greek learning medicine, as we see from the writings of Hippocrates, was singularly free from superstitious observances, yet the part played in the public and domestic life of Greece by oracles, dreams, omens from birds, beasts and the phenomena of nature must have caused divination to play an important part in illness In the later days of Greek learning, when the knowledge of anatomy and therapeutics was at its highest level, in the times of Galen and Aretæus, we know from their writings that methods which we can only regard as superstitions were in use in the treatment of the sick The accounts of miraculous instances of healing in the early days of Christianity and the virtues ascribed to the relics of holy men at a later period still fostered the belief that the art of healing was the gift of God and this belief is by no means yet extinct Healing by suggestion occupied a very prominent although unrecognised position in the practice of mediæval times Even William Harvey appears to have had faith in the therapeutic virtues of the bone of a stag's heart, and touching for the king's evil persisted in this country until the reign of George I Those who are students in folk-lore know how deeply the belief in witchery and sorcery had permeated all classes of men and was fostered by the total absence of what I may call the scientific mind among the learned of the Middle Ages They devoted their mental powers to metaphysical questions and, like the Greek philosophers, entirely neglected experimental investigation into the phenomena of nature

I fear you will think that I have wandered far from my subject I thought that the brief sketch which I have given you of the genesis of the Medical Act and the changes which have taken place in the position and education of our profession would be interesting at the present time when the development of medicine appears almost to necessitate fresh educational methods for the fit preparation of those who intend to make it the study and business of their lives

Of the importance of an acquaintance with the sciences, such as physics and chemistry, as a preparation for the study of medicine we are all agreed, but we are not equally of one [illegible] should be acquired To [illegible] liminary education before students enter on their medical course should necessarily embrace the principles of chemistry and physics A student then would enter on his anatomical and physiological studies prepared by his earlier work to make the best use of his time Biological chemistry, pathology, and bacteriology demand so much time and are so valueless unless a man has a certain amount of practical experience while studying them that the present five years course would not enable any unless they are exceptional men to obtain more than a mere smattering of any of them We must remember that for what may be termed the highest branch of medicine, sanitary science and public health, a post graduate course is now required, only those who hold medical qualifications being admissible to the examinations held by the various licensing bodies for the diploma of public health

By a process of natural development even more than by the artificial and arbitrary regulations made by corporate bodies the medical profession long ago fell into three great classes more or less distinct—physicians, surgeons, and apothecaries, the latter of whom at a subsequent date developed into general practitioners The complexity of medicine is now so great that although these three classes remain fairly well marked, the two first are being subdivided into smaller groups It has, however, been wisely decided by the legislature that no one should be admitted to the Medical Register who has not passed a competent examination in the three subjects of medicine surgery, and midwifery consequently it is not until after we have been admitted to the ranks of the profession that we specialise in any way It is evident that it is impossible for anyone to attain to the highest degree of technical knowledge and skill in all departments Good general practitioners are, as a rule, exceedingly well up in their work I am filled with admiration when I consider how seldom they are found incompetent Think of the responsibility which they have—liable to be called on (especially those practising in the country districts) to treat single handed every sort of emergency, sudden illness, a broken limb, a general smash, an alarming post partum hæmorrhage or a placenta prævia or as medical officer of health to combat a sudden outbreak of epidemic disease Yet competent as most of them are to deal with these emergencies of practice, they would be the first to repudiate the title of specialists In the progress of the evolution of medicine the differentiation of physicians and surgeons naturally took place and all honour must be given to the surgeons who have raised their art from the position of a handicraft subservient to the physicians to that in which it now stands higher possibly in the estimation of the public than medicine

Specialism and specialists are terms which are very much misused nowadays The true specialist, whether he be physician or surgeon is one who with a wide knowledge of all has paid especial attention to some particular branch or branches of medicine, such as sanitation or public health, mental diseases gynæcology, ophthalmology, &c, not as the public appear to think the man who has fixed his attention on a single organ of the body In surgery, where to a greater extent than in medicine manual dexterity is required, surgeons in large centres of population are able to make particular study of certain classes of operations in which by constant practice and most careful attention to details they are enabled to improve the methods and to obtain greater success. It is the success of these honoured and honourable men which has led the public to their demand for specialists—a demand which meets a ready response, although I fear the quality of the article supplied is very inferior to that which the public think they are obtaining. A certain number of these so-called specialists are no doubt honest and honourable men, but by directing their thoughts exclusively to a limited range of subjects have lost all sense of proportion, and I fear that no inconsiderable number trade rather on the ignorance of the public than on any superior knowledge of their own. Of all quacks the worst are those who are duly qualified to practise, for by their position as medical men they bring discredit on the profession. All of us who have reached a certain age have seen how these quacks vary with the fashion of the day; at one time all ills the flesh is heir to arise from acidity or gout and in the other sex from versions, malpositions, and ulcerations of an internal organ; at another time adenoids or supposed phimosis is at the root of all disorders of childhood, and at another exploratory operations on the abdomen are the panacea for all internal derangements. Mankind is alike everywhere and in all classes; its credulity does not grow less with advancing times; if we have lost our belief in miracles and relics we need only look at the advertisement pages of any newspaper to see that our credulity has only taken another form.

The time which can now be allotted in the five years course is too short to enable the average man to spend sufficient time in clinical and practical work. It is essential for the student not only to have general experience in the wards but to have attended the special departments and if possible to have held the post of clerk or dresser in them. Those who are fortunate enough to obtain posts in our large hospitals, especially those with medical schools attached, are virtually enjoying post-graduate study of the best kind, but it is a minority of men who can obtain the advantages of holding such posts. This country, as in other educational questions, has, I am afraid, been behindhand in organising post-graduate teaching of any sort. In the United States of America a large proportion of those attending the arts course at the Johns Hopkins University are post graduates and I am informed that at Baltimore nearly one-third of the medical students are qualified men. The first attempt at organising anything of the nature of medical post-graduate study in London was as long ago as 1888 or 1889; a notice used to appear in the medical papers annually above the signature of Dr. J. Fletcher Little, but it was not until about ten years ago that the West London Hospital course was started. The earlier attempts appear to have failed mainly because they took the form of lectures and did not embrace hospital practice. It is in this respect that the West London school is able to offer so much more valuable assistance to qualified men than such institutions as the Polyclinic or the other hospitals at which occasional lectures or demonstrations are given. You have gradually built up a complete medical school and by confining yourselves to qualified men have not interfered with, or given cause for jealousy to, any of the existing medical schools. The practice in the hospitals attached to the great medical schools in London is open to qualified men but it is not possible to meet their requirements. The teaching for the junior students is necessarily different from that most suitable for those further advanced. Any considerable number of senior men attending the clinical practice of our medical schools has always, and rightly, been resented by the junior students.

That there is abundance of room for post-graduate teaching no one can deny; it is, in truth, urgently needed. After qualification a man makes up his mind in what department he prefers to do special work. If he intends to enter on general practice he knows in what subjects he is weakest and can obtain with you the opportunity and assistance for strengthening his knowledge and supplying his deficiencies, for there is no way by which this can be attained equal to closely following the practice of a large general hospital. There are many subjects now which it is essential for a man to know something of, particularly those which are not suitable for him to spend much time over as a junior student. As instances I might mention the application of electricity for the diagnosis and treatment of diseases or injury, the manipulation necessary for the examination of gynæcological, orthopædic, or ophthalmic cases. If opportunities for increasing their stock of knowledge are advantageous to those just entering on their professional life they are no less so to those who have been placed in circumstances which rendered it difficult either to gain new knowledge or to keep up that which they possessed. Especially useful is it to those who have joined our public services; from the nature of their work it is impossible for them in ordinary circumstances to gain varied experience for want of opportunity. In times of peace the work of the officers of the Royal Army Medical Corps is necessarily without much variety. Even if attached to a large home hospital the field for observation is much more limited than that presented in large civilian ones and excepting during war time the larger operations in surgery very rarely come under their notice. Nothing struck me more forcibly when visiting the hospitals in South Africa than that in many instances the older and higher in the service the officer was the more of a soldier and the less of a medical man he appeared to be. This doubtless arises from the large amount of official non-medical work that they have to get through. A principal medical officer's duties are so largely executive that some of them scarcely did any true medical work themselves. This disability which many of the officers of the Royal Army Medical Corps felt and complained of is now, I trust, remedied, as the Advisory Board has recommended that study-leave should be periodically granted to all officers to enable them to attend civilian practice at intervals during their career. By doing this we are adopting a course which has been in practice in other countries. In the naval service the position is much the same. Commissioned to a ship the complement of which consists of healthy men in the prime of life the medical officer's opportunities for gaining experience are limited. It has been my lot as one of the assessors of the Gilbert Blane medals to read the logs of a considerable number of naval medical officers, and excepting when they have been on active war service there is a great monotony in their medical reports. No doubt they, and the officers of the Royal Army Medical Corps when on foreign service, have opportunities of studying certain forms of tropical disease, but here again the similarity of cases is such that the temptation to fall into a rule-of-thumb treatment of them is hard to resist; nevertheless, I should not be doing justice to a distinguished branch of our profession if I did not bear witness to the excellence of some of its work. Naval officers, I am informed, have not been slow to avail themselves of the opportunities which you offer them and I feel sure that those of the sister service will do the same when it is known how much they can learn here.

In case there should be anyone present who may think that in the remarks I have made I have only had present to my mind the advantage of our profession and not given due attention to the purposes for which this hospital was founded and for which it is supported—the relief of sickness and suffering in its neighbourhood—I should like to say that there can be no greater benefit conferred on the patients who receive relief at an hospital than the attachment to it of a school of clinical medicine. Teachers must always be learners and there is no incentive to a teacher so great as the presence of students anxious to learn. You can have no greater safeguard against mismanagement or against slackness and inattention on the part of the staff than the presence of students. They form a body of critics, kindly it may be, but severe and uncompromising, ready to expose the shortcomings and failures of their teachers. I can unhesitatingly say that the character and quality of the medical treatment in hospitals with medical schools attached to them compare favourably in every way with those in which the work is done without the publicity which necessarily exists when clinical teaching is carried out in the wards and out-patient departments. You have an excellent staff, earnest in their work and anxious to maintain and to increase the reputation of your hospital. You have the material and a certain amount of means for carrying out educational work. I trust that in the near future it may be possible for the lay authorities to give increased facilities for teaching and research, and I would venture to remind the supporters of this institution that whilst a few more beds or an increased number of out-patients might relieve a certain small amount of local sickness and suffering that would hold but a small proportion to the benefit which increased knowledge obtained within these walls might confer on suffering humanity throughout the world. In conclusion, I wish all prosperity to the West London Hospital and its Post-Graduate School.

An Address

ON

CHARLES WHITE, F.R.S.: A GREAT PROVINCIAL SURGEON AND OBSTETRICIAN OF THE EIGHTEENTH CENTURY.

Delivered before the Medical Society of Manchester on Oct. 7th, 1903,

BY CHARLES J. CULLINGWORTH,
M.D. DURH., F.R.C.P. LOND.,
OBSTETRIC PHYSICIAN TO ST. THOMAS'S HOSPITAL.

[IN his introductory remarks Dr. Cullingworth referred to his former period of residence in Manchester and to his having held the offices of honorary librarian and afterwards of honorary secretary of the society for a continuous period of 13 years. He then said :]

For many years I have had it on my mind to gather together such materials as are obtainable for a somewhat fuller account than has yet appeared of the life and work of one of the greatest, if not the greatest, amongst the medical worthies of Manchester, Charles White, the friend of John Hunter, the principal founder of your famous infirmary, the founder also, along with the two Halls (Edward and Richard), of the Lying-in Charity, now St. Mary's Hospital, a pioneer in conservative joint surgery, and, above all, the emancipator of the lying-in woman from the deadly dangers to which she had been condemned by the accumulated traditions of centuries of ignorance and superstition. Other writers have to a certain extent forestalled me. In Mr. W. Whitehead's presidential address before the meeting of the British Medical Association held here last year, and also in the address delivered by Dr. D. Lloyd Roberts as President of the Section of Obstetrics and Gynæcology at that meeting, some account was given of Charles White and of his work as viewed from the respective standpoints of the two speakers. Dr. E. M. Brockbank has also got together a very considerable amount of information about Charles White in connexion with the valuable series of biographical sketches of the older physicians and surgeons to the Manchester Infirmary which he is contributing to the pages of the *Medical Chronicle*, and although I desired him by no means to disturb on my account the order of publication of his series of biographies he generously insisted on withholding his sketch of White until after this address had been delivered.

It has been erroneously stated that Charles White was born in Warrington. He was in reality *born in Manchester* of parents who resided there; he was educated there, practised his profession there, and died at only a short distance away—namely, at Sale in Cheshire. His father was Dr. Thomas White, who was born on April 9th, 1696, and who, after practising his profession in King street in a house in which his son succeeded him, retired to his country cottage at Sale and died there on July 20th, 1776, at the age of 80 years. The house in King-street just mentioned was situated on high ground at the corner of Cross-street, on the site afterwards occupied by the town hall, now the home of the free reference library. Contemporary drawings show the house to have had in front of it a terrace approached from the street at each end by a flight of steps and to have been quite the most handsome and conspicuous house in the street.

From the fly-leaf of an old "breeches" Bible, "imprinted at London by Christopher Barker, printer to the Queen's Majesty, 1578," and discovered about 20 years ago in the collection of a secondhand bookseller, it appears that the book came into the possession of the White family about 1728, the year of Charles White's birth, and was thereupon made the repository of the family records. These records commence with an account of Dr. Thomas White's ancestry. His grandfather was "Charles White, Esq., of Benall Abby, near Griersley [Greasley], Nottinghamshire," who was member of Parliament for the county of Nottingham and "Colonel of a regiment under the King in the grand rebellion when he lost his estate." Colonel White had a son Thomas, who was "baptised at Griesley, 28th Dec, 1656," practised as an attorney at Manchester, and died in 1702, when his son Thomas (Charles White's father) was but a child of six. The record goes on to say that Dr. Thomas White and his wife Rosamund had three children—Charles, Sarah, and Elizabeth—born in 1728, 1730, and 1739 respectively.[1]

While still a mere boy Charles was allowed to assist his father in his midwifery practice. After a time he was sent to attend lectures and hospital practice in London and there it was that he formed the acquaintance of John Hunter, which ripened into a lifelong friendship, the two young men going together to the lectures of John Hunter's elder brother, the scarcely less celebrated Dr. William Hunter, then at the height of his reputation as a teacher of anatomy in London. White seems to have begun his studies in London in or about the year 1748, when he was at the age of 20 years. He cannot have been very long in London, for in 1752 he was not only settled in Manchester and agitating for the establishment of a hospital there, but he had also in the meantime supplemented his London experiences by passing a winter at the University of Edinburgh, already becoming famous as a school of medicine. How far his character and future career may have been influenced by his association with John Hunter there is now no means of knowing. I searched in the library of the Royal College of Surgeons of England and elsewhere for any notes, letters, or other records bearing on that association but in vain. On his return to Manchester he joined his father and very soon established a reputation that led not only to a very considerable practice within the town itself but also to an extensive consulting practice in the surrounding district. He was, as Allen's well-known portrait of him indicates, a man of great force of character and immense energy and his powers of physical endurance were quite remarkable. "Even in advanced age," we are told, "he was capable of performing without fatigue very long journeys on horseback and of bearing without injury to his health exposure to the most inclement weather. He required little sleep and was for the greater part of his life an early riser." With these physical qualifications added to mental endowments that raised him far above the majority of his medical contemporaries, it is no wonder that by the time he had been settled 20 years in Manchester he had come to be considered as the head of his profession in the north of England. He remained in almost undisputed possession of this pre-eminence many years, quite up to the close of the century.

[Dr. Cullingworth here quoted extensively from de Quincey's "Autobiography," chiefly in reference to Charles White's medical attendance on Mrs. Schreiber, who had acted as companion and chaperon to Lady Carbery before her marriage to the fourth Baron Carbery, an Irish peer who had a seat at Laxton in Northamptonshire. He then continued :]

It must have been very soon after his return from Edinburgh to rejoin his father in Manchester that the project of a public hospital or infirmary for Manchester *began to be discussed*, for in the *spring of the year 1752*, Mr. Joseph Bancroft, evidently a friend and admirer of the young and enthusiastic surgeon, offered to defray all the expenses of such an institution for one year, provided Charles White, who, let it be remembered, was not yet 24 years of age, would consent to give his professional

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[1] [illegible] contradictory statements in reference to

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assistance The proposal was accepted and a small house was hired in Garden-street, Shudehill, by way of experiment. A few other gentlemen joined Mr. Bancroft, the project was made public, and at a general meeting of the subscribers held in December, 1752, it was unanimously resolved to erect with all convenient speed an infirmary capable of containing 40 beds. Accordingly, on May 20th, 1754, the foundation of the new building was laid, and in April of the following year it was ready for the reception of patients. The story of the Manchester Infirmary has been often told, and never better and more clearly than in the series of papers by Dr. Brockbank, now in course of publication. It is unnecessary, therefore, for me to enlarge upon it here. I need only say that in the first printed list of officers containing the names of three honorary physicians, three honorary surgeons, and two honorary surgeons extraordinary, the list of surgeons is headed by the name of Charles White, and that he remained an active member of the staff for 38 years—namely, until August, 1790, when after an unfortunate and long-continued controversy he, together with five colleagues, resigned his post, the alleged reasons being that the wishes and opinions of the medical faculty had lately been treated with neglect and that alterations of which they gravely disapproved were being made in the constitution of the charity.

On Feb. 18th, 1762, when in his thirty-third year, White was elected and admitted a Fellow of the Royal Society and on the same day he was admitted a member of the corporation of surgeons, now the Royal College of Surgeons of England.

In 1781 the Manchester Literary and Philosophical Society was founded. There resided at that time in and about Manchester a small band of literary and scientific men who had for some years been in the habit of meeting at the house of Dr. Percival and elsewhere and had now decided that the time had come to organise themselves in a more formal manner. The first secretary of the society was the future biographer of Charles White, Thomas Henry, F.R.S., 'Magnesia Henry," as he was called on account of his having discovered a new method of preparing magnesia alba (calcined magnesia). Henry was 78 years of age when his biography of White was written. White was elected one of the earliest vice-presidents and continued to hold office in that capacity for many years. He read several papers before the society, most of which were published in its memoirs. In 1783 he joined in the establishment of a "College of Arts and Sciences," at which instruction was to be given and lectures were to be delivered on those subjects. It is believed to have been the first institution of the kind started in the provinces. White and his second son, Dr. Thomas White, took charge of the anatomical department and delivered, up to 1788,[2] courses of lectures on anatomy which they were enabled to illustrate from the series of anatomical preparations, upwards of 300 in number, that they had gradually collected. It was to this collection, afterwards, in 1808, presented to St. Mary's Hospital and unfortunately for the most part destroyed by a fire which occurred there in February, 1847, that de Quincey refers in one of the later chapters of his "Autobiography."

[Dr. Cullingworth here again quoted from de Quincey chiefly in reference to an embalmed subject in the museum. He also gave an account of the career of a highwayman whose skeleton was in the museum, after which he said :]

Owing in great measure to the advocacy and exertions of Charles White there was founded on May 6th, 1790, a lying-in charity for attendance upon poor married women at their own homes. This event has naturally a peculiar interest for me on account of my long connexion with St. Mary's Hospital, into which the lying-in charity eventually developed. The first medical officers elected included as consulting staff Charles White himself, his son Thomas, and the two Halls, Edward and Richard. They received the uncouth appellation of "men-midwives extraordinary." In 1795 a house was taken near the old bridge, Salford, into which a few in-patients were admitted, and in the year following a large building situated near the New Bailey prison, also in Salford, which had been originally designed for a hotel but had never been licensed, was bought for about two fifths of what it cost the proprietor and converted into a lying-in hospital. But after a few years, chiefly, it is said, owing to want of funds, the number of in-patients gradually diminished, until in 1814 their admission entirely ceased, the charity reverting to its original function of providing attendance at the patients' own homes. It was in connexion with this charity and in the first year of its existence that Dr. Thomas White, the second son of Charles White, delivered the first course of lectures to midwives that had been given in Manchester. He continued to deliver a course annually up to the time of his death in 1793. The lectures in 1794 were delivered by his father. For midwifery was a subject in which Charles White was deeply interested. During the first half of the eighteenth century the practice of midwifery was almost entirely in the hands of extremely ignorant women and it was only in difficult cases that men were called in. White, who for some time after commencing practice had the care of all the parish poor not only of Manchester but of a large district around it, had his attention called very early in his career to the disastrous effects upon the lying-in woman of the mode of management then in vogue and soon determined to do what he could towards bringing about a change. He may in fact be said to have entered forthwith upon a beneficent crusade of which the results soon became manifest and although there is even yet vast room for improvement the women of this country are still reaping the benefit of the revolution he was largely instrumental in effecting. Let us hear his own description of the mode of treatment of the lying-in woman that then prevailed. "When the woman is in labour she is often attended by a number of her friends in a small room with a large fire, which, together with her own pains, throw her into profuse sweats. ...... If the woman's pains be not strong enough her friends are generally pouring into her large quantities of strong liquors mixed with warm water and if her pains be very strong the same kind of remedy is made use of to support her. As soon as she is delivered, if she be a person in affluent circumstances, she is covered up close in bed with additional clothes, the curtains are drawn round the bed and pinned together, every crevice in the windows and door is stopped close, not excepting even the keyhole, the windows are guarded not only with shutters and curtains but even with blankets the more effectually to exclude the fresh air, and the good woman is not suffered to put her arm, or even her nose, out of bed for fear of catching cold. She is constantly supplied out of the spout of a tea-pot with large quantities of warm liquors to keep up perspiration and sweat and her whole diet consists of them. ...... Amongst the poor people who live in cellars and upon clay ground floors the air is still made worse by the dampness and closeness of their houses, and the want of clean linen and cleanliness in general. Those who live in garrets are also in no better a situation, for the putrid miasmata of several families inhabiting the lower part of the house ascend to them. ...... In a few days after delivery the patient is perhaps seized with a shivering fit, and the nurse is surprised, as she protests she has not had the least waft of cold ; more clothes are heaped upon her ; spirituous liquors and hot spices are given her to throw off the cold fit, which most certainly increase the succeeding hot one " Against these barbarities Charles White strenuously set his face. "The evil," says his biographer, Mr. Henry, "was indeed ...... great ...... and the mortality truly alarming. To overcome the influence of prejudice and long-established custom required a manly spirit and steady perseverance united with real professional ability and the possession of the public confidence. With these requisites Mr. White finally accomplished his object. His patients, instead of being confined to their bed for above a week, were permitted to rise on the second day ; the room was well ventilated and kept cool and no cordials or vinous liquors were allowed except when absolutely necessary and under proper restrictions. The good effects of these changes were so evident as to carry conviction wherever they were introduced. The miliary fever almost entirely disappeared and the puerperal soon became of comparatively rare occurrence." I have quoted Mr. Henry's testimony at length, because it is that of a contemporary, and a practising member of the medical profession, as well as being that of a distinguished man of science. After carrying out for 20 years in a full midwifery practice, embracing much consulting work and personal attendance upon women of every rank or condition of life,[3] the enlightened principles just enunciated, White published his celebrated book on the Management of Pregnant and Lying-in Women and so diffused his doctrines throughout the country. The work had an immediate success. One edition followed quickly upon another. Its fame and influence spread beyond the writer's own country. An American edition was published at Worcester, Massachusetts, in 1773, and the book was translated first into French and subsequently into German. "Perhaps, indeed," says Mr. Henry, "few medical books have been productive of more important reform in medical practice, or of more comfort and safety to the subjects for whose benefit it was intended."

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[2] The opening lecture of the scholastic session in 1786 was delivered on Oct. 8th by Charles White. (Axon's Annals of Manchester, 1886.)

[3] See Preface to White's "Inquiry into the Nature and Causes, &c.," Part II., March, 1801, pp. x. to xii.

I purpose to speak presently of White's published writings in their chronological sequence, but as this, the most important of them, has now been mentioned, it will be convenient to make here any further observations I may have to make about this remarkable book, although in doing so it will be taking it out of its proper order. The author has himself, in an appendix to the second edition (reproduced also in subsequent editions), summarised what he conceives to be the "most material improvements" which his book has been a means of introducing into the management of pregnant and lying-in women. They are: (1) the use of a cold or tepid bath during pregnancy and also during lactation; (2) permitting the shoulders of the child to be expelled by the labour pains only instead of pulling at the child's head the instant it is born, which latter not only prevents the shoulders from making their proper turns, so as to accommodate themselves to the dimensions of the pelvis but also induces flooding and after-pains from retention of the placenta and irregular uterine contractions[4]; (3) allowing the circulation between the child and placenta to cease spontaneously instead of immediately intercepting it by tying the navel string as soon as the child is delivered; and (4) placing the woman in an upright position as early after delivery and as frequently as possible.

The first three of these innovations require no comment, they have long ago been generally accepted and are now regularly inculcated by every obstetric teacher. With regard to the fourth, however, a few words of explanation seem desirable. It was White's strong conviction that freedom from puerperal fever is very closely connected with this question of posture. "Writers," he says, "are still much divided in their opinions of the cause, and even of the nature of the puerperal fever," and "it is obvious," he continues, "that till some greater certainty be obtained with regard to the cause and nature of this disease all attempts towards a rational method of prevention or cure will be vain. There are, however, some particular symptoms attending it which if accurately investigated may greatly assist our inquiries." He then speaks of a rapid pulse as being the most constant and distinguishing symptom and proceeds to draw an inference which shows him to have been a thinker as well as an observer. "Every surgeon," he says, "conversant with [his] business, knows that [this symptom] never fails to attend absorption of matter from abscesses or ulcers, whatever be the other concomitant symptoms. ...... If to these considerations we add that, as the puerperal fever is more fatal in large cities and crowded hospitals than in places where the air is more open and pure, so is the fever occasioned by the absorption of matter ...... [and] that as the puerperal fever does not appear till after delivery, so neither does absorption of matter from an abscess till it be opened and the air have access, we may, I think, with a good degree of certainty conclude that the absorption of matter is the immediate cause of the puerperal fever as well as of that consequent upon abscesses and ulcers." In other words, he recognised, long before Sir James Simpson wrote his classical essay on the subject, the close analogy between the fever that followed surgical operations and the fever to which lying-in women were liable. White was not long before he translated these views into practice and adopted means of preventing and treating puerperal fever founded upon them. "The horizontal position," he says, "to which women are so frequently confined after delivery, greatly favours an absorption of the lochia." "The lochia, stagnating in the womb, and in the folds of the vagina, soon grow acrid, for it is well known that the mildest humours in the human body, if suffered to stagnate, become so, as soon as the air has access to them. These are in part absorbed by the lymphatics." To prevent this absorption he advises that "in a few hours after delivery, as soon as the patient has had a little rest, she should sit up in bed, with a bed-gown thrown over her shoulders. ...... [She] should lie very high with her head and shoulders and should sit up in bed many times in a day, especially when she takes her food and as often as she suckles her child. ...... The sooner she gets out of bed after her delivery the better, even on the same day if possible; she should not defer it beyond the second or third at the furthest." "This frequent upright posture," he says, "is of the utmost consequence and cannot be too much enforced; it prevents the lochia from stagnating, the stools and urine from being too long retained, and promotes the contraction of the uterus, together with that of the abdominal muscles.[5] Notwithstanding his insistence on this matter of posture he by no means neglects other hygienic precautions. The windows are to be opened; there is to be no board or other contrivance to block up the chimney; the curtains are not to be closely drawn; the lying-in chamber is to be in every respect as sweet, as clean, and as free from any disagreeable smell as any other part of the house; the room is to be brushed every day and the carpets are to be taken out to be cleaned and aired; the patient is to be often supplied with clean linen and clean, well-aired sheets are to be laid upon the bed. "For," says he, "cleanliness and free, pure, and, in some cases, cool, air are the greatest necessaries in this situation, and upon the strictest examination it appears evident to me that there never was a miliary eruption without a sweat nor a puerperal fever without either foul air, an accumulation of excrements in the intestines, or confinement of the patient to a horizontal position, ... except in cases where violence had been used ...... or from some very great imprudence." In his treatment of puerperal fever when it has actually occurred he is still guided by the same principles. "Every method recommended ...... as preventive of this disorder should now be enforced in a higher degree in order to its cure." And the chapter concludes with a remarkable paragraph quoted by Dr. Lloyd Roberts in his address last year but well worthy of being repeated. "I must not," he says, "omit to mention in this place the good effects I have experienced from emollient or antiseptic injections into the uterus by means of a large ivory syringe or an elastic vegetable bottle. In those cases when the lochia have become acrid or putrid, and by being absorbed into the circulation have served as a constant *fomes* to the disease, I have by this means known the fever much assuaged and in many cases wholly extinguished; for though, as I have before observed, the quantity of the lochia is not to be much regarded the quality [illegible] matter of infinite importance." White [illegible] tagiousness of puerperal feve[illegible] not been wholly absent from [illegible] declare that out of the large number of lying-in patients whom he had himself delivered he had never lost one nor, to the best of his recollection, had life in one single case been greatly endangered from puerperal fever in any of its forms. No one can, I think, read these extracts (which could easily have been multiplied) without recognising that White's views and practice were far in advance of his time. The whole book, indeed, teems with startlingly modern suggestions and may be read from beginning to end with advantage even to-day.

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[4] [illegible] expelled [illegible] witnessed [illegible] on this [illegible] towns- [illegible] expulsive [illegible] tance to [illegible] on given [illegible] aves the [illegible] of con- [illegible] sequence [illegible] sudden [illegible] On In- [illegible] e, 1837). [illegible] y of the child through the os externum as soon as the head was born is now very generally laid aside. There can be no doubt that this imprudent conduct often brought on a retention of the placenta (See White's Treatise on the Management of Pregnant and Lying-in Women. S. Merriman: Difficult Parturition, new edition. London, 1838, p. 152).

[5] [illegible]

The first paper that White communicated to the Royal Society was read on March 27th, 1760, and consisted of an account of a successful operation for ununited fracture.[6] A second paper, also contributed in 1760, described a case of dislocation of the thigh in an adult produced by external violence. His next paper was read before the society in February, 1762, the same month in which his election took place, and gave an account of the value of sponge as a topical application in the arrest of hæmorrhage. He did not lay claim to the merit of being the first to use sponge for this purpose but he was not aware that it had previously been employed to arrest hæmorrhage from the larger arteries. He declared that the inside of fresh and thoroughly dried sponge was, besides being perfectly easy and safe in its application, more certain in its effects than even the ligature itself. This method was largely superseded by the tenaculum invented a few years later by Mr. Bromfeild and White himself soon ceased to apply it except for particular cases. It greatly interested me to hear that Sir Victor Horsley in his brain surgery adopts no other method for the arrest of hæmorrhage than that of sponge pressure and that he also applies it with increasing frequency in his ordinary surgical operations.

White contributed three surgical papers to the "Medical Observations and Inquiries" published by a society of physicians in London. One of these was on a new method of reducing dislocations of the shoulder of long standing, published in Vol. II. (London, 1764) and another, in the same volume, was on a case of tetanus in which the patient's recovery appeared to be the result of immersion in a hot bath. The third paper appeared some years later in Vol. IV. (London, 1772) and described a new method of amputating the leg above the ankle-joint. But shortly before this paper was published there appeared another of much greater importance. It is an account of a case in which the head of the os humeri was removed for caries and the operation is described as being the first of the kind that had been performed, or at least the first that had been made public, though the author admits that there had been instances of the heads of bones being sawn off in compound dislocations. As the question of priority here comes in it may be well to state that Mr. White's operation was performed in 1768 and that the paper was read before the Royal Society on Feb. 9th, 1769. Already, as a matter of fact, there had been placed on record several cases in which the heads of bones had been removed for disease as well as for injury,[7] but we may take it as certain that, so far as White was aware, the proceeding was a new one. His practice was imitated in 1771 by Mr. Bent of Newcastle and in 1778 by Mr. Orred of Chester. With the exception, however, of a case of Mr. Wainman of Skipton-in-Craven, which occurred in 1768 and in which the ends of the bones were excised in a compound dislocation of the elbow,[8] and a case of Mr. Filkin of Northwich in Cheshire, in which the patella and the articular extremities of the femur and tibia were removed in a case of diseased knee,[9] all the cases published up to this time, both in this and other countries, were, so far as I can find, examples of the removal of one articular surface only. The merit of suggesting the more complete operation of excision, in which not only the articular ends of the bones but the whole, or as much as possible, of the capsular ligaments are removed, appears to belong unquestionably to Mr. Henry Park of Liverpool[10] who first published his method in the form of a letter to Mr. Percivall Pott in 1783. It seems desirable to state these facts, inasmuch as it has been claimed for White that he originated the operation of excision of joints for disease. This claim can scarcely be sustained. At the same time he was certainly one of the pioneers in this department of surgery and deserves the credit of having proposed and carried out a conservative method of operating that, so far as *he* knew, was original. The result in his case was successful, for although four inches of the end of the humerus exfoliated the patient could afterwards carry heavy weights and regained all the movements of the arm.

In 1770 he published a volume entitled "Cases in Surgery." This he dedicated to his father and he included in it, along with much new matter, all his previous surgical writings with the exception of the paper on the surgical use of sponge which he had already published in separate form. The appearance of this book is said to have had the effect of widely extending his reputation. It is described on the title-page as Part the First, but there is no record of his having made any further contribution to strictly surgical literature. Of his next book I have already spoken. It was his *magnum opus*, the work upon which his fame most firmly rests and which has secured for Manchester a peculiarly honourable place in the history of obstetrics. Other distinguished Manchester obstetricians succeeded him and worthily maintained the traditions that he had established but none can be said to have been quite his equal or to have in any way dimmed the lustre of his great reputation. Following upon this larger and more comprehensive work came another important contribution to obstetric literature in which he gave the first accurate description published in the English language of the condition known as "white leg."[11] His theory as to the nature and cause of this affection may be briefly summarised as follows. The pregnant uterus, by the violence of its contractions during labour, presses the lymphatic vessels so forcibly against the sharp and often jagged edge of the pubic portion of the pelvic brim as to wound the vessels and cause them to discharge their contents. The lymph thus extravasated usually becomes absorbed sooner or later by the lymphatics in the neighbourhood. In a space of time varying from 24 hours to six weeks the orifices in the ruptured lymphatics close but they do so in such a manner as to constrict, and in some cases to obliterate, the lumen of the vessels, which consequently become gorged with lymph to such an extent as to cause a general swelling of the limb with all the usual signs and symptoms that characterise "white leg." The whiteness is due to incidental compression of the blood-vessels; all the other physical signs, together with the pain, result from the suddenness and extent of the initial distension. The lymph that exudes when the limb is punctured flows not from the meshes of the cellular tissue, like the fluid in anasarca, or from the main trunks of the lymphatic vessels, but from the *minima vasa* of the cutaneous lymphatics. The speedy subsidence of the first violent pain and of the extreme distension is due to the anastomosis of the injured vessels with the vessels more deeply seated, whereby the obstructed lymph is by degrees carried off, though it is many weeks before the relief is complete. This I believe to be a fair though, of course, condensed statement of White's views as to the pathology of the condition he is describing. It is scarcely matter for surprise that such a theory, however ingenious, was not allowed to pass long unchallenged and a supplementary volume was issued the object of which was to reply to the various criticisms that had been offered[12] and at the same time to bring forward a fresh body of evidence in support of the author's opinions In judging of his theory it must be remembered (1) that as all his 14 cases recovered he had no opportunity of examining the condition of the parts by dissection and (2) that we are even yet without a convincing and adequate pathological explanation of this remarkable affection But whatever he thought of its pathology there can be no difference of opinion with regard to the value of White's essay as an original and accurate clinical study, and it is in this light that it will always possess an interest for the historian of obstetric medicine

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[6] The operation consisted of removal of the ends of the bone and though suggested by Charles White was not actually performed by him but by his colleague Mr. Burchall, who so bitterly resented White's taking the credit of the case that an inquiry was instituted and witnesses were called. A narrative of the proceedings was published by White who therein declared that the only merit he assumed was that of the "invention," not the actual operation, and that he had never stated anything to the contrary.

[7] For particulars and references see note under "Joints, Excision of," in Cooper's Dictionary of Practical Surgery, new edition, by S. A. Lane, vol. ii., London, 1872.

[8] See postscript to Charles White's art[illegible] of Animal Substances in the Memoirs of th[illegible] and Philosophical Society, vol. i. Warrington, [illegible]

[9] Jaffray's Cases of Excision of Carious Joints, Glasgow, 1806, pp. 52 to 55 (see following footnote).

[10] H Park: An account of the new method of treating diseases of the joints of the knee and elbow, in a letter to Mr. Percivall Pott, Liverpool, 1783. A translation was published in France in 1784 by Professor Lassus. The pamphlet was reprinted with additions by Dr. Jaffray in Glasgow in 1806 under the following title: "Cases of Excision of Carious Joints," by H. Park of Liverpool and P. F. Moreau, de Bar-sur-Ornain, with observations by James Jaffray. Mr. Park's additions to his original letter comprise "a second case as communicated by him in a letter to Dr. Simmons, Nov. 5th, 1789, and published in the eleventh volume of the London Medical Journal" and "subsequent observations" bearing date, Liverpool, Sept. 10th, 1805.

[11] "An Inquiry into the Nature and Cause of that Swelling in One or Both of the Lower Extremities, which Sometimes Happens to Lying-in Women, &c." The first edition was published at Warrington in 1784, the second in London in 1792, and a supplementary volume, Part II., at Manchester in 1801.

[12] The most important of these were contained in (1) an essay published in 1792 by Mr. Trye of Gloucester, surgeon to the infirmary of that place and formerly assistant to Mr. Sheldon, professor of anatomy to the Royal Academy of Arts; (2) an essay in the third volume of Dr. Ferriar's "Medical Histories and Reflections," published in 1798, on an Affection of the Lymphatic Vessels hitherto Misunderstood; and (3) an "Essay on Phlegmatia Dolens," by John Hull, M.D., published in Manchester in the year 1800. It was in this last-named essay that the name "phlegmatia dolens" appears for the first time. Dr. Hull was a botanist with the botanist's instinct to label and to classify everything. He accordingly gave the disease a name in order to be able to fit it into its proper place in the nosology, which he does

His next essay, which appeared in 1790, was entitled "Observations on Gangrenes and Mortifications accompanied with, or occasioned by, Convulsive Spasms"[13] The object of the essay is to call attention to the excellent effects which the author had found to follow the administration in these cases of large and frequently repeated doses of musk and salt of hartshorn The musk was held to be the important ingredient. It is described as possessing antispasmodic, diaphoretic, sedative, and cordial properties It had, so far as the author knew, never been given before for this particular condition nor had it, in his opinion, ever been prescribed in sufficiently large doses He was evidently greatly pleased with himself for having found out a new remedy and prided himself quite as much on the result of this, his solitary excursion into the domain of therapeutics, as he ever did upon being the discoverer of a new operation or the delineator of a hitherto unrecognised disease This brings to an end the series of White's strictly professional writings[14]

In his later years he interested himself with questions of natural history and read a series of papers before the Manchester Literary and Philosophical Society, embracing such different subjects as the regeneration of animal substances, the natural history of the cow considered as a milk producer for the benefit of man, the thigh bone of a mammoth and some new kinds of timber trees three in number, which he believed likely to prove a valuable acquisition to this country "both in point of profit and as trees for ornament and shade" These trees were the black American birch, the Athenian poplar, and the iron, wainscot, or Turkey oak More important, however, than any of these essays was one on "Gradation" in man and in the animal and vegetable kingdoms which was first read in a series of papers before the Manchester Literary and Philosophical Society during the year 1795 and was published in 1799 in the form of a quarto volume with illustrations The essay was suggested by a demonstration of John Hunter at which White was present and in which a number of skulls was placed upon the table in regular series, first the human skull with its varieties, then the skull of a monkey and so on to that of a dog It occurred to White, as he reflected on the question, that nature would not be likely to employ gradation in the matter of skulls alone, but if she adopted it at all would almost certainly adopt it as a general principle The facts and observations he had been able to collect had led him to the conclusion that there is a general gradation in nature, not only between the different races of men but from man to other animals, from one kind of animal to another, from animals again to vegetables, and through the whole vegetable system The author laments his want of a thorough knowledge of natural history, which indeed, is obvious throughout the essay and gives it what may be described as an air of amateurishness But even when that is said it remains a remarkable and interesting production, considering the time at which it was written and the circumstances in which it was composed This treatise provoked a reply from Samuel Stanhope Smith D D, president of New Jersey College[15]

In the year 1803 White was attacked with an eye affection said to have been at that time epidemic At first only the left eye was involved, The pain he suffered in it was extreme and long continued and although the inflammation was eventually subdued the sight of the eye was never completely restored He still continued to practise, however and even to perform operations There is in the library of the Obstetrical Society of London an autograph letter addressed by him to Dr Rigby of Norwich which is interesting not only in itself but as showing the firmness of his handwriting and the character displayed in it, notwithstanding his age and the impairment of his vision The letter is dated "Sale, Sept 6th, 1811," and reads as follows —

> My dear Sir —Give me leave to return you my best thanks for the fifth edition of your excellent essay on the uterine hæmorrhage and particularly for the honour you have conferred upon me by dedicating it to me I read your first edition as well as the MS with great [illegible] have enriched it [illegible] [illegible]

The little villa spoken of in this letter is the house now known as Sale Priory which had belonged to Charles White's father and had been *his* haven of refuge in his declining years as it was now to be his son's At the end of what was once a picturesque grove of forest trees forming part of the priory grounds are the dilapidated remains of a monument of red sandstone originally about 14 feet in height, erected to the memory of his father by the more eminent son Dr Angus Smith in his "Centenary of Science in Manchester" gives a graphic and touching description of a visit he paid to this monument in April, 1881, in company with Dr Joule, the famous discoverer of the mechanical equivalent of heat The following is a copy of the inscription —

> To the memory of Dr Thomas White who after acquiring [illegible]
>
> [illegible] erected this monument A D 1790

White was not destined to enjoy his rural retirement very long, for he soon became totally blind and died on Feb 20th, 1813, at the ripe age of 84 years

Charles White married on Nov 22nd, 1757, Ann, daughter of John Bradshaw, at one time (1753) High Sheriff for the county of Lancaster They had eight children, four sons and four daughters Thomas, his second son, became physician to the Manchester Infirmary and, as has been already stated, undertook, in association with his father, the charge of the anatomical department in the College of the Arts and Sciences instituted in Manchester in 1783 delivering courses of anatomical lectures there in the years 1787 and 1788 He made considerable additions to his father's museum of anatomical preparations He took part in the founding of the Manchester Lying in Charity and Hospital and delivered lectures on midwifery in connexion [illegible] 1790 [illegible] to the time of his death, [illegible] fall from his horse in [illegible] him his "Observations [illegible] Of the other three sons of Charles White one, Charles, died in infancy The third [illegible] Charles was accidentally drowned, in June, [illegible] elder brother Thomas and other [illegible][16] The fourth, John Bradshaw [illegible] medical profession, lived with [illegible] and became one of the medical officers of the Lying in Hospital His career, however, was soon cut short, for he died in 1797, at the age of 27 years, and was buried in the old church at Ashton upon Mersey A tablet in the north wall of the church erected in memory of Charles White and several members of his family indicates the place of interment both of Charles White himself and of his youngest son.

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[13] [illegible] a new botanical specimen White [illegible] ne into phlegmatia alba dolens [illegible] It is evident that by the phrase convulsive spasms the author means hiccough and subsultus tendinum

[14] Finding in the catalogue of printed books at the British Museum under the name of "Charles White" the following entry Lying in Mr W[illegible]s address to the community respecting concealed pregnancy I naturally flattered myself that I had unearthed a writing unmentioned by, and probably unknown to White's former biographers On [illegible] over to the publication itself the thing proved to be a [illegible] in London kept [illegible] to be ashamed [illegible] ment A tariff [illegible] It was evident [illegible] White's princi[illegible] For the sake [illegible] communicated [illegible] once had the error rectified

[15] An essay on the causes of the variety of complexion and figure in the human species to which are added animadversions on certain remarks made on the first edition of this essay by Mr Charles White Second edition New Brunswick, 1810 A copy of this book is in the British Museum

[16] Harland's Collectanea vol ii, p 182 Chetham Society's publications Manch 1867.

It may be that now and then White yielded to a temptation to which men of predominant intellect and force of character are specially prone, the temptation to let others see and feel the superiority of which they themselves are conscious. Stories have come down to us which show that he did occasionally in his behaviour towards his professional brethren carry matters with rather a high hand, but certainly nothing could exceed the admiration expressed for his character and work both in Manchester and elsewhere by those who being leaders of the profession to which he belonged were best qualified to judge. It is on record that he possessed a clear and pleasant voice and that he was an impressive and inspiring teacher. His painstaking manner in the investigation of a case and his promptitude and firmness in coming to a decision gave his patients unlimited confidence in him. He was a genial companion ever ready to gather as well as to impart information, and his conversation is said to have abounded with entertaining anecdotes. He was a man of whom Manchester will always feel proud and in taking leave of him to-day we can adopt with very slight modification the graceful words addressed to him towards the close of his life by his old friend Dr. Rigby of Norwich,[17] and, after the lapse of nearly 100 years, can still truthfully say "that time has in no degree lessened the sense of our obligation to him, nor can it diminish the great respect that has ever been entertained for his high character as a surgeon, as an author, and as a man."

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[17] See the dedication to the fifth edition of his famous monograph on uterine hæmorrhage.

THE QUANTITATIVE AND QUALITATIVE RELATIONS OF TOXIN AND ANTITOXIN.

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PART I.—SOME CONCLUSIONS DRAWN FROM THE ABOLITION OF THE FATAL ACTION OF A LETHAL DOSE OF TOXIN BY ANTITOXIN, AND THE ABSENCE OF THIS ABOLITION IF THE HUNDREDFOLD MULTIPLES BE TAKEN.

THE following paper has only an indirect bearing upon the routine methods of testing and standardising diphtheritic and other antitoxic sera. These methods fulfil the requirements of testing and are not, from the practical aspect, subject to the following criticism of the hypotheses which have been advanced in explanation of phenomena met with in the course of following them out.

It is usually stated that the quantity of antitoxic serum necessary to render no longer lethal a fatal dose of diphtheria toxin bouillon neutralises the latter. It is one of the purposes of this note to emphasise the limitations within which this method of stating the neutralisation process is true and to point out the important bearing of these limitations on some hypothetical explanations of the apparent nonfulfilment of what is known as the law of multiples when solutions of toxin and antitoxin react with one another in different volumes. The term "neutralisation" is indiscriminately applied both to the reaction between toxin and antitoxin, and to its consequence—viz., diminution or complete loss of the full toxicity of a quantity of toxin. Although intimately related, the two are distinct phenomena. It is unfortunate that the distinction between them is not more generally made. A chemically neutral mixture of toxin and antitoxin will be a physiologically neutral one. What is usually called physiologically neutral mixture is not necessarily a chemically neutral one; the former takes no account of *molecular quantities*. Much confusion is obviated by keeping these distinctions in mind. It must also be remembered that cells or animals, as indicators of the physiological neutrality of a mixture of toxin and antitoxin, do not permit of the sharp definition attainable in determining chemical neutrality, and also, as with some chemical indicators—e.g., turmeric which only gives evidence of free alkali—the physiological indicators only respond to one of the factors in the reacting mixture—viz., the toxin—if the latter be present in sufficient excess to produce illness. In dealing with toxins and antitoxins we have no direct indications of chemical neutrality.

One of the fundamental assumptions of some very prevalent views on the nature of immunity is that 100 times the quantity of antitoxic serum needful to render non-lethal the fatal dose of toxin should render 100 times the fatal dose innocuous.[1] The requirement is practically never fulfilled and it is customary to point out that its fulfilment can alone be possible if the toxin bouillon contains only a single factor capable of reaction with the antitoxin. Conversely the nonfulfilment of the requirement is held to be an argument in favour of the assumption that more than one factor is able to react with the antitoxin. Because the hundredfold multiple of antitoxic serum is not found to render non-lethal so much as 100 times the fatal dose of toxin bouillon it is stated that there must be contained in the latter other factors than the toxin able to neutralise antitoxin, and this assumption requires the further hypothesis that any factors present cannot be possessed of the characteristic toxic action of the toxin, but they must nevertheless still be possessed of the latter's power to neutralise the specific antitoxin. It is only fair to point out that further reasons are also adduced in support of the view that non-toxic products present in diphtheria toxin bouillon may still be antitoxin-neutralising bodies, and I may add that because guinea-pigs frequently die subacutely with paralytic symptoms after receiving a mixture of diphtheria toxin and antitoxin it has been assumed that this is further evidence of the existence of a relatively non-toxic modification of the toxin. Into the question of the relation of the toxic power of a toxin to its antitoxin-neutralising power I do not now wish to enter.

In the first place I wish to discuss why it is not justifiable to require that the hundredfold multiple of the quantity of antitoxin that is able to render non-lethal a lethal dose of toxin should render 100 such lethal doses innocuous.

1. In experiments performed some time ago in Berlin I found, after preliminary determinations, the dose of a diphtheria toxin bouillon which killed five guinea-pigs each of 250 grammes weight between the fourth and the fifth day to be 0·0075 cubic centimetre (contained in 2·25 cubic centimetres of 1 in 300 dilution). The dose which did not kill any of another similar series till between the fifth and sixth day was 0·006 cubic centimetre (contained in 1·8 cubic centimetres of 1 in 300 dilution). In each case the quantity was made up to four cubic centimetres with 0·86 per cent. of saline solution. The syringe was washed out with saline solution and the washings were also injected. The injections were made over the sternal region. Previous attempts to secure two such series as above had given wider margins of difference between the doses of the two series and also between the intervals at which the fatal issue occurred. When the difference between the doses of the two series specified amounted to one-fifth of the determined lethal dose (0·0075 cubic centimetre) it was possible to obtain two series distinguished from one another by one day's interval in the manifestation of the lethal issue. The attainment of this result was probably exceptional because I have not again been able to obtain two doses one of which always killed on the fourth and the other on the fifth day. The smaller dose was as apt to kill on the fourth as the larger was to kill on the fifth day. The two successful series, however, were sufficient to show that the diminution by one-fifth of its quantity sufficed to prevent the fatal dose from fulfilling the requirement that it should kill within four days. In a further series of experiments it was determined that a quantity somewhere between one-twelfth and one-twentieth of the above lethal dose did not manifest itself in any symptoms—*i.e.*, the animals did not lose weight. I did not attempt to define the largest portion of the lethal dose which could be borne without manifest illness. It was sufficient to have obtained a measurable quantity thus characterised.

2. When a series of mixtures of toxin bouillon and antitoxic serum was made, so that in the same bulk of fluid the determined lethal dose was always contained, together with varying amounts of antitoxic serum, that dose of serum which rendered the lethal dose non-lethal within the time limit of four days was determined. Very little serum sufficed

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[1] *The fatal dose more particularly referred to is the dose of* diphtheria toxin bouillon which kills a 250 gramme guinea-pig within four days, but on this special case very far-reaching general statements are based.

to postpone death (which was still acute) to the fifth or the sixth day. The quantities effecting this postponement were only fractions of the total amount of antitoxin necessary to prevent a lethal issue within four days and still smaller fractions of the amount necessary to prevent absolutely a fatal termination I do not wish to suppose that these fractions of serum were equivalent to the previously determined diminution by one fifth in the lethal dose of the bouillon; the postponement of the lethal issue may possibly have been effected by the abolition of far smaller fractions of the full toxic power of the lethal dose With a greater proportion of antitoxic serum added and the apparent absence of all symptoms there was probably not less than from one twelfth to one twentieth of the toxin dose "free,"[2] as determined in the section above The amount "free" may here have been considerably above this fraction There was no means by which it could be determined that these last fractions of the full toxic power had been rendered completely innocuous, although by the arbitrary addition of excess of antitoxin this would easily have been effected It is needless to enter into further details of "neutralisation" series, such as are familiar to all pathologists and easily accessible in many papers In the reaction between a toxic bouillon and an antitoxic serum there is, therefore, a phase of which the boundaries cannot be accurately defined If one does not assume that a molecule of the one reacts with a molecule of the other, there is on the one hand, the possibility of the presence in the mixture of a measurable fraction of unneutralised toxicity, and on the other hand, of unneutralised—i e, excessive—antitoxicity Just as in section 1 the line of demarcation is indefinite A series of doubtful doses intervenes *between the certainly lethal and the certainly non lethal* It is pure hypothesis to suppose that toxin and antitoxin can only react in one fixed proportion It is further to be noted that it has become the fashion to estimate all these reactions on the basis of a lethal dose which kills within four days Whereas the four day limitation allows of greater rapidity in arriving at comparative results, it does not give greater but less accuracy in determining certainly lethal from *the certainly non lethal doses* The zone between all the certainly lethal and all the certainly non lethal doses may be a narrower one and have more definite limitations if the absolute minimal lethal dose be determined When one is dealing with the absolute minimal lethal dose and the abolition of the lethal action by means of antitoxin, one has at any rate a definite issue to look for in obtaining comparative results If the period of observation be limited, however, to a period of four days within which the issue must be lethal or non lethal this definiteness is lost[3] No attention is paid to the symptoms of illness, which must vary from *nil* to any degree of seriousness in accordance with the size of the fraction of unneutralised toxicity All degrees of neutralisation extending over the wide zone lying between excessive addition of antitoxin and very limited neutralisation of toxicity are thus classed in the same category as "neutralised" and no attempt is made to secure, nor would it be possible to obtain, the same margin of error in all the observations compared In making the determinations all that is sought for is such an addition of antitoxin that death does not occur at all, or at any rate not within four days, and obviously these results will be obtained by very different quantities of antitoxin This procedure, while eminently serviceable for the practical purposes of standardising antitoxin, is not sufficiently accurate for theoretical purposes The wideness of the limitations of what is regarded as "neutralisation" is, I consider, therefore quite sufficient to account for the 100 antitoxin equivalents corresponding "to 16 and in another extreme instance to 136 lethal guinea pig doses," according as there had been physiologically really "under- or over-neutralisation" respectively of the lethal dose multiplied[4] In experiments of this nature the facts ascertained have reference only to physiological neutralisation and it is not correct to interpret these as having a direct and equal bearing upon chemical neutralisation

3 From what has been said above it is obvious that to render non lethal within four days a dose of toxin bouillon, proved to be lethal within that period, it is necessary to abolish the potency of only a fraction of the total toxicity, to reduce the latter, indeed, to the equivalent of that of a dose fatal in five days as noted in section 1 Similarly, to render non lethal the absolute minimal lethal dose, it is only needful to abolish such a fraction of the full toxicity as shall reduce this latter to the non lethal dose still sufficiently large to cause illness—i e, complete abolition of the whole effect is not required Fraser has emphasised this for snake venom ' While 0 35 cubic centimetre of antivenene per kilogramme is required to prevent death from twice the minimum lethal dose of venom, the minute quantity of the $\frac{1}{1000}$th of a cubic centimetre, or nearly 1000 times less (0 0004 as compared with 0 35) is sufficient to prevent death from a little more than the minimal lethal dose of venom, if this dose be the actual minimum lethal, the rendering inert of *any portion of it, however minute, will prevent the* remainder from causing death Kanthack and Cobbett have also drawn attention to the same phenomenon Cobbett obviated the error involved in taking the simple lethal dose as unity, by taking two lethal doses for the starting point, and then determining the ratios for 2, 11, 101 and 1001 lethal doses I take the liberty of directing special attention to Cobbett's experiments in this connexion, for they seem to have been overl
of drugs—viz,
phenomenon is I
of one and a half minimal lethal doses of morphine this is effected in the accompanying table both by 0 07 milligramme

Abolition of Fatal Action of One and a Half Minimal Lethal Doses of Morphine Tartrate

Number of experiment	Weight of rat in grammes	Dose of atropine sulphate in milligrammes		Dose of morphine tartrate in milligrammes		Result
		Actual dose	Dose per 100-gramme rat	Actual dose	Dose per 100-gramme rat	
55	204	0 0412	0 02	173 0	85·0	+ after 4 hours
56	140	0 06	0 05	119 0	,	+ before 17 hours
57	187	0 1125	0 06	159 0	,	+ after 6 hours
58	142	0 1	0 07	128 7	,,	0 on 6th day
59	184	0 1372	0 075	156 2	,,	+ after 6 hours
60	210	1 525	0 25	178 0	,,	0 after 5 days
61	210	1 0	0 5	178 0	,,	0 after 4–5 days
62	195	1 0	0 6	165·0	,,	0 after 3–4 days
63	325	2 4	0 75	278 0	,,	+ (*) after 6 days
64	134	1 2	0 9	115 0	,,	0 after 5–6 days
65	147	6 0	4 081	125 0	,	0 after 3 days
66	156	7 0	4 5	133 0	,	0 after 3–4 days
67	138	6 25	4 6	117 0	,,	+ before 17 hours
68	124	6 0	4 84	105·0	,,	+ before 20 hours
69	155	7 75	5 0	132·0	,,	+ before 22 hours
70	124	7 0	5 66	105 0	,	+ before 17 hours

+ means dead, 0 means alive These experiments are quoted from [illegible] Vide Archives Inter [illegible]
in consequence of the
[illegible] rarded as considerably

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[2] [illegible]

antitoxic sera such a time limitation is essential The method has been productive of advances in knowledge which would have been [illegible]

explained

[4] Transactions of the Jenner Institute of Preventive Medicine 1899, p 6

and 4·5 milligrammes of atropine. The latter of these doses must certainly have exercised an influence in excess of that attained by the former dose, and yet it did not abolish all the effects of the dose of morphine, nor for the matter of that was any dose of atropine able to effect complete abolition of the action of the morphine.

The nature of pharmacological antagonism precluded abolition of the lethal effect by a still larger dose. Pharmacological antagonism is certainly not due to direct interaction of the two active agents in question and I only quote the matter here in support of the general contention that between abolition of lethal action and complete abolition of all action (or in the case of toxin and antitoxin of complete physiological and chemical neutralisation) there is a wide margin. Obviously, therefore, to state that a certain quantity of antitoxic serum neutralises the lethal dose is a careless way of saying that it abolishes the lethal action. To require that the hundredfold multiple of the quantity of an antitoxic serum which renders non-lethal a dose of toxin shall *neutralise* physiologically 100 similar doses is erroneous and it is wrong to apply the data to the problems of chemical neutralisation. If it be found that instead of the action of the 100 doses only that of 60, say, is accounted for, this fact of itself does not justify the adoption of an explanation which calls into existence in the toxin bouillon some non-toxic but antitoxin-neutralising substance—i.e., a body physiologically inert but chemically active. It is only legitimate to require that the hundredfold multiple of the quantity of serum shall account for the action of 100 times the toxic fraction abolished in the case of the simple dose of the toxin bouillon—i.e., provided the larger masses acting and their products are indifferent to the reaction, which in all probability they are not. In making comparisons for theoretical purposes it is not justifiable to assume that a constant quantity of a specific antitoxic serum must neutralise the same multiples of the lethal doses of different toxin bouillons of which the lethal doses are contained in different volumes; for practical purposes this variation in the volumes containing a lethal dose matters little.

4. Some of the points raised in the foregoing in regard to deductions based on what occurs for a simple dose and its multiples may be illustrated by a case in which there can be no question of a non-toxic yet antitoxin-neutralising modication of a toxin, nor of an antitoxin. If corrosive sublimate dissolved in 0·86 per cent saline solution is allowed to act on one cubic centimetre of defibrinated rabbit's blood in a 5 per cent. suspension the erythrocytes will be laked after an interval of from four to six hours at 38° C., as follows:—

Corrosive sublimate, 1 in 10,000,	1 0 c.c.	Complete laking.
,, ,, ,, ,,	0·75 ,, ...	,, ,,
,, ,, ,, ,,	0·50 ,, ...	,, ,,
,, ,, ,, ,,	0·55 ,, ...	,, ,,
,, ,, ,, ,,	0·25 ,, ...	,, ,,
,, ,, ,, ,,	0·15 ,, ...	Not complete.
,, ,, ,, ,,	0·10 ,, ...	Slight.
,, ,, ,, ,,	0 05 ,, ...	*Nil.*

To all the test-tubes saline solution is added to raise the bulk to 2 c.c

The limits of the action vary in different specimens of defibrinated blood, probably on account, not so much of varying susceptibility as of variation in the number of erythrocytes in one cubic centimetre of the suspension due to the different extents to which they are removed during the process of defibrination. It is better to obtain more accurate determinations by using higher dilutions of corrosive sublimate and then to choose a dilution which allows of all the stages being included within a convenient compass.

In the above series 0 25 cubic centimetre is the lowest dose which has effected complete laking. In another series of tubes, under the same conditions of experiment, that quantity of rabbit's serum (or any other serum apparently indifferent to rabbits' erythrocytes) is determined which added simultaneously with 0·25 cubic centimetre of the corrosive sublimate solution abolishes[5] the effect of the latter.

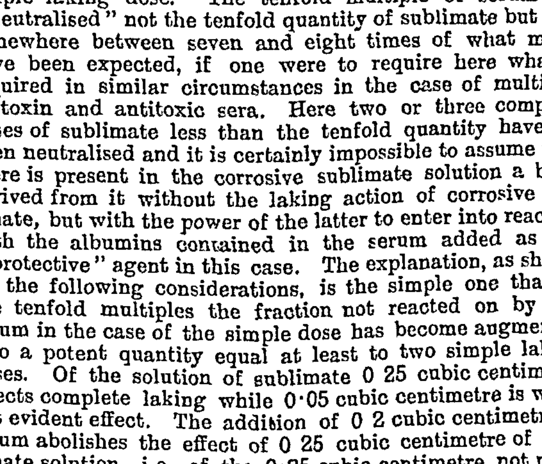
Corrosive sublimate 1 in 10,000.	Serum.	Result.
0·25 c.c.	0.55 c.c.	0
,, ...	0·30 ,, ...	0
,, ...	0·15 ,, ...	0
,, ...	0·20 ,, ...	0
,, ...	0·15 ,, ...	Almost complete laking.
,, ...	0·10 ,, ...	Complete laking.

Here it is only after much experimentation that the results can be obtained in this convenient compactness.

From these two series of experiments we have obtained the information that 0·25 cubic centimetre of the corrosive sublimate solution effects complete laking, that 0 05 cubic centimetre has no effect, that 0·2 cubic centimetre of serum abolishes the effect of 0·25 cubic centimetre of the sublimate solution, and that therefore in the mixture containing 0·25 cubic centimetre of sublimate and 0·2 cubic centimetre of serum there could not have been free to act more than 0·05 cubic centimetre of sublimate solution. If an experiment be now performed with the tenfold quantity of serum we shall see if this quantity be able to abolish the effect of ten times as much corrosive sublimate. The quantity of serum is two cubic centimetres and we add corrosive sublimate in the following quantities:—

Corrosive sublimate (c.c.).	Result.	Corrosive sublimate (c.c.).	Result.
2·50	Complete laking.	1·90	Incomplete.
2·35	,, ,,	1·85	Slight.
2·25	,, ,,	1·80	? trace.
2·20	,, ,,	1·75	0
2·15	,, ,,	1·70	0
2·10	,, ,,	1·65	0
2·05	,, ,,	1·60	0
2·0	,, ,,	1·55	0
1·95	? not complete.		

There is difficulty in determining the exact limit where complete laking and no laking are present. We may take these limits, however, as being with two cubic centimetres and 1·75 cubic centimetres respectively. The difference between these two quantities is 0·25 cubic centimetre—i.e., the simple laking dose. The tenfold multiple of serum has "neutralised" not the tenfold quantity of sublimate but only somewhere between seven and eight times of what might have been expected, if one were to require here what is required in similar circumstances in the case of multiples of toxin and antitoxic sera. Here two or three complete doses of sublimate less than the tenfold quantity have not been neutralised and it is certainly impossible to assume that there is present in the corrosive sublimate solution a body derived from it without the laking action of corrosive sublimate, but with the power of the latter to enter into reaction with the albumins contained in the serum added as the "protective" agent in this case. The explanation, as shown by the following considerations, is the simple one that in the tenfold multiples the fraction not reacted on by the serum in the case of the simple dose has become augmented into a potent quantity equal at least to two simple laking doses. Of the solution of sublimate 0 25 cubic centimetre effects complete laking while 0·05 cubic centimetre is without evident effect. The addition of 0 2 cubic centimetre of serum abolishes the effect of 0 25 cubic centimetre of sublimate solution—i.e , of the 0·25 cubic centimetre not more than 0 05 cubic centimetre is free and not less than 0·2 cubic centimetre has been neutralised. If 0 2 cubic centimetre $= x$ then $0·25 - x = 0\ 05 = 20$ per cent.; if the tenfold multiple be taken then $2\ 5 - 10\,x = 0\ 5$, or two simple laking doses free. With ten multiples of the dose of sublimate the quantity unneutralised has become a multiple of this simple dose—i.e., a dose which was harmless has been multiplied so as to become harmful. It is therefore needless to assume that something else than the corrosive sublimate *per se* has used up the serum added.



Diagrammatic representation of the results of experiments with corrosive sublimate. 1, Minimal dose taken as unity. 2, Largest dose producing no evident action. 3, Shaded on of minimal dose; white area= otent. 4. Result of taking tenfold action abolished; unshaded area= augmented extent of portion not abolished by serum.

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[5] This is not an antitoxic action on the part of the serum, but ns which in another paper I have because they simulate the toxin-

The erythrocytes are not delicate indicators enough to permit of a "neutralisation" of this nature without the introduction of an experimental error of more than one complete dose in a tenfold multiple. In the "neutralisation" the difference between the tenfold "neutralisation" required and that obtained was nearer three doses than two—the *action only of seven and not of eight simple doses* was completely abolished. This shows that with the hundredfold multiples there would have been a difference of from 20 to 30 doses between the neutralisation point found and that required by assuming complete "neutralisation" of the single dose to have been effected by the quantity of serum which sufficed to abolish its action. I doubt if anyone would venture to suggest that the explanation was to be found in the presence in the sublimate solution of bodies analogous to those nowadays generally believed to be responsible for the similar difference in the case of toxin and antitoxin.

5. Guinea-pigs are not such good indicators of the presence of free diphtheria toxin as rabbits' erythrocytes are of corrosive sublimate. Earlier in this note I have mentioned that one twelfth to one-twentieth of the lethal dose of diphtheria toxin bouillon was certainly borne without any symptoms, but a much larger dose—one-sixth, one-fifth, or even one-fourth—may frequently be followed by little or no sign of illness. In a "neutralisation" experiment, where the presence or the absence of a fatal issue is the criterion of "neutralisation," any lesser reaction would almost certainly be overlooked or regarded merely as transitory œdema, loss of weight, &c., even if prominent enough to attract so much notice. When, on taking the hundredfold quantity of antitoxic serum, it is found that ten, 20, or 30 doses less than the hundred doses of toxin expected are "neutralised," it is not correct to interpret this falling short solely on the hypothesis that in the diphtheria toxin bouillon there is present a derivative of the toxin which is not toxic but yet possessed of antitoxin-neutralising powers. Some proportion of this shortcoming is represented by the difference between the hundredth multiple of the fractions "neutralised" and the 100 complete doses. Another portion will be due to the magnification of the experimental error in the determination of the lethal dose in the same way as an error of more than one whole dose arose in the corrosive sublimate experiments. If these two factors of themselves are not sufficient to account for the whole difference, then, apart from other considerations, it is probable that where bodies of high molecular weight are reacting the process only advances to a certain limit when the products of the reaction cause it to cease. This is, however, a hypothetical consideration.

6 Various observers have drawn attention to the following. When 100 times the quantity of antitoxin required to neutralise the lethal dose reacts with a multiple of the latter the animals experimented on, though they may escape immediate death, frequently suffer from, or even ultimately die with, chronic paralytic symptoms. Naturally the hypothetical non-toxic bodies, which have been held to be responsible for the incapacity of 100 equivalents of antitoxic serum to account for 100 lethal doses of toxin bouillon, have been designated as the cause of this paralysis It will be noted that bodies previously termed non-toxic (they are defined as inert but chemically active) have, to suit this interpretation, to become toxic and paralysis-producing bodies. In determining the absolute minimal lethal dose of diphtheria toxin bouillon the acutely fatal doses are succeeded by others which kill after long intervals up to three or four weeks. Among the guinea-pigs which die after three weeks there are occasionally some which die after the manifestation of paralysis. Some which manifest paralysis recover. I have made no special observations into this matter with toxin bouillon. The above observations have been made incidentally at various times. With a diphtheria toxin precipitated by means of sulphate of ammonium, however, I have been able to confirm the observations of Ransom in regard to the paralysing action of various fractions of the lethal dose of such a toxin. This simply means that doses of *toxin* less than the acutely lethal dose may produce paralysis, may indeed produce paralysis and death subacutely. It does not much matter whether the toxin used was contained in fluid diphtheria toxin bouillon, or in precipitated and dried diphtheria toxin bouillon Some may, however, object that the precipitation of the toxin might modify it and therefore be responsible for the manufacture of a product able to bring about paralysis. Personally I do not entertain the validity of this objection. When these phenomena can be called forth by the toxic body itself, without the addition of antitoxin, I must confess that I do not see any necessity for assuming that the causative agent producing the same phenomena in the cases of doses of toxin imperfectly satisfied by antitoxin is due to a factor other than the toxin present in the bouillon. If the product of the reaction between toxin and antitoxin be able to react with a further addition of either of the latter, it may be that toxin partially chemically neutralised but not saturated with antitoxin gives rise to a product not indifferent to the organism. It would be speculation to ascribe the paralytic phenomena to the activity of this product when toxin alone can produce them. It seems to me that the facts ascertained, however, only justify us in concluding that by means of antitoxin the acutely lethal dose is reduced in its toxicity so that it ceases to be acutely fatal but remains sufficiently toxic to call forth the same paralytic symptoms as the before mentioned fraction of the lethal dose and for the same reasons If not, then one is forced to the assumption that the fraction of the mere lethal dose which calls forth paralysis is able to effect the same degree of injury as can be effected by the sum-total of the difference between 100 and the actual number of doses which are rendered physiologically inert [illegible]

not been enunciated, and it is interesting to observe that Madsen in describing the occurrence of paralysis in guinea-pigs which had received multiple doses of toxin imperfectly neutralised physiologically also accompanies his excellent description of this paralysis in guinea pigs by an equally detailed description of paralytic phenomena noticed in a horse. In the case of the guinea-pigs the paralysis was induced by doses of toxin imperfectly "neutralised" by antitoxin; in the case of the horse, however, it was brought about by repeated injections of sub-lethal doses[7] of toxin alone. The toxin used by Madsen appears to have been toxin bouillon and not precipitated toxin.

It may be asked, Why is it that if sub-lethal doses of toxin alone produce paralysis this phenomena is so rarely seen in determinations of the lethal dose and so often found in experiments directed to determining the physiological neutralisation power of 100 equivalents of antitoxin? The answer is that in the latter case the doses are grouped in a manner which tends to bring into prominence the zone intervening between acutely lethal and non-lethal doses. In the case of the determination of the lethal dose the point to which attention is directed is at the other end of the scale, is the lethal issue, and nowadays a lethal issue within four days. If the zone within which such a pronounced effect as death occurs varies within very considerable limits it is extremely likely that the zone within which an effect manifesting itself after three or four weeks in such very delicate and varying degrees as the diphtheritic paralysis does will vary within wider limits, and guinea-pigs are not ideal animals in which to observe paralytic phenomena. Attention has been directed to the causation of death and the less pronounced manifestations at the other end of the scale of active doses have been very rarely studied.

The considerations contained in the preceding paragraphs show that it is not correct to require that if a certain quantity of antitoxin renders non-lethal a single fatal dose of toxin the hundredfold multiple of this quantity should render physiologically inert 100 similar fatal doses. In taking a large multiple of the fatal dose the fractions remaining potent are multiplied also. They become an agency which has to be reckoned with and may even become a multiple of the toxic power of the fatal dose itself. In cases where their effects become multiples of that of the fatal dose they are largely, if not entirely,

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toxin

[7] One is forcibly reminded of the relation of peripheral paralysis due to alcohol or arsenic to the acute poisoning by these agents.

responsible for the difference between 100 and the total number of fatal doses accounted for by 100 equivalents of antitoxin. Where they are augmented into sub-lethal effects they may become responsible for the occurrence of paralysis. This line of investigation of itself affords therefore absolutely no evidence of the presence in diphtheria toxin bouillon either of non-toxic modifications of diphtheria toxin which are still able to neutralise antitoxin, or of modifications of diphtheria toxin having the specific power of producing paralytic phenomena.

PART II.—SOME THEORETICAL CONCLUSIONS DRAWN FROM THE PHENOMENA MANIFESTED WHEN MORE TOXIN IS ADDED TO WHAT HAS BEEN DETERMINED TO BE A PHYSIOLOGICALLY NEUTRAL MIXTURE OF TOXIN AND ANTITOXIN.

The physiologically neutral mixture of toxin and antitoxin may be composed of any multiple of the lethal dose and the equivalent quantity of antitoxic serum. It has, however, become customary to take as a basis the hundredfold multiple of the lethal dose or, more correctly, to take what is regarded as being the hundredfold multiple of the quantity of antitoxin necessary to abolish the action of the simple lethal dose The hundredfold multiples have been chosen by distinguished observers for the purpose of instituting a comparison with the phenomena and conclusions drawn from the abolition of the fatal action of a lethal dose of toxin by antitoxin and the absence of this abolition if the hundredfold multiples be taken. No attempt has been made by those who have made this comparison to show that it is a legitimate one. The following considerations will show that it is not. An explanation common to the two sets of phenomena compared in this way has been given on the assumption that they must be due to identical factors. It has been assumed that these phenomena are due to the different affinities for antitoxin of non-toxic or relatively non-toxic modifications of toxin. I have concluded that the line of investigation considered in Part I. gives no evidence of the existence of such bodies. The two phenomena compared are, however, not comparable in this way, for it will be shown that they are not due to identical factors but stand in no direct relation to one another. Some observations which I have made with diphtheria toxin and antitoxin in vivo and with ricin and its antitoxin in vitro have given distinct evidence that either (1) the proportion of antitoxin necessary to effect abolition of the action of a definite quantity of toxin is quantitatively in excess of the portion of toxin actually chemically neutralised, or (2) the product of the reaction between toxin and antitoxin is capable ultimately of modifying the action of higher amounts of toxin than the quantity with which the antitoxin reacts in the first instance.

In illustration of what has just been said the following experiments with ricin and its antitoxin (antiricin) may be given.

Ricin—Abolition of the Action of the Unit Clumping Dose means Interference with the Action of Higher Doses.

(a) *Determination of the unit clumping dose of ricin* (solùtion = 1 in 10,000 of 0·86 per cent. saline solution).

Solution of ricin 1 in 10,000.		5 per cent. blood suspension.		Result after two hours at 38° C.
1·0 c.c.	+	1 c.c.	......	Complete clumping.
0·75 ,,	+	,,	......	,, ,,
0·50 ,,	+	,,	......	,, ,,
0·35 ,,	+	,,	......	Almost, but not complete.
0·25 ,,	+	,,	......	,, ,, ,,
0·15 ,,	+	,,	......	,, ,, ,,

Conclusion.—0 5 cubic centimetre of 1 in 10,000 ricin clumps completely 1 cubic centimetre of the blood suspension.

(b) *Determination of dose of serum necessary to abolish the action of the above dose of ricin.*

Ricin 1 in 10,000		Serum 1 in 20.		Result after two hours at 38° C.
·0·5 c.c.	+	0·20 c.c.	Remained 10 minutes at 38° C., then blood added as above.	Some clumping.
,,	+	0·25 ,,		Trace of ,,
,,	+	0·30 ,,		No ,,
,,	+	0·35 ,,		,, ,,
,,	+	0·40 ,,		,, ,,
,,	+	0·50 ,,		,, ,,

Conclusion.—0 3 cubic centimetre of serum dilution abolishes the action of the unit dose of ricin. In order to obviate the pseudo-antitoxic action of normal serum the serum was diluted 1 in 20.

(c) *Determination of the limits of action of 0·3 cubic centimetre of the serum dilution.*

Ricin 1 in 10,000.		Serum 1 in 10.		Result after two hours at 38° C.
0·50 c.c.	+	0·3 c.c.	Remained 10 minutes at 38° C., then blood added as above.	No clumping.
0 55 ,,	+	,,		Slight clumping.
0 60 ,,	+	,,		Gradually increasing clumping.
0·65 ,,	+	,,		
0·70 ,,	+	,,		
0 75 ,,	+	,,		
0·80 ,,	+	,,		
0·85 ,,	+	,,		
0 90 ,,	+	,,		
1·00 ,,	+	,,		
1·05 ,,	+	,,		Only moderate clumping.
Control ricin.		Serum 1 in 10.		
0·5 c.c.	+	0·3 c.c.		No clumping.

(d) *Confirmation of experiment* (c).—The conditions were the same as in (c) but here quantities of saline solution (0·86 per cent.) were added to each test-tube to raise the bulk to one cubic centimetre before adding the serum; this allows of stating the result in absolute quantities of ricin contained in one cubic centimetre in each tube.

Ricin 1 in 5000.		Serum 1 in 10.		Result after two hours at 38° C.
0·25 c.c.	+	0·3 c.c.	Remained 10 minutes in incubator at 38° C, then blood added as above.	No clumping.
0·30 ,,	+	,,		(?) Slight clumping.
0·35 ,,	+	,,		
0·40 ,,	+	,,		Gradually increasing clumping.
0·45 ,,	+	,,		
0·50 ,,	+	,,		
0·55 ,,	+	,,		
0·60 ,,	+	,,		
0 65 ,,	+	,,		
0 70 ,,	+	,,		
0·75 ,,	+	,,		
0·80 ,,	+	,,		
0 85 ,,	+	,,		
0·90 ,,	+	,,		
1·00 ,,	+	,,		Very strong but not complete clumping.
Control ricin.				
0·25 c.c.	+	Saline + blood		Complete clumping.
0·25 ,,	+	Serum 1 in 10, 0·3 c.c. + blood.		No clumping.

Conclusion from experiments (c) and (d): The quantity of serum which abolishes the action of 0·05 milligramme of ricin also interferes with the action of much higher doses of ricin.

The experiments were performed with the red blood corpuscles of the rabbit after centrifugalising free from serum and suspending them in 0·86 per cent. saline solution. The antitoxic serum was also derived from a rabbit. As is well known, ricin clumps together the red blood corpuscles of the rabbit. In the first instance one determined the smallest dose of ricin able completely to clump one cubic centimetre of the blood suspension after two hours' contact in the incubator at 38° C. Then in another series to it varying quantities of the antitoxic serum were added to this dose of ricin as a constant quantity. After the serum and the ricin had remained in contact for ten minutes in the incubator[8] the blood was added and after two hours in the incubator the degree of clumping was noted. In this way the smallest dose of antitoxin able to abolish the clumping action of a dose of ricin taken as unity was determined. In two other series the quantity of antitoxic serum thus determined remained constant; the quantities of ricin varied. The results showed that the smallest quantity of antitoxin (antiricin) able to effect abolition of the action of the dose of ricin taken as unity was also able to modify the effect of much larger doses of ricin when the experimental conditions were altered. For in the two series with varying doses of ricin abolition of the action of the dose of ricin taken as unity also involved an extension of the abolition much further up the series of doses of ricin. Where one would have expected the unit dose of ricin to be again "free" to act—e.g., at two or three times unity—the action manifested fell much behind that of the unit dose of ricin. From this experiment, which has been confirmed by many repetitions, I draw the conclusion that either (1) one must make the assumption that the proportion of antitoxin necessary to effect abolition of the action of a definite quantity of ricin is quantitatively in excess of the proportion of ricin actually physiologically neutralised, and of this there is no evidence; or (2) that the product of the reaction with the smaller quantity of ricin is capable ultimately of taking up a higher amount of ricin than that quantity with which the antiricin reacts chemically in the first instance and that neither in the case of the smaller nor of the larger doses of ricin within a definite range of doses is there free ricin or free antiricin.

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[8] This duration was chosen to obviate fallacies arising in precipitation of the constituents of the ricin solution by the antiricin serum.

In the above experiment the toxin was ricin and the experiment was performed in vitro. In the case of diphtheria and tetanus toxins and antitoxins I have met with phenomena of a similar nature and such as have been recorded especially by Knorr and by those who have advanced the views under criticism. When more toxin i added to what has been determined to be a physiologically neutral mixture of toxin and antitoxin it is necessary in order to obtain again the full action of the dose of toxin taken as unity to add, not one unit of toxin, but several; the reasons are possibly identical with those obtaining in the above experiment with ricin. In the case of ricin the full effect of the dose of ricin taken as unity was in the presence of antiricin not obtained again till more than three times this unit was present. In the case of the experiments with diphtheria toxin and antitoxin a physiologically neutral mixture (made on the basis of hundredfold multiples) was not converted into a mixture able to produce again the effect of the dose taken as unity till more than three times the latter quantity of toxin had been added. This was the smallest quantity which caused the full effect to be reproduced and obviously the considerations in the first part of this paper will have made it evident that the quantity required to produce this effect will vary in proportion to the amount of unavoidable error in determining what was a physiologically neutral mixture. It has been demonstrated in Part I. that what is defined as a physiologically neutral mixture is no constant quantity but that by this term a whole series of mixtures (in which at one end there is present a qualitative excess of antitoxin and at the other end just enough antitoxin) are equally well designated and, indeed, are indistinguishable by any methods at our command. These experiments lead to the natural conclusion that a constant volume of a solution of antitoxin reacts in more than one quantitative relation *with volumes of toxin as illustrated* here, especially for ricin.

No further explanation is needed in order to point out the absolute difference and entire independence of the phenomena which are responsible on the one hand for the abolition of the fatal action of a lethal dose of toxin by antitoxin and the absence of this abolition if the hundredfold multiples be taken; and, on the other hand, the necessity for adding more than one unit of toxin to what has been determined to be a physiologically neutral mixture of toxin and antitoxin in order that the full effect of a unit of toxin may be again manifested. It will now be evident that any attempt to explain these distinct phenomena by making them dependent upon the same causative factors must be wrong. In particular the view that the factors in both instances are non-toxic or relatively non toxic modifications of toxin of the same, a greater, or a less affinity for antitoxin than is characteristic of the toxin, is not in accordance with the facts. The assumption that the existence of physiologically inert but chemically active modifications of toxin causes the apparent non-fulfilment of the law of multiples must be given up, although it is hypothetically adequate to account for the phenomenon, and the explanation sought in the unavoidable experimental errors of a qualitative and quantitative nature and in toxin and antitoxin reacting with one another in more than one fixed proportion.

CONCLUSIONS.

In investigating toxin alone it has been shown that—

1. The volume containing the lethal dose can be converted into one no longer lethal within the time limit by diminishing the total volume by a small but measurable fraction of the whole.

2. A measurable quantity of toxin solution can be borne without the production of any symptoms.

Both these effects can be obtained in a different guise when one is dealing with a mixture of toxin and antitoxin, for it has been ascertained that—

3 The poisonous action of the lethal dose may be abolished within the time limit by the addition of a very small quantity of antitoxin; the experiment gives evidence of a qualitative reduction in the toxicity itself, but no evidence of the occurrence of the quantitative reduction referred to in conclusion 1.

4. When the toxic power of a quantity of toxin has been reduced by antitoxin to such an extent that no symptoms appear a measurable degree of toxic power is still potent qualitatively, but we are not entitled to state this in the quantitative terms of conclusion 2.

It has further been found that—

5. The lethal dose is separated from the non-lethal not by a hard-and-fast line but by a zone wherein are contained appreciable fractions of the lethal dose; the data here are quantitative.

6. In mixtures of toxin and antitoxin in such proportions that a lethal issue occurs and does not occur, the margin between the toxic powers of such mixture is not sharp but is a zone, and the actions standing at the upper and lower limits of this zone differ from each other by a measurable fraction of the total toxicity; the data here are purely qualitative.

7. It is not justifiable to assume *a priori* that one volume of antitoxin solution always fully accounts for one volume of toxin solution when mixed in varying multiples. This presupposes that quantitative excess of either is possible and measurable, and ignores the fact that we cannot estimate the quantitative and chemical relations of toxin and antitoxin, but merely the qualitative physiological characters of the mixture, and this only when the toxic power present is manifestly in excess. It is preferable to speak of the retention of active toxicity or of active antitoxicity in characterising such mixtures. The phrases "free toxin" and "free antitoxin" may not be in accordance with the facts and should be abandoned.

8. The above facts indicate the limitations within which it is possible to determine the volume of the lethal dose of toxin and the volume of antitoxic serum sufficient to abolish its lethal action—i.e., the qualitative determination of a physiologically neutral mixture of smallest bulk. If the volumes thus determined be merely multiplied one hundredfold a qualitative indication of the amount of the experimental error present in the original determination is obtained, but no basis for deductions as to the quantitative and chemical relations existing between the toxin and antitoxin contained in the reacting volumes. The assumption that data thus obtained permit of conclusions of a far-reaching nature as to the quantitative relations and intimate chemical nature of the reaction involves a confounding of the abstract with the concrete.

9. The smallest quantity of antiricin which just suffices to abolish the action of a unit dose of ricin, that is the smallest qualitative equivalent of the latter, modifies the action of higher doses of ricin. This shows that the unit dose of ricin is but one of a series of doses to which this quantity of antiricin has a qualitative relation and the fact can only be interpreted as proving that one and the same volume of antiricin has quantitative relations with more than one volume of ricin. At one end of the scale of doses of ricin, with which qualitative relations exist, there will be active if modified antitoxicity, as, e.g., with the *unit dose of ricin*, and at the other end active if modified toxicity, but neither ricin nor antiricin is really "free." The phenomena noted for mixtures of diphtheria toxin and antitoxin and for tetanus toxin and antitoxin are exactly comparable to those obtained with ricin and antiricin and are to be explained by the existence between these toxins and antitoxins of similar quantitative relations in accordance with which they react with one another in more than one fixed proportion.

The results on which this paper is based were obtained previously to November, 1902, and have already been communicated to the scientific assessors of the Worshipful Company of Grocers; other duties have interfered with earlier publication. In a recent number of the *Annales de l'Institut Pasteur* Bordet has announced similar results. Bordet followed different lines of investigation and his results were of a nature to warrant him drawing more definite and far-reaching conclusions than I feel justified in making at present.

Harley House, W.

ROYAL DEVON AND EXETER HOSPITAL.—In accordance with ancient custom the committee and governors of [illegible] ayor and corporation anc [illegible] lies will go in pro- ces [illegible] *to Exeter Cathedral* where a sermon will be preached by the Rev. Chancellor Edmonds and a collection will be made on behalf of the funds of the institution.

A CASE OF UPWARD DISLOCATION OF THE FOOT.

By PERCY W. G. SARGENT, M.A., M.B., B.C. CANTAB., F.R.C.S. ENG.,
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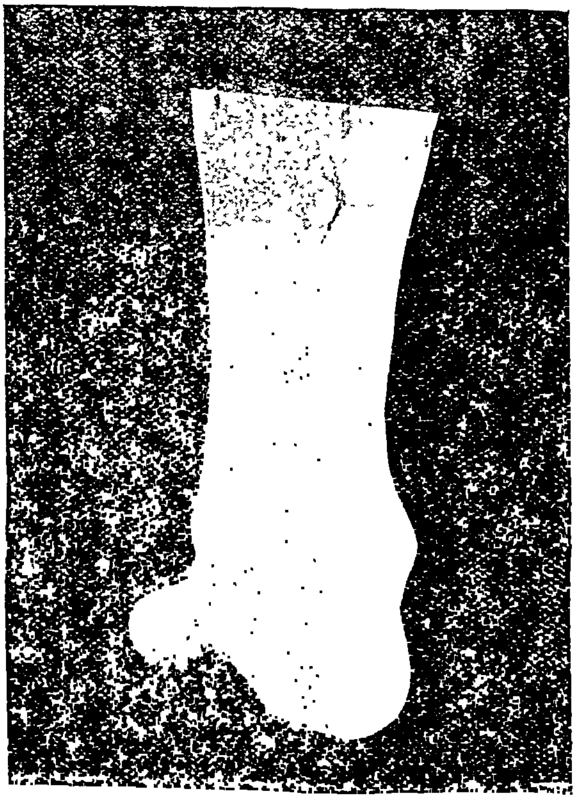
I AM indebted to the late Professor William Anderson for permission to make use of the following case which was admitted to St. Thomas's Hospital under his care in 1899. It appears from the literature of the subject to be an accident of extreme rarity, the salient features of the case being that the astragalus, retaining its normal relations with the foot, was driven upwards between the tibia and fibula without fracture of either bone.

The patient was a short muscular man, aged 46 years, a carman by occupation. He fell from a loft, a distance of about nine feet, and alighted on the soles of the feet upon a heap of stones, falling to the ground immediately and twisting his foot in so doing. There was no history of any previous injury or disease of the joint. On examination, as the patient lay on his back upon the couch with the legs extended, the right foot rested on its outer border, having been rotated at the ankle through a complete right angle. The relations of the tarsal and metatarsal bones to one another were unaltered. The tibia lay in its natural position, the crest and internal malleolus being markedly prominent, whilst the fibula was displaced backwards. The inferior articular surface of the tibia could be distinctly felt beneath the tightly stretched skin which was in no place lacerated. The heel was markedly prominent. The illustration from a plaster cast taken shortly after the accident (see figure) shows the widening between the malleoli, which amounted to over two inches, and the approximation of the malleoli to the plane of the sole. No evidence of fracture could be obtained either by manipulation or by means of the x rays as seen in a skiagram which was taken by the late Dr. Barry Blacker. The foot was firmly fixed in its new position. Under an anæsthetic the dislocation was readily reduced by simple traction on the foot. Massage and passive movements were begun on the third day and the patient was able to walk with only a slight limp at the end of three weeks. He subsequently made a complete recovery.


From a photograph of a plaster cast of the foot taken shortly after the accident.

The dislocation appears the more remarkable when the enormous strength of the ligaments uniting the lower extremities of the tibia and fibula is considered. As described by Mr. Henry Morris[1] these are: (1) inferior interosseous, a dense felted mass of short fibres passing transversely one and a half inches in depth, and extending between (2) the anterior and posterior inferior tibio-fibular ligaments; and (3) the transverse inferior tibio-fibular ligament. Experimentally on the dead subject the dislocation could not be imitated until not only these and the lateral ligaments of the ankle but also the lower part of the interosseous membrane had been divided. In spite of their great strength these ligaments must have been ruptured, since there is no evidence that any portion of either bone was torn away. As the superior articular surface of the astragalus is wider in front than behind extreme dorsal flexion of the foot puts these ligaments upon the stretch and tends to separate the tibia and the fibula. If now the foot is so fixed as to prevent movement at the mid-tarsal joint and then forcibly everted as a whole, the tendency is still farther to separate the two bones and also to bring the outer edge of the upper articular surface of the astragalus against the inferior tibio-fibular ligaments. In this position if force is applied upwards to the foot this edge of the astragalus will form the thin edge of a wedge and thus the whole bone can be forced upwards, separating the tibia from the fibula. In the present instance the foot was rotated outwards through a right angle and the fibula displaced backwards, so that a further movement of supination must have taken place at the superior tibio-fibular joint. There was no evidence of dislocation at that joint or of fracture of the fibula.

I have been able to find only one similar case recorded. This one, of which there is a cast in Guy's Hospital Museum, is described by Bryant.[2] It occurred in both feet simultaneously, in a man, aged 38 years, who fell from a scaffold. The malleoli were widely separated and projected; the depth of the foot from the malleoli to the plane of the sole was lessened and there was no evidence of fracture. The feet were firmly fixed in the abnormal position and reduction being found impossible the patient recovered with stiff joints. Bryant[3] also mentions a case of a similar nature but complicated with fracture of the astragalus. In Treves's "System of Surgery"[4] Mr. A. Marmaduke Sheild describes the accident as being excessively rare and points out that fracture of the malleoli may complicate it. Mr. G. H. Makins[5] remarks that there is some doubt as to whether in such cases the separation of the tibia and fibula is not actually due to an oblique fracture of the tibia; and notes that reduction has proved extremely difficult or impossible. Hamilton[6] speaks of a lateral dislocation of the tibia from the fibula at the lower end, where the fibula may remain unbroken and undisturbed, the tibia having become displaced inwards. He points out the rarity of absence of fracture and notes that the injury is usually compound. Boyer[7] writes: "I have had the opportunity of seeing an incomplete dislocation of the astragalus upwards ('en haut') and inwards in a man who had fallen from a horse," but no mention is made of fracture. This also remained unreduced. Nélaton[8] says: "The upward dislocation necessitates at the same time a fracture of the fibula, and a separation of its inferior extremity from the tibia. The astragalus retains its normal direction but is raised between the two bones." He also points out the increase of the intermalleolar measurement, the proximity of the malleoli to the sole, and the immobility of the foot. Benjamin Anger[9] quotes Nélaton as to the name "luxation en haut" but gives neither description nor instance. He describes a case of "dislocation by rotation," the foot having been turned outwards through a right angle but without separation of the tibia and fibula.

Summary.—The chief points of interest in this case, some of which can be observed in the reproduction of a photograph of the cast, seem to be: (1) the increase of the intermalleolar measurement; (2) the prominence of the heel; (3) the approximation of the malleoli to the plane of the sole; (4) the absence of fracture; (5) that the injury was not compound; and (6) the extreme ease with which reduction was effected.

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[1] H. Morris: A Treatise on Anatomy, article "The Articulations."

[2] Bryant: System of Surgery, vol. ii., p. 838.

[3] Loc. cit.

[4] Treves: System of Surgery, vol. ii., p. 1020.

[5] International Text-book of Surgery, article "Dislocations."

[6] Hamilton: Fractures and Dislocations, p. 773.

[7] Boyer: Traité des Maladies Chirurgicales, p. 406.

[8] *Nélaton: P* [illegible] ome iii, p. 292.

[9] Benjamin Anger [illegible] Chirurgicales, article "Luxations et Fractures.

NOTE ON A CASE OF RENAL CALCULUS.

BY H. E. BRUCE PORTER, M.R.C.S. ENG.,
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THIS note upon a case of suppuration of the right kidney caused by a calculus which first gave rise to symptoms 12 years ago and which for the whole time was mistaken for sciatica may be interesting in the light of recent correspondence in THE LANCET upon sciatica.

The patient, a woman, aged 35 years, sent for me early in 1901. When asked what she complained of she seemed to make light of her trouble, replying, "Oh, it is only a touch of my old friend sciatica." As the patient was to my mind rather young to have old friends of such a nature my next query was, "When did you first have sciatica?" I was informed 12 years ago and that it was so bad that she was in bed for some weeks, her then medical attendant devoting much thought to the case and using every means in his power to cut short the attack. As the treatment had no effect on the disease she was sent to the German baths and spent the best part of three years seeking relief without much success. My next query was, "Please tell me about your present attack." The patient replied that she had lunched out an [illegible] felt rather out of sorts and [illegible] fit which returned off and o [illegible] of a dull character in the right side, there was frequent micturition, and her temperature was 102° F. The right kidney seemed the most probable seat of trouble and it was felt to be enlarged and tender; there was no tenderness over the sciatic region. I now returned to the history of the sciatica of 12 years or so ago. The onset of this was sudden while out walking and, in the patient's words, she walked home doubled up with pain. This did not sound like sciatica. Everyone knows how a patient with this trouble walks—certainly not doubled up. The pain ran down the inside and outside of the thigh and at times was in the sole of the foot. It was not affected by the position of the leg—in fact, as she put it, the pain made her squirm. The first attack lasted, as I have said, off and on for three years and during this time she believed that the urine was examined; she had never noticed blood in it. For the last nine years she had always had an uncomfortable feeling in her right side and occasionally attacks of "sciatica" (?). During these attacks she had noticed the urine to be thick but took no particular notice beyond observing the fact.

The patient was married about four years ago and was pregnant for the first time 12 months later. When three months pregnant the pain in the right side became worse; she also had so much swelling of the hands that she could not wear her rings; she was given to understand that this was due to her pregnancy and her urine was not examined. The pain in the right loin during the later months of pregnancy was worse but was all put down to the uterus. Since the birth of her child she had had to give up many of her pursuits and from being active became the reverse. At times she was unable to bear anything tight around the waist. The lungs were quite healthy and there were no signs of wasting—in fact, considering the history the patient was very well nourished. There was no history of phthisis. I ordered the whole of the urine passed during the next 24 hours to be saved in one vessel, the clear portion to be poured off, and the sediment to be sent to me. This contained one-sixth albumin; a few pus cells were to be recognised und [illegible] r crystals except urates. I [illegible] case was either calculous [illegible] the kidney, that the attack [illegible], and that during pregnancy the change had become more rapid in the breaking down of renal tissue. I advised complete rest and also advised the husband to have a second opinion, pointing out that the urine ought to be examined by a bacteriologist to exclude as far as possible the tuberculous cause.

Dr. Archibald E Garrod made an examination. In the urine of the second 24 hours there was more pus (about three drachms). He agreed with my view of the case and took a specimen of urine to town to have it examined for tubercle. It was found free from tubercle and though the negative result did not exclude the possibility of tuberculous disease it was an additional point as there was no evidence of trouble in the chest, and the history of what we were both agreed was an attack of renal colic 12 years previously made us hope the case would prove to be one of calculous kidney. The temperature varied between 102° F. at night and 100·4° in the morning. On Feb. 25th the patient's child being put on the bed pressed against the damaged kidney, the result being that the swelling was much greater. It could now be seen as an oblong tumour in the right side of the abdomen. On the morning of the 26th, as the pus was not coming away freely enough, hot fomentations were applied. On the 27th the pus was coming away more freely. Sir Frederick Treves came to see the patient to decide when he would advise operation. He confirmed by his examination of the case and history the view taken by Dr. Garrod and myself—i.e., that the trouble began with an attack of renal colic which was then taken for sciatica. He decided that it was a case for removing (when the active stage had passed and the temperature had become normal) what was a serious menace to life. Pus continued to come away and on May 6th the patient's temperature touched the normal line in the morning, rising to 99 4° at night. As it was necessary to have the patient in a surgical home in town for the operation I allowed her up for one hour on the 8th. The temperature went up to 99 6° in the evening. On the 9th the temperature was again normal. The patient was up for three hours. The temperature on going to bed was 101° but came down after she had been in bed about an hour. On the 11th I took the patient to town and she stood the journey well. On the 13th Sir Frederick Treves operated. The organ was removed from the front; an incision was made along the right semilunar line for a considerable extent. The other kidney was examined and found to be quite healthy; the ovaries were also felt and found to be healthy; the right kidney was adherent at the upper end so the lower was delivered first. It is not necessary to describe the various steps of the operation, so I will content myself with saying that the wound was closed without the insertion of a drainage-tube and the patient was taken back to bed. The kidney was a mere shell of pus; there was not a trace of renal tissue left. It contained at least 15 ounces of pus. The calculus which had evidently started the trouble had become quite disintegrated. The patient had a good night and the urine passed was quite healthy. The patient made a good recovery except for the delay caused by the formation of an abscess in connexion with the stump of the ureter. About ten months later the patient became pregnant and this pregnancy was free from the pains, &c., of the former one. The child was born at term. I think the case of interest as showing that in a young woman the symptoms caused by a renal calculus had given rise to the idea that she was suffering from sciatica. The patient is now in perfect health and certainly looks and feels years younger.

Windsor.

THE TREATMENT OF SCIATICA.

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MY reason for writing this short paper is that I believe that the Weir-Mitchell method of treatment of sciatica by immobilisation of the affected limb by means of the long splint is not so generally employed as it deserves to be. It is true that there are references to the method in some of the text-books but they are brief, and although Dr. I. Burney Yeo gives a longer and more satisfactory description in the last edition of his "Manual of Medical Treatment," it does not seem to be generally known that obstinate and protracted cases of sciatica can be successfully dealt with in this way. It is not my intention to enter into the discussion of what is the exact nature of sciatica but to confine myself to a brief statement of my experience of this particular mode of treatment in severe cases of this very troublesome complaint.

Although in its mild forms, and when of short standing, sciatica easily yields to constitutional and local treatment of various kinds, in its severer varieties it is one of the most intractable maladies with which we have to do, trying the patience alike of physician and patient. Every now and then a patient, most frequently a male, presents himself suffering from this most painful complaint which has incapacitated him from work for a longer or shorter period and for which he has generally tried many forms of treatment, both regular and irregular. If the patient has to earn his living he generally tries to go on as long as possible in spite of pain or with only partial relief from remedies. I believe it is this neglect in the early stages that makes the disease in certain cases so intractable and difficult of cure. So long as there is any pain the complaint is not cured and is liable to relapse from a mild into a severe form. It was whilst treating a severe and long-continued case in which many measures had been tried without benefit that I first employed Dr. Weir-Mitchell's plan of treatment and this was completely successful. Since then I have carried it out in all severe cases of sciatica that have come under my care. For mild cases and for those that come under treatment just after the onset it is hardly necessary, though in the latter if the pain is very acute it is effectual in relieving the symptoms and it does so quickly.

The details of the treatment will be found in a most instructive paper on sciatica in Dr. Weir-Mitchell's Clinical Lessons on Nervous Disease,[1] where he emphasises as the essential point that the splint must check motion at the hip and the knee. The leg is first carefully and evenly bandaged with a firm flannel bandage from the hip to the knee. A long splint is then applied, the knee being in slight flexion, and bandaged on with flannel bandages and secured round the trunk by two or three broad bands. The heel must, of course, be carefully supported. In my own practice the limb is left untouched for the first three days, or if it is uncomfortable the bandages are taken off and reapplied with as little disturbance as possible. In any case this is done once a day after five days, and after five or six days gentle passive movement of the joints is made at the same time. When the patient has been free from pain for some days, generally at the end of two or three weeks, or longer in a severe case of long standing, the splint is left off by day and reapplied at night. Then the splint is discontinued altogether, the leg being still kept bandaged, and after another week or less the patient is allowed to get up. I have followed Dr. Weir-Mitchell in the above stages of treatment and in taking the absence of pain as the indication to pass from one to the other, and also have followed his valuable caution that when a patient with sciatica first gets up he should stand or lie but not be allowed to sit. When the splint is first left off by day massage of the limb may generally be begun and as in these severe cases the muscles are flabby and wasted it is of great advantage in hastening the restoration of the use of the limb.

I may briefly mention, without going into details, the result of the last 12 consecutive cases of severe sciatica treated in hospital in this way. 11 of the patients were men, their average age being 49 years. The longest time the disease had lasted was 21 months and the shortest time was seven weeks. The average duration before coming into hospital was 23·6 weeks, the average duration of treatment in hospital was five and a half weeks, and the average time from admission until the splint was left off entirely (by night as well as by day) was 25 days. As showing that the cases were severe I may point to the duration, the facts that from the great pain caused by movement four of the patients were carried in unable to walk at all and a fifth could only hobble a few steps with help, that in ten the muscular wasting was marked, and in four there was defective sensation on the outer side of the leg.

Ten patients were cured. One had a severe relapse some weeks later but was cured by a second course of treatment. One was not relieved; he was a restless, impatient man and would not submit to keep the splint on. It will be noticed that the patients only stayed a short time in hospital after they were allowed to get up; a few of them attended for a short time afterwards as out-patients in order to go on with the massage. It seems to me that the result in these cases as to cure and as to the duration of stay in hospital—the latter an important consideration both to the hospital and to working-men patients—is satisfactory.

In patients of the well-to-do classes I have had equally good results. A cure was effected in one man who had suffered from sciatica almost continuously for ten years and he has remained free from pain and able to walk about since the treatment four years ago. In his case the time under treatment was longer than in those given above.

The restraint of the splint is trying to nearly all the patients and extremely irksome to some and the pain may be considerable for the first 24 to 48 hours. With some patients considerable persuasion is required during the first two or three days to induce them to go on with the treatment. A hypodermic injection of morphia is often necessary on the first night and sometimes on the second, but not, in my experience, afterwards. By the third to the fifth day there is great relief and the patients begin to sleep well; indeed, in favourable cases the acute pain is not felt after the third day. If the pain persists it often does so behind the outer malleolus of the ankle or in the foot. This sometimes means that a readjustment of the support is required.

In the more neurotic patients who come into the hospital and in private patients one of the chief difficulties is at first flatulent dyspepsia. Many sufferers from sciatica have already been troubled with this before they come under treatment and it is then aggravated by the enforced rest. Very careful feeding and a light diet are therefore better in all cases at first and afterwards the latter can be gradually improved, for as liberal a diet as the patient can digest is generally advantageous. Lastly, care must be taken that the bed is flat and even and that there is a firm basis of support under a flat mattress. The limb must be absolutely at rest in its whole length and failure to secure this will prevent a successful result. A short course of massage, tonics, and cod-liver oil are advantageous to complete the cure.

I think I have given a fair account of my experience of this method of treatment, and if I have seemed unduly to emphasise small details it is because they are essential, as in many other matters, to success.

Clifton.

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[1] Lea Brothers and Co., Philadelphia and New York, 1897.

A CASE OF

INFANTILE ACUTE ECZEMA; HÆMATEMESIS; DUODENAL ULCER; DEATH.

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I DESIRE to put this case on record on account of the unique character of the lesion and the fact that I have been unable to find in the literature of the subject a recorded case of duodenal ulcer following eczema, which I believe in the present case are related to each other and analogous to the cases of duodenal ulcer following severe burns.

The patient was a baby, aged eight months. At birth he was well nourished and fully developed He was breast-fed till seven months old. When about two months old he began to suffer from eczema capitis which persisted more or less during the latter months of life. Vaccination was performed at the fifth month; this ran a normal course and had but little influence on the eczema. About the sixth month the face became eczematous with considerable leeting. The left submaxillary gland became swollen and the skin became inflamed as if suppuration was imminent. The swelling, however, subsided by resolution. When seven months old the child was weaned, as the mother at that time was suffering from acute rheumatism. The artificial diet—Mellin's food and milk—on which he was put did not do so well as the mother's milk. On April 2nd, 1903, when eight months old there was an exacerbation of the eczema which took on a virulent form, affecting the head, the face, the neck, and to a slight extent the trunk. From this time onwards the child seemed to go back in every way; soothing applications failed to arrest the intensity of the affection. The patient, previously happy and contented, became peevish and fretful. On the 3rd I saw him and found that the state of the head and face was becoming rapidly worse, but the uption over the trunk had by this time faded entirely. The mperature was subnormal; the pulse was small and 140 [illegible]; the respirations were 30; and the feet and hands [illegible] face and head for the first time [illegible]. *The eyes could not be kept open* ving to the œdematous swelling of the eyelids which had pervened. I found on cleaning away purulent exudation om the closed eyes that the skin was abraded with the entlest swabbing. On the 5th I called in the morning and ound the child asleep in his father's arms; the discharge om the head had *exuded copiously on to the father's shirt*-eeves. When I removed the shawl which was adhering to e head of the little patient I found that the scalp was mply reeking with vapour. I observed further that the aracter of the eruption had undergone a change: the sicles or pustules were now enlarged to the size of a split a; *those were purulent, raised, discrete, and impetiginoid.* esides the mass over the scalp and brow there was an tension of the pustules to the cheeks, the chin, and to a less egree to the neck, but there was still no eruption on the unk Towards evening the child rapidly became worse and t 3 A.M. on the next morning he vomited some blood and om this time the motions were tarry. He drew up his little gs continually and often passed his hands down on the bdomen as if in pain. There were considerable vomiting nd retching. On the 6th the patient had a restless day nd at midnight he seemed to be sick and vomited milk on vo occasions. The bowels were moved just about the same me; the motions were again tarry. He then vomited "some ark-like material." The child's hands were clenched, he y much distressed, and the feet were cold. On the 7th, t 1 A.M., he vomited some blood which was red in colour. n order to relieve the retching a poultice was placed over e stomach and sips of iced water were given by the mouth. *e settled down and was quiet thereafter for several hours.* uring the day, however, retching of a severe nature eturned. He became very restless; at 5.30 P.M. he was oking very ill; the head and face became bluish black. is strength was slowly slipping away and a gurgling sound as occasionally heard. A few sips of whisky and iced *ater had been given to him during the day.* At 10 P.M. he omited a single mouthful of bright-red blood. There was o special retching before this last and fatal vomit, but ubsequently he spat a little and lay down quietly for some me apparently in a collapsed condition. When raised up t any time he cried as if in pain and at times placed his *ft hand over the left side* of the abdomen. He was laid own on his right side about 1 A.M. and at 2.30 A.M. a movement was heard of something passing down the bowels. [illegible] after which he became quiet, [illegible] twitching of [illegible] h.

I have to record my thanks to Dr. John Anderson, athologist to the Victoria Infirmary, Glasgow, for making he post-mortem examination for me and I append a ummary of his report. From external appearances the atient was a well-developed and well-nourished child. igor mortis was pronounced. The pupils were equal and f medium size. Eczema of the face and head was present. s to the thorax, the pericardium was healthy. The eart was of normal size and appearance, the chambers resenting healthy characters. A small quantity of clot as found in the right ventricle. All the valves preented normal and healthy appearances. There was a iny patency of the foramen ovale. The heart muscle as of good colour and consistence. The lungs were nonadherent and apart from a slight degree of congestion of the ases presented remarkably healthy appearances. With egard to the abdomen a few ounces of blood-stained fluid ere found in the general peritoneal cavity. No evidence of eritonitis could be found. In the lesser sac of the perioneum was found a large-sized piece of clot filling pracically the entire space. The posterior wall of the stomach nd surface of the pancreas on which it rested showed resence of fibrinous exudation. A round ulcer situated on he posterior wall of the duodenum just beyond the pylorus as made out The ulcer had perforated and the perforation as of about the size of a split pea with punched-out edges nd directed towards the lesser sac of the peritoneum (see igure). The stomach contents were chiefly of the nature of ltered blood. The stomach presented healthy appearances; he mucous coat was rugose and slightly congested. The ntestine was examined throughout and apart from bloodtaining of the contents showed healthy appearances. The liver was of normal size and slightly cloudy in appearance. The spleen was healthy. The kidneys and adrenals were healthy in appearance.

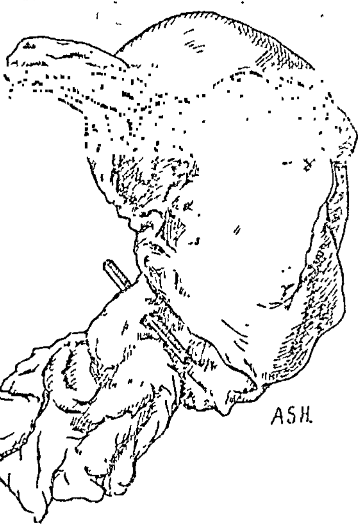

Illustration showing the stomach and duodenum of the child. The place where the perforation occurred is indicated by the wooden probe *in situ*.

The skin of a child is relatively greater in area than that *of an adult in its ratio to the body weight, hence a cutaneous* lesion predisposes infants to constitutional disturbances of greater intensity and may be expected to tell more severely upon them. This may be due to impairment of the function of the skin, to nerve irritation, to destruction of red corpuscles or leucocytes, or to absorption of toxins from the *disintegration of the blood corpuscles.* I am disposed to regard the occurrence of the duodenal perforation in this case of eczema as due to the same contributory causes which we [illegible] of burns. In both there is a like [illegible] n and the soluble fibrin [illegible] entrance to the circu-[illegible] of emboli which results [illegible] the duodenal mucous membrane.

Cases of duodenal ulcers have been recorded after burns as already mentioned, after frost-bite, and in erysipelas, pemphigus, and septicæmia. In those due to infective processes bacterial influences obviously play an important part.

The etiology of duodenal ulcer and its relationship to cutaneous burns.—As bearing upon the above case it is interesting to consider the remarkable coincidence of burns of the skin with ulce[illegible] subjects first observe[illegible] less than ten cases; [illegible] subject has been investigated by several observers, especially in England, with the result that though the occasional appearance of an ulcer after an extensive burn has now been well established the occurrence is certainly very rare. In 125 cases of severe burns Holmes[3] *found the duodenum* ulcerated in 16 and other portions of the intestine in two. The earliest appearance of the ulcer was *from four to six* days after the burn. Perry and Shaw[4] noticed it five times in 149 necropsies of cases of burns. It is further established that these ulcerations occur chiefly in young subjects and more especially when there are extensive burns of the trunk; that the ulcer occurs in the second or inflammatory period of the burn; and that *before ulceration occurs there is marked* congestion followed by hæmorrhagic infiltration which affects

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[1] Curling: On Acute [illegible] the Royal Medical and C[illegible]

[2] Dreschfeld: Allb[illegible]

[3] *Holmes:* [illegible]

[4] Perry and Sha[illegible]

other parts of the alimentary tract besides the duodenum. In several cases the lesion did not go beyond a hæmorrhagic infiltration; in other cases, an ulcer forms which may lead to a perforation or to profuse hæmatemesis. The formation of the hæmorrhagic infiltration is most rationally explained by a septic embolus and the change into an ulcer by the action of the gastric juice. The nature of the ulcer is similar in character to the gastric ulcer, round or oval, punched-out appearance, with little inflammation of the periphery, and microscopically shows the same condition—more of a necrosis than inflammatory round cell or new cell formation. The ulcer is situated in the first part of the duodenum and above the bile papilla and is therefore classifiable with the gastric ulcer. It falls, then, under the same group of causes. It may arise from mechanical, chemical, thermal, &c., agencies; bacterial necrosis has been said to play an important part, while in the case of burns the destruction and emboli formation of red corpuscles have been assigned an important place.

Micro-organisms have been brought forward as the cause of gastric ulcer. Letulle[5] found numerous streptococci in the veins of the submucosa and of the uterus in a case of recent ulcer of the stomach which appeared during the course of puerperal septicæmia. Pure cultures of these injected into guinea-pigs also caused ulcerations in the stomachs of the animals and these threatened to perforate the walls of the distended organ. Letulle obtained the same result in four cases with staphylococcus pyogenes aureus cultivated from various abscesses and in one case with the microbes of dysentery. Experiments by Ponfick and others have shown that in animals extensive scalds will cause a destruction of red blood corpuscles similar to that seen on injecting toluylendiamin. Dr. W. Hunter succeeded in producing extensive ecchymoses and ulcers of the duodenum in dogs by injecting toluylendiamin and suggested, as a probable explanation of the duodenal ulcer in burns, the secretion, with the bile, of a poison which causes the ecchymoses and ulceration. Virchow's view that the process may result from plugging the nutrient artery of the part, either by an embolus or by a thrombus, and that the infarct so produced is destroyed by the gastric juice, has gained general acceptance. There is obviously a local disturbed nutrition over a circumscribed area. The corrosive action of normal gastric juice plays an essential rôle in attacking the spot deprived of its vascular supply just as under favourable conditions it leads to softening and digestion of the dead tissue of the stomach. If the gastric juice meanwhile has become hyperacid and cannot be neutralised till it meets with the pancreatic secretion, this will readily explain why round ulcers are so prone to occur in the duodenum. Eostein,[6] making use of a discovery of Schiff, produced gastric hæmorrhages and corroding ulcers, and even perforation, by injury to the anterior corpora quadrigemina and it has been assumed that the excessive production of acid secretion in these cases was due to cerebral irritation.

The relationship of the eczema to the lesion—It was noticed in the last three days of the child's life that the eczema was characterised by a virulent exacerbation—that the septic condition of the skin had become intensified, enabling the flora of the skin to assume fresh activity from the increased pabulum. The lesion had merged into eczema pustulosum—eczema impetiginoides due to secondary inoculation of the inflamed skin by pus cocci; this is to be distinguished from impetigo contagiosa by the fact that the pustules in the latter disease occur on healthy skin and not on an already inflamed surface. When the eczema of the child had passed into the acute pustular form it is a reasonable theory to suppose that septic absorption supervened from bacterial toxins and that these, acting as a source of irritation on the central nervous system, produced greater acid secretion in the stomach and duodenum. The cutaneous lesion of this nature brings about an alteration in, and destruction of, the blood corpuscles through the superficial inflammation of the skin, followed by necrosis of the superficial layers of the epidermis and the prolonged secretion of serum and pus

Treatment.—Surgical intervention was in this case beyond consideration after the diagnosis was assured. Had the case not presented such grave features surgical interference would have been worthy of suggestion and adoption in view of the absolutely hopeless prognosis of ulcer of the duodenum after perforation, although it must be conceded that the results of such operations offer nothing to boast of.

Glasgow.

THREE CASES OF PERFORATED GASTRIC ULCER; RECOVERY AFTER OPERATION.

BY FREDERICK C. WALLIS, B.A., M.B., B.C. CANTAB., F.R.C.S. ENG.,
ASSISTANT SURGEON, CHARING CROSS HOSPITAL; SURGEON, METROPOLITAN HOSPITAL, ETC.

CASE 1.—A single woman, aged 34 years, was admitted into the Metropolitan Hospital on Jan. 1st, 1902, at 9 P.M. The patient had been seized with sudden pain in the epigastrium at 9 A.M. on the same day and was much collapsed. She was seen by Mr. Reginald Brown who gave her morphia; she was also seen by a surgeon in the afternoon. Towards evening the pain returned, the abdomen became rigid, and the pulse rate increased. There was a past history of anæmia and indigestion for years but there had never been any hæmatemesis. When seen at the hospital she was not in great distress but was evidently well under the influence of morphia. The abdomen was not moving at all and on the upper and left side where the pain was complained of the muscles were very rigid. Resonance was unaltered all over; the liver dulness was normal. No dulness was present in the flanks.

Operation was performed at 11.30 P.M. on the day of admission. Chloroform was the anæsthetic used. An incision was made in the mid-line above the umbilicus. There was no sign of general peritonitis or free gas on first opening the abdomen but on reflecting the omentum to expose the posterior surface of the stomach there was a small escape of gas. A perforation was found in a small lymph-covered area on the posterior wall, near the cardiac end of the lesser curvature, about two millimetres in diameter. There was very little escape of stomach contents. The perforation was sewn up by invagination with Lembert's sutures. Any lymph and fluid were sponged off the neighbouring peritoneum and no fluid was used in the abdomen. The abdomen was closed and no drain was employed.

The patient made an uninterrupted recovery. She sat up in bed on the second day, was on the couch the middle of the third week, and left the hospital at the end of six weeks in better health than she had been for years. She was seen in September, 1902, and in July, 1903, when she was as well as could be wished. The following was the diet used while in hospital. Rectal feeding was begun on the morning after the operation with three and a half ounces of peptonised milk every four hours and one yelk of egg. Nothing was given by the mouth until the fifth day after the operation when small quantities of water were allowed. On the next day one drachm of whey was given every hour; occasionally the same amount of beef-tea was given instead. This quantity was gradually increased until at the end of three days four drachms were given every hour. Very gradually the amount given by the mouth was increased and the rectal feeding was discontinued. On the nineteenth day after operation baked custard was added to the diet and the enemata were discontinued entirely. On the twenty-third day a small amount of boiled sole was given. On the twenty-sixth day the note reads: "Diet as follows with slight variations daily: Breakfast, 6 A.M., milk, thin bread-and-butter; luncheon, 9 A.M., milk or beef-tea and jelly; dinner, 12 noon, boiled sole, bread and-butter, custard with milk or water; tea, 3 P.M., milk, bread-and-butter, sponge cake; and supper, 7 P.M., beef-tea or milk and custard or jelly. Total, one pint of milk and half a pint of beef-tea in the 24 hours." On the twenty ninth day two lightly boiled eggs were added and a week later minced chicken was given. On Feb. 14th the patient went home taking ordinary diet except meat.

CASE 2.—The patient, a woman, aged 21 years, was admitted to hospital on Jan. 24th, 1902. She had felt sudden pain in the epigastrium on Jan. 21st; this had been constant ever since but it recurred more violently on the morning of the day of admission. On this day she vomited three times.

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[5] Letulle: Origine infectieuse de certains Ulcères simples de l'Estomac ou du Duodenum, Comptes Rendus, tome cvi., No. 25.

[6] Ebstein: Experimentelle Untersuchungen über das Zustandekommen der Blutextravasate in der Magenschleimhaut, Archiv für Experimentelle Pathologie, Band ii., S. 183.

The bowels had not acted since Jan 20th She had suffered from anæmia and dyspepsia for three or four years but there had been no hæmatemesis Her condition on admission was as follows She was fat and anæmic and looked ill The temperature was 101° F, the pulse was 120, and the respirations were 40 and thoracic only The abdomen was rigid with no movement; it was moderately distended; great pain and tenderness were present in the left hypochondrium; there was dulness in the left flank The liver dulness was unaltered

Operation was performed The abdomen was opened but contained no free gas There was no general peritonitis The area in the lesser curvature of the stomach near the cardiac end posteriorly was covered with lymph A little gas escaped on disturbing these parts The perforation could not be found until a linear incision was made through the anterior surface of the stomach when on inserting the finger an ulcer with a tiny perforation was found high up on the posterior surface of the lesser curvature near the cardiac end The perforation was sutured, as was also the incision The peritoneum was wiped out, no lotion being used The abdominal wall was closed with a single row of silkworm gut sutures Four hours after the operation the patient was propped up with pillows and on the next morning she sat up with a bed rest, feeling quite comfortable She vomited once after the anæsthetic. The convalescence of this patient was quite uneventful The diet was practically similar to that in Case 1 The patient has been seen since and is perfectly well

Both these cases were under the care of Mr Brown before coming into the hospital and on admission both were well under the effect of morphia. In neither instance were the abdominal symptoms distressing nor was there much distension The acute onset, the localised pain, and the tension of the abdominal muscles were the main symptoms on which abdominal section was performed In Case 2 much time was saved by the incision into the stomach and a thorough knowledge of the ulcer was obtained, whilst the closing of it was facilitated Valuable information and assistance may be obtained by this method which practically does not add any risk to the operation More use should, I think, be made of it than has hitherto been the custom No fluid was used to wash out the abdomen and any fluid that was already there was lightly sponged out with Gamgee sponges the peritoneum being interfered with as little as possible The patients were placed in a sitting posture in bed as soon as they had recovered from the anæsthetic The after treatment and diet which were carried out by Dr J A Nixon (my late house surgeon) were, I think, the best possible and had largely to do with the success which followed the operations

CASE 3 —The patient, an anæmic looking young woman aged 19 years, was admitted into Charing Cross Hospital on May 1st, 1903, suffering from perforated gastric ulcer She had been in good health until the past few weeks, during which she had been suffering from anæmia She had not had any pain after meals except occasional heartburn About a week before admission she had first experienced subacute pain in the left hypochondriac region; this had no relation to food and did not cause vomiting and was put down to a strain On April 30th, at 4 30 P M, about four hours after her midday meal, she was suddenly seized with acute pain in the epigastric and left hypochondriac regions and became collapsed and was helped to bed When seen by a medical man at 9 30 P M she was in great pain The pulse was 120 the epigastrium was extremely tender, and vomiting was frequent A small amount of morphia was injected and she had a little sleep, but on waking the pain and vomiting returned This condition of affairs continued until she was admitted to the hospital at 5 P M on May 1st evidently in great pain The pulse was 140 and the respirations were 30 On examining the abdomen it was found to be slightly distended and extremely tender

Operation was performed 27 hours after the first onset The abdomen was opened by a median epigastric incision No gas was noticed to escape but some clear blood stained fluid came out of the peritoneal cavity; this was not offensive and, in fact, was odourless On lifting up the margin of the liver a quantity of blood stained turbid fluid came from the space in front of the lesser omentum A perforation was seen on the stomach near the lesser curvature a little to the left of the pylorus, the perforation was one third of an inch in diameter and the surrounding tissues were infiltrated and very friable The perforation was closed and was then sewn twice over with interrupted Lembert sutures The liver and surrounding structures in the neighbourhood of the lesser omentum were carefully wiped A gauze drain was passed down to the stomach and the incision was closed with one row of interrupted fishing gut sutures The operation was fairly well borne A saline and beef tea enema was given before the patient left the operation room

This patient eventually made a good but somewhat protracted recovery The after treatment in this case was much the same as in the former two cases but a certain amount of intestinal irregularity caused at times a quick pulse and a rise of temperature which it was feared might mean the starting of a subphrenic abscess This, however, all cleared up and the patient went to the convalescent home two months after her operation

Harley street, W

A NEW ETHYL CHLORIDE APPARATUS AND METHOD

By G W BAMPFYLDE DANIELL, M R C S ENG,
L R C P LOND,

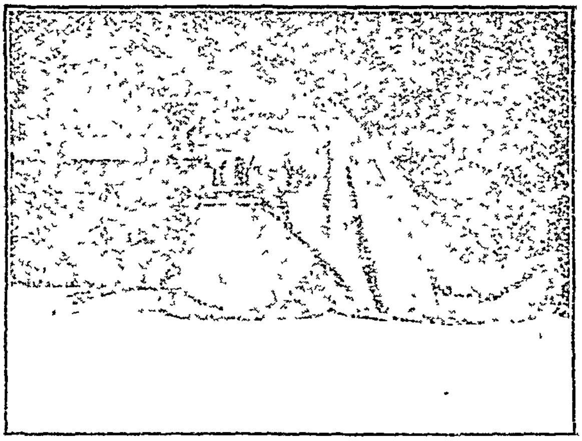
LATE ANÆSTHETIST TO THE TOTTENHAM HOSPITAL ETC

SINCE chloride of ethyl has of late been receiving so much attention as a general anæsthetic there has resulted a variety of special inhalers for its administration, each of which claims certain advantages I venture to think that the most convenient as well as the most simple in use is that so easily made by attaching together the facepiece and angle mount of an ordinary Clover's portable ether inhaler and introducing the chloride of ethyl through an orifice at the end of the angle mount If it is desired to give this agent as a preliminary to ether instead of nitrous oxide the ether chamber is, of course, retained in its place

In THE LANCET of July 18th, 1903, p 168 Dr T D Luke has explained and illustrated his inhaler which is of the above mentioned pattern except that the ordinary tap for nitrous oxide has been removed and the hole in the angle-mount is closed with a boxwood plug In most of the other inhalers I have seen and used the estimated dose of ethyl chloride has first to be projected on to a more or less extensive surface of lint, cotton-wool, or sponge which is situated close to the patient s nose and mouth and then the mask is rapidly applied In others a capsule is broken—containing either three or five cubic centimetres of ethyl chloride—inside the inhaler

The objections to the former class of inhalers are that a certain amount of the fluid rapidly evaporates and is lost for anæsthetic purposes, and consequently an unknown quantity of the agent is given Also, freezing takes place inside the mask and often close to the patient s nose and mouth The objection to the capsules is that there is too much restriction of dose In the case of children one and a half to two and a half cubic centimetres are often enough, and in adults five cubic centimetres are often more than are necessary for one inhalation Again, for prolonged administration a much larger amount than five cubic centimetres may be required and it would be inconvenient and wasteful to be frequently breaking capsules The disadvantage to both methods is that the patient is subjected to a concentrated vapour of the full dose immediately the mask is applied to the face This is to many patients alarming, especially to children and nervous subjects, and not infrequently causes hampered breathing, coughing, choking, struggling, and consequent delay in the induction of anæsthesia

Having used this "Clover method a number of times I find the following modifications of great advantage and venture to submit them to the consideration of administrators Instead of the hole and boxwood plug in the angle mount I retain the ordinary tap with metal tube continuation, commonly found on the Clover s angle mount and used for gas in the nitrous oxide ether sequence The tap is easier to manipulate than the plug and cannot get lost. Also owing to the construction of some of the trigger-valved ends of the ethyl chloride bottles it is easier to get in the fluid through the projecting end of the tap than through a hole flush with the surface of the angle mount, especially if the patient is inclined to move At the commencement of the inhalation, instead of projecting the ethyl chloride through the tap directly from the bottle, I first measure out a definite quantity into a small tube made of thick glass, which for the sake of accuracy I have marked in three, four, and five cubic centimetre graduations. To this small measure-glass is attached a short piece of red rubber tubing, by means of which it is attached to the end of the tap of the angle-mount (vide illustration).



In the case of a patient sitting up in the dentist's chair the position of the tube in relation to the facepiece is as shown in the illustration and the tap may with advantage be closed. The tube being downwards, no ethyl chloride will escape and no smell will be noticed if the tap is closed. The mask having been accurately adjusted to the patient's face a short period of to-and-fro breathing is first permitted, the tap is then opened, and the angle mount, with its tube, is rotated from the vertical position—with the administrator's right hand—until it is almost horizontal. The rotation is now conducted gradually so that the fluid will run very slowly out of the glass phial through the tap and metal tube into the bag. If this is done at first slowly the patient will soon get accustomed to the dilute vapour and most of the fluid, at least at first, will evaporate on its way through the tap and metal tube, very little entering the bag in a liquid state. If there is a tendency to holding the breath or to coughing the angle-mount can be rotated back again, thus limiting further evaporation of the ethyl chloride until the symptoms subside; it can then be rotated upwards again and the flow continued until the tube is empty. With a little care and practice there will only on rare occasions be any trouble during induction

In the case of a patient in the recumbent position it is sometimes better to have the charged tube apart but close at hand. The facepiece having been adjusted the tap is then opened and the tube fixed on, and all that then will be necessary is to tip up the tube very slowly, which is easily done on account of its rubber attachment to the tap. Should more ethyl chloride be required—and this is most likely to occur in the case of full-blooded muscular men and alcoholics—the tube can be removed and recharged with a definite dose, or more may be projected directly from the bottle through the tap. If desired, the bag can be first filled with nitrous oxide and the patient permitted to inhale it until commencing unconsciousness, then the rubber gas tube can be detached and replaced by the charged phial—which should be in this case rather more quickly emptied—and full anæsthesia rapidly follows. By replacing the ether chamber this method can be used to give ethyl chloride as a preliminary to ether just as well as the nitrous oxide-ether sequence, the only thing necessary being the little glass phial with its rubber tube The idea of the glass tube I have from Dr. F. W. Hewitt who uses it with his special gas apparatus to give nitrous oxide and ethyl chloride mixed. The metal tap and tube of the angle mount can with advantage be made larger than is generally found and that of mine (supplied to me by Mr J. H Montague of New Bond-street, London, who also makes the glass tubes) is very much larger.

The following is a summary of the advantages of this inhaler and method of administration: 1. A measured quantity of the anæsthetic fluid is given, varying according to the age of the patient and taking into consideration the time of anæsthesia required, the nature of the operation, &c. This gives accuracy of dosage and is useful for making observations and notes for future reference. It should also help to insure against an overdose. 2. The ethyl chloride can be given *gradually* and that *after* the facepiece is adjusted; this prevents coughing, holding the breath, &c., and produces a satisfactory induction. The tube need not be emptied if satisfactory anæsthesia is likely to be produced by less than its contents. 3. More can at any time be added if necessary, either by projecting the fluid through the large open tap or by measuring off more in the tube; also, either can be done without having to remove the facepiece which is an advantage in some cases. 4. Movements on the part of the patient before anæsthesia is complete are of little consequence as the charged tube can first be fitted on, which it is desirable to do in the case of children and nervous patients who are likely to struggle or to resist. 5 In the case of struggling it may be better to empty the tube more quickly, and then both hands of the administrator are available to hold the mask and to steady the patient. 6. If the tap is turned off before the tube is fixed on the patient will not experience the slightest smell of the narcotic when the mask is applied. This is of importance in nervous patients. 7. A perfectly free air-way, no lint, sponge, or wool to breathe through, and no *freezing* vapour near the patient's mouth or nose, as all evaporation takes place in the metal tube and rubber bag. 8 Nitrous oxide can be given as a preliminary, and by retaining the ether chamber ethyl chloride can be given before the ether, all that is necessary being the glass tube. 9 Bromide of ethyl could be given with advantage by this apparatus, as it is important to be able to measure carefully the quantity of the drug. It would be as well to have a larger graduated phial in this case. 10 Economy in the amount of the anæsthetic used.

I have given ethyl chloride by this method and apparatus using the paper bag—as invented by Mr. Rickard W. Lloyd and made by Messrs. Barth and Co.—with satisfactory results and recommend its use instead of the rubber one in the case of patients suffering from tuberculosis. In conclusion, I would state that up to the time of writing I have given ethyl chloride over 150 times by this method and in not a few cases somnoform; also a number of times in conjunction with ether.

Edinburgh.

TWO CASES OF CÆSAREAN SECTION.

BY ARTHUR H. N. LEWERS, M.D., F.R.C.P. LOND.,
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IN the course of last year I had two cases of Cæsarean section for obstruction due to fibroid tumours. These cases did well both as regards mother and child and an account of them was published in THE LANCET.[1] Since then I have had two cases of Cæsarean section for pelvic contraction, which are typical of the two classes in which Cæsarean section is performed for this cause.

The first case is an example of the group in which the fact that the pelvis is contracted and the degree of the deformity have been ascertained some long time before labour is expected, and where a date, generally about a week before full term, has been fixed for the performance of the operation. In such cases every opportunity is afforded for operating in the most favourable circumstances; the patient is thoroughly prepared beforehand as in other cases of abdominal section and the preparations for the operation itself can be made as carefully as in ordinary cases of ovariotomy. The patient has to stand the effects of the operation but she has not been worn out beforehand by prolonged labour nor has she been subjected to the risk of infection by vaginal examinations, with, perhaps, fruitless attempts at artificial delivery through the natural passages. Provided the operator is accustomed to abdominal work and familiar with the special points that require attention in this particular operation, especially as regards the proper method of suturing the uterine wound, Cæsarean section in the circumstances under consideration is an operation of little risk at the present time. Formerly it was thought to be disadvantageous to operate before labour pains had started, either spontaneously or after the induction of labour, for it was believed that if labour had not started the uterus would not contract well after Cæsarean section. This objection has now proved to be merely theoretical and, in fact, in cases of Cæsarean section performed before the onset of labour the uterus does contract as well as after a normal delivery.

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[1] THE LANCET, Jan. 17th, 1903, p. 157.

In the second case we have an example of the class in which nothing has been known of the existence of pelvic contraction till labour has been some considerable time in progress and where unavailing efforts to effect delivery with the forceps have been resorted to. Such a combination of circumstances is generally considered to add greatly to the danger of Cæsarean section. While I am far from disagreeing with that view of the matter I think that the danger may be easily exaggerated. Much must necessarily depend on the exact circumstances of the particular case. The time that the second stage of labour has lasted, the state of the patient at the moment, and the probability or otherwise that the preceding vaginal examinations or manipulations have been made by someone who may be trusted to have scrupulously observed the principles of asepsis are the chief factors to be taken into account. The suitability of the surroundings for the performance of an abdominal section under aseptic conditions is also, of course, a matter of the first importance. Again, the vitality of the child as evidenced by the state of the fœtal heart sounds must be ascertained as well as possible. If the heart sounds have their normal frequency the chances are that the child's vitality is so far unimpaired; on the other hand, if the heart sounds are much slower than normal the child is probably already in a critical condition as a result either simply of the prolonged labour or of the damage it has undergone from attempts to deliver with the forceps. In this case the patient, who had had one previous confinement, had been some 28 hours in labour and two attempts to deliver with the axis-traction forceps had been made before she came under my observation. The fœtal heart sounds were easily heard and had about their normal frequency. Yet although the child's heart was still beating after delivery all attempts at resuscitation unfortunately failed. This is, I think, to be ascribed in all probability to the previous attempts at forceps delivery. Obviously, then, it is most desirable to miss no opportunity of recognising contraction of the pelvis early in pregnancy, for in that way if delivery has to be effected by Cæsarean section the risk to both mother and child is very much reduced.

CASE 1.—The patient, aged 29 years, was admitted into the London Hospital on March 6th, 1903, for the purpose of having Cæsarean section performed. She had been married four years and had had two confinements. In the first labour, which took place on April 23rd, 1900, she was delivered of a full-term stillborn boy. The presentation was a footling and the child was said to have been "suffocated." No instruments were used. The puerperium was normal. In her second labour on July 20th, 1901, she was delivered with forceps of a stillborn boy who was the first of twins. On the 22nd she was brought up to the London Hospital in labour with the second child. Delivery was effected by cephalotripsy at 7 A.M. on the same day. Her temperature on admission was 100° F.; at noon she had a rigor and the temperature rose to 106°. On the 25th she had another rigor with a temperature of 106 5°, the pulse-rate being 128. On August 2nd there was pain in the right hypochondriac region and there were physical signs of pleurisy. Up to the 6th there was marked pyrexia with nocturnal elevations. On that day she had another rigor, the temperature reaching 106°. On the 10th a sausage-shaped swelling was felt on the right side of the vagina close to the vulva. This proved to be an abscess and it was opened on the 12th On the 14th a superficial abscess on the buttock was opened; it communicated with that in the vagina. A large quantity of fœtid pus was evacuated. On the 21st a firm swelling occupying the right iliac region was noted. The uterus was almost fixed. The temperature at this period varied from 99° to 101°. The cellulitic swelling in the right iliac region did not suppurate. It gradually disappeared, the temperature came down, and the patient went to a convalescent home on Sept. 14th. She came to the London Hospital in November, 1902, and was then found to be about six months pregnant. She was told that she could either have labour induced at the seventh or the eighth month or that she could go to her full time and have the child so delivered that there would be little or no probability of a future pregnancy. She chose the latter alternative and was admitted on March 6th, 1903, under the care of Dr. G. E. Herman. Shortly afterwards, owing to Dr. Herman's absence from the hospital, the patient came under my care. A consideration of the dates led me to believe that March 19th was the date on which labour might be expected and accordingly I decided to perform Cæsarean section a week beforehand—namely, on the 12th. The measurements I took of the pelvis were as follows: between the anterior superior iliac spines, 9 inches; maximum distance between the crests, 10 inches; the external [illegible]

three and a half inches. I performed Cæsarean section on the afternoon of March 12th, Mr. R. Norman, the senior resident accoucheur, assisting me. The child, a girl, was extracted alive and soon cried vigorously. The uterine wound was sutured with deep and superficial sutures of silkworm gut. The deep sutures were of course passed through the peritoneum and muscle only. The left Fallopian tube was found to be occluded but not dilated and it was not interfered with. A portion of the right Fallopian tube was pinched up, tied, and the distal portion removed about one-eighth of an inch beyond the ligature. The patient stood the operation well. The temperature at 8 P.M. was 100·2° and the pulse was 114. After 24 hours the temperature was normal and the pulse was 80. The patient made a good recovery; the temperature remained normal, except on one afternoon when there was a service in the ward. It fell on the next morning and did not rise again. All the abdominal sutures were out by the tenth day. The patient got up at the end of the third week and left the hospital shortly afterwards with her child, both perfectly well.

CASE 2.—The patient, an alien immigrant who spoke no English, was admitted from the outdoor maternity department into the London Hospital under my care on July 19th, 1903, at 12.30 A.M. She had been in labour since the 17th at 10 P.M. It was difficult to get much information as to her previous history. She was believed to have had one child previously in Russia. It was said to have been small and to have been delivered with forceps after a very difficult labour. On the present occasion two attempts had been made to effect delivery with the axis-traction forceps before I saw the case. The head, which lay in the second vertex position, could not be made to enter the brim. When I saw her at about 1 A.M. she was having strong pains almost every minute, the vulva was very œdematous, the os was fully dilated, and the head was in the position just mentioned. I measured the pelvis carefully and found that the distance between the anterior superior spines was 8 inches, the maximum distance between the crests was 9⅜ inches, the external conjugate was 6⅝ inches, and the diagonal conjugate was 3⅞ inches. The true conjugate was judged to be about 3¼ inches. The fœtal heart sounds were easily heard and they seemed to be normal. The alternative methods of delivery that were considered were craniotomy, symphysiotomy, and Cæsarean section. As the child was alive and the mother's condition was fairly good I excluded the first. The choice between symphysiotomy and Cæsarean section was difficult. The œdematous condition of the external genitals influenced me to some extent against symphysiotomy and I decided upon Cæsarean section. The patient was in a very dirty condition on admission. The skin of the abdomen was first thoroughly washed with soap and water and afterwards was rubbed with a solution of biniodide of mercury in spirit; the part of the skin in relation with the operation was also thoroughly rubbed with ether. I then performed Cæsarean section assisted by Mr. A. L. Matthews, resident accoucheur. As compared with the operation when undertaken before the rupture of the membranes, it was noteworthy in the present instance how closely the wall of the uterus was applied to the child's body. On that account more care than usual was necessary in cutting through the uterus to avoid injuring the child. The placenta was attached under the upper half of the uterine incision. The child was extracted rapidly without difficulty but although the heart could be seen to be beating all efforts at establishing respiration were unsuccessful. The uterine wound was sutured with silkworm gut, an attempt was made to sterilise the patient as in the preceding case, and the abdominal wound was closed completely. In this case there was a good deal of distension for the first [illegible] bowels were well opened; [illegible] nt made a good recovery

Harley-street, W.

ON THE ETIOLOGY OF BUBONIC PLAGUE:

AN EPIDEMIOLOGICAL CONTRIBUTION.

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OBSERVATION of two epidemics of plague which have occurred at Sydney among whites and in circumstances of population, laws, customs, housing, and food which closely correspond with European conditions has led me, as well as all the members of the public health staff over which I have the honour to preside, to entertain opinions concerning the diffusion of plague which differ fundamentally from those commonly advocated. What the latter are can be most concisely shown by a quotation from the latest work which deals with this subject. I refer to "A Manual of Plague," by Major W. E. Jennings, I.M.S., and I choose it for the purpose not merely because it has been published during the present year but also because it is most carefully written and reflects with great accuracy the views as to the causation of epidemic plague which are all but universally held at this date. The quotation runs as follows: "Our measures for the prevention of plague should be mainly directed against what the strongest evidence points to as the most important etiological factors. The disease is mainly spread by human beings, infected clothing or effects, and ship-borne rats" (chapter x., p. 200), and that the teaching thus indicated is not confined to the English school is testified sufficiently for the present purpose by reference to the extraordinary pains taken to isolate every person who had in any way come into communication with the subject of that case of laboratory plague which recently occurred at Berlin.

The teaching drawn from the first of the epidemics at Sydney directly opposed those views; it was that neither direct nor indirect communication with the sick had borne any share at all in diffusion of the disease, that place-infection almost certainly had not operated to maintain it, and that the sole source of infection for man had lain in rats affected with it. The evidence on which these opinions rested was given in my official report[1] which probably has fallen under the notice of most of those who are specially interested in this subject; however, its contents were also summarised in an article which appeared elsewhere.[2] Its importance lay wholly in positive exclusion of human intercourse and of place-infection as factors in the epidemic prevalence, a point which one author alone has perceived.[3] It lay not at all in the assertion that the sole source of the infection consisted in diseased rats which, though clearly seen by us to be justified, was but imperfectly supported by examples.

Our observations of 1900 have been repeated at two places and, as far as the reports permit judgment, with similar results—namely, at Brisbane, Queensland, by Dr. G. B. Halford[4] during epidemics which occurred in 1901 and 1902, at the same city by Dr. B. Burnett Ham[5] during a further epidemic which occurred in 1903, and at Port Elizabeth, Cape Colony, by Dr. G. J. Blackmore[6] during the earlier part of an epidemic in 1901. All of these writers seem to have been able to exclude the influence of human intercourse and place infection.

A second epidemic began about 15 months after the first had ceased. It afforded the desired opportunity of repeating, checking, and extending the observations recorded in 1900. A result was that the latter were in every respect corroborated. My account of this second epidemic, together with many interesting and important observations by Dr. Frank Tidswell who directs the laboratories of the board, has also been published and is now available to epidemiologists.[7] I do not propose on this occasion, therefore, to offer any summary of its contents; suffice it to say that the opinions thus far referred to have been carried into practice. I do not isolate the sick but allocate wards to them which form part of the infectious diseases division of a general hospital; there they are treated under the same conditions as are cases of measles or chicken-pox in other and adjacent wards in the same inclosure; the only extra precaution which has been taken is that of rendering all the wards rat-proof. Neither do I segregate those who have been in contact with cases of plague (though to this contact with cases of primary plague pneumonia would form an exception), in accordance with an opinion which I have elsewhere expressed—namely, that "contacts" are not such persons, but those who have been closely associated with plague rats.[8] Hence disinfection of clothing, &c., is rapidly done; only the cleansing of houses from rats and the rendering of them less liable to infestation in future are subjects of careful attention. These modifications of the method of managing epidemic plague which elsewhere is still thought necessary have been attended with a great saving of time, anxiety, perturbation of the public mind, and of money, and if the result may be referred to as evidential in relation to the soundness of our conclusions, it can be said to have confirmed in practice the teaching we drew from the epidemiological facts observed in 1900.

Another consequence of these improved conditions was that the business of managing the second epidemic proceeded quietly and steadily, without excitement on the one hand and without opposition to necessary measures on the other. Hence, it became possible to direct attention mainly to examining much more closely than before into the nature of the relationship which existed between cases of plague and plague rats—a matter which, with us, had come to take that position of prime importance which before had been occupied by the questions whether human intercourse and place-infection were in reality among the causes of epidemic bubonic plague. Connexion between the neighbourhood of plague rats and cases of plague was discovered very much more completely than in 1900 and especially precedence of the disease among rats over its occurrence in man was shown by the events noted in many separate localities to have been practically constant. Starting then, from these two latter observations which, for us, have all the weight of facts, I proceeded to inquire by epidemiological methods how communication of the infection from the rat could be commonly effected under the conditions of daily life.

In the rat plague is a septicæmia; certainly some special means are necessary to transmission of the infection from it to man. Now, we know that plague rats can deposit the virus on external objects with the nasal secretion and with the excreta; it is possible, therefore, that it might reach man in one of two ways—(1) by contamination of his food and (2) by casual contact with his skin. The former of these must be summarily dismissed from consideration, for there is practically no pathological evidence that man is infected by feeding. If it be possible, as analogy from experiments made with the lower animals suggests, at all events it has happened so rarely that this mode can have no significance in relation to epidemics. But the pathological evidence that the infection is commonly received by inoculation in the skin is direct, uniform, and clear; all but a small minority of cases in every considerable epidemic are of the bubonic form and all such cases are so caused. Consequently that inoculation is the result of casual contact with deposited virus is at this date very generally held to be the most important cause of epidemics, although (altogether contrary to my experience) deposition is usually ascribed to man, and but rarely, or in quite a minor degree, and always with hesitation, to plague rats. This mode of infection—inoculation in the skin by casual contact with deposited infection—is a possibility which, it may be admitted, has occasionally come into play; but what evidence is there that it is a factor of any practical importance in production of epidemic prevalences of plague? This is the question which I propose to refer to a test of practical experience.

The proof that the infection of plague is communicated to man by inoculation through the skin in the vast majority of cases has been well stated in the report of the Indian Plague Commission.[9] It is, "that primary buboes practically always develop in connexion with lymphatics which originate in the skin." The constant preponderance of "inguinal" or "groin" buboes over others was also shown in the same paper to stand in relation to the larger area of skin which drains through the lymphatic glands of the groin. Analysis of returns which represented 5442 cases of bubonic plague showed that the ratio in which buboes occurred in the lymphatic glands of the head and neck, the axilla, and the groin respectively was nearly the same as the ratio which the skin areas draining through the lymphatics of those regions bear to each other.

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[1] Report on an Outbreak of Plague at Sydney, 1900, by J. Ashburton Thompson (W. A. Gullick, Government printer, Sydney, 1900).

[2] Journal of Hygiene, vol. i.

[3] Kolle: Zeitschrift fur Hygiene, 1901, p. 397.

[4] Report on 117 Cases of Plague occurring at Brisbane in Sporadic Form (Briggs and Morcom, Brisbane, 1902).

[5] Report on an Outbreak of Plague in the State of Queensland (G. A. Vaughan, Government printer, Brisbane, 1903).

[6] THE LANCET, Oct. 11th, 1902, p. 984.

[7] Report of the Board of Health on a Second Outbreak of Plague at Sydney, 1902, by J Ashburton Thompson (W. A. Gullick, Government printer, Sydney, 1903).

[8] Report, Sydney, 1900, p. 42.

The proportion in which buboes are met with in the groin always preponderates over that in which the buboes occur in other regions of the body; this was very early observed among Eastern races who habitually go barefoot. Before long, however, the same preponderance was noticed among Europeans (though in small number) who did not go barefoot, but the hint thus given seems to have been overlooked and (perhaps in consequence) assumed infectiveness of ground surfaces became a prominent feature in writings on the etiology of plague. But at Sydney in 1900 I was able to show that in no less than 73 per cent. of the 283 cases which exhibited buboes the latter were found in the groin although all the patients referred to were white, clothed in European fashion, and invariably shod.[10] The validity of the banal explanation of the preponderance of buboes in the groin thus seemed to be rendered more than doubtful. But I had pointed out in the same report that the infection of plague was received by man, for the most part, within buildings, which seems also to have been noticed in India.[11] Now, if the infection be usually received by man in houses, &c., the objection raised above to the banal explanation of the preponderance of groin buboes must be revised, for there is a time of day when nearly all people, whites as well as others, go barefoot—namely, when they are going to bed or rising from it. At that time, therefore, infectious material deposited on floors, carpets, &c., by rats (or otherwise) would be more likely to come in contact with the unprotected skin of the feet than with that of any other part of the body. So that, although conjunction between a recent breach of the epithelium and deposited infection in the requisite state of activity cannot often happen, here is the opportunity for it at all events, and plague was not so frequently contracted by our people in either epidemic but that possibly those persons who exhibited groin buboes might have received the infection in that way. Let us try, then, to ascertain what the fact was. Does the record contain any cases in which infection resulting in groin buboes was probably not contracted by casual contact with deposited virus of the unprotected skin of the lower extremities? If it turn out that it does the hypothesis under examination will be very greatly weakened; it must, indeed, be discarded as an explanation of epidemic bubonic plague.

Among the 139 cases which constituted the epidemic there were 106 in which buboes occurred in the groin. But it is necessary to speak more exactly. Our present concern must be with primary buboes, since these alone indicate the region of skin through which the virus entered; and in order to leave no room for possible confusion between primary buboes and secondary glandular swellings it is desirable to take into account only those cases in which the groin bubo was solitary. Then the expression "groin bubo" is loose. A bubo in one of the oblique set of inguinal glands indicates infection through the skin of the lower part of the trunk. Buboes in one of the vertical set of femoral glands alone indicate infection through the skin of the feet or of other part of the lower extremity. An examination intended to discover whether there were buboes betokening infection through the skin of the lower extremity must be limited, therefore, to cases which exhibited *solitary* buboes in one or other gland of the *femoral* chain. The total number of such cases was 60, but the majority are not available for the present purpose. Thus the place at which the infection was taken could not be determined in 16 of them; either the inquiries made failed to reveal any clue to it or else the evidence for infection at home and at work seemed equally cogent. These 16 must be thrown out, therefore, for they (or some of them) may have been infected at their place of residence, where they were admittedly exposed to the risk ascribed to bare feet which is now under investigation. In 25 other cases it was considered that the patient did receive the infection at his place of residence, so that these too must be thrown out for the reason just given. In three others the place of employment probably was the place of infection but the details left room for some slight doubt; these are excluded by way of precaution. Three more were Chinese, concerning whom either information of the required kind could not be got at all or it was untrustworthy. Lastly, one was a woman whose movements could not be traced. So that 48 of the 60 have to be discarded. There remain 12 patients who had solitary femoral buboes and who are confidently adjudged to have received the infection away *from home and therefore while fully clothed. Of* these patients eight inhabited houses in neighbourhoods which were distant or even remote from the infected area and which were at all times free from suspicion of infection with plague (yielded neither indigenous cases nor plague rats); and while, on the one hand, 11 of the residences bore no traces whatever of infestation with rats (the twelfth alone having exhibited some slight signs), on the other hand, the places at which the patients were employed were badly infested and had yielded dead rats in number in ten instances at least. It is certain that these persons all fell into danger at their place of employment and apparent that they were not infected at home. At their employment they were fully clothed; their lower extremities were protected by boots, socks, and trousers, or (in one case) by stockings and petticoats, while their hands, arms, necks, faces, and in some cases, no doubt, their chests too were uncovered, exposed, and in no way protected from casual contact with deposited infection and therefore they should, *ex hypothesi*, have exhibited cervical or axillary buboes. In fact, however, they none of them did so. They were all of them inoculated in one or other lower extremity—in that very area of skin which beyond all doubt was well protected from casual contact with deposited infection. These 12 cases form but a small proportion of the 139 of which the second epidemic consisted, but the necessary rules under which they were selected, in circumstances where great caution was indispensable, led to rejection of several others which, were they to be cited as examples of a fact otherwise ascertained, might have been included. These 12 persons then were not infected by feeding for the reason drawn from the pathology of plague which has already been mentioned; it has just been shown that they could not have been inoculated in the lower extremity by casual contact with deposited infection and none of them had had any communication with preceding cases of plague. How, then, did they come to contract the disease? There is, in my opinion but one plausible—nay, but one possible—explanation. Inoculation in that situation and in those circumstances can have been brought about only by a suctorial parasite. On the whole the parasite which is best fitted to fulfil all the requirements of the case is the flea.

Several *a priori* objections have been raised during two or three years past to Simond's hypothesis of the flea[12] which, I may be permitted to add, I had myself accepted as a working hypothesis before I had had any practical experience with epidemic plague on the ground that it reconciled a much greater number of discrepant and even contradictory observations which had then been recorded than any other suggestion which had been made.[13] I conclude, therefore, by mentioning first that the indirect objections raised by Nuttall[14] on grounds furnished (*a*) by his unsuccessful experiments on the transmission of plague from animal to animal by means of bed bugs and (*b*) on the rapidity with which the bacilli of several diseases, among which plague was not included, lost their virulence after entering the stomach of the flea, have recently been met. Successful experiments on the transmission of plague from animal to animal by means of fleas have now been reported by Raymond and Gauthier working at Marseilles[15] and by Elkington working at Bombay,[16] both, be it remembered, thus confirming experimental results originally reported by Simond himself.[17] Secondly, that the objection raised by

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[9] Indian Plague Commission, paragraph 175.

[10] Report, Sydney, 1900, p. 40.

[11] Indian Plague Commission, paragraphs 221 and 298.

[12] Annales de l'Institut Pasteur, tome xii., p. 625.

[13] Report, Sydney, 1900, p. 40.

[14] [illegible]

[15] Abs [illegible] 1902, to[illegible] d'Hygiène, May, 1903, p. [illegible]

[16] Australasian Medical Gazette, August, 1903, p. 348.

[17] Loc. cit. sup., p. 673.

Galli-Valerio,[18] with him Nuttall,[19] on insufficient grounds—namely, that "rat fleas" do not bite man—has also been met by direct experiments recorded by the observers just mentioned, as well as by Tidswell at Sydney. The species pulex fasciatus (Baker) and pulex pallidus will freely bite man and can even live on his blood alone for several weeks. I take this opportunity of pointing out that Tidswell[20] first observed pulex pallidus to be a species which most commonly infests the rats of the Australian coast line, an observation which was found to hold good with rats in India after he had communicated it to correspondents at Bombay.

The question which was asked above concerning inoculation by casual contact with deposited infection must now be put with reference to transmission of the infection by the flea. The former was there admitted to be a possibility which sometimes, in all likelihood, had been realised; but the chances against conjunction of the necessary circumstances are so many that it cannot be regarded as the cause of epidemics. The latter, also, appears to be a possibility; but does it take practical effect often enough to constitute that cause of epidemics which otherwise is still unrevealed? The answer cannot be drawn from laboratory experiments; it can be furnished only by epidemiological investigation and the evidence must always remain indirect. Much to the purpose has been recorded in my report on the epidemic of 1902.[21] We are of opinion that the hypothesis of the flea fully explains its observed course but the evidence is too lengthy for inclusion in the present communication.

Sydney.

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[18] Centralblatt fur Bakteriologie, Band xxvii., p. 1., Band xxviii., p. 842; Journal of Tropical Medicine, vol. v., p. 33.

[19] Op cit., p. 65.

[20] Report, Sydney, 1903, p. 72.

[21] Op. cit., Paragraphs 295-300.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

FIVE CONSECUTIVE CASES OF INTESTINAL OBSTRUCTION SUCCESSFULLY TREATED BY OPERATION.

(Under the care of Mr. G. P. NEWBOLT.)

CASE 1. *Intestinal obstruction produced by a large gall-stone.*—A married woman, aged 54 years, was admitted to the Royal Southern Hospital, Liverpool, on August 4th, 1902, suffering from intestinal obstruction. She was a big, stout woman, weighing 18 stones and measuring 44 inches round the waist and was the mother of nine children, the youngest being aged 12 years. Her bowels were moved naturally eight days before admission and again two days later after an aperient. No flatus had passed for six days but an injection had brought away fæcal matter. She had been vomiting brown, foul-smelling fluid for a week past, her tongue was dry, her pulse was 92, and her respirations were 28. The onset of the attack was sudden and the pain spread all over the abdomen. She had had similar, only slighter, attacks previously but had never been jaundiced and had never had pain in the region of the gall-bladder. Examination per rectum revealed nothing. The abdomen was somewhat distended but there was very little tenderness and the walls moved freely with respiration. When seen at 10.30 A.M. shortly after admission there was no vomit for examination and it was decided to wait for a while in order to get a specimen of the vomit before opening the abdomen. This was done as although there was some distension yet the woman did not seem to be in the distress which is usual when intestine is nipped or tied down. Her obesity did not invite laparotomy unless absolutely necessary. The trouble had lasted a week and she admitted having had similar attacks which she had got over. However, some hours later she had an attack of fæcal vomiting and there was no object in further delay. At 8 30 P.M., the patient being under chloroform, Mr. G. P. Newbolt opened the abdomen in the middle line with a four-inch incision, its centre being at the umbilicus. Some coils of distended small intestine escaped and on passing the hand into the abdomen a hard lump was at once felt in the intestine occupying the left iliac fossa. On drawing it up to the surface a large gall-stone was found to be blocking the gut. All the intestines were now returned except the portion containing the stone, and the abdomen having been shut off with sponges the intestine was tightly held on each side of the stone whilst the latter was removed through a longitudinal incision in the gut. The stone was squeezed out and the incision was closed by two layers of interrupted suture, one taking the edges of the wound and the other (a Lembert suture) prolonged well over each end of the incision. The abdomen was closed with through-and through silkworm-gut sutures and the patient left the table with a pulse of 108 which soon fell to 92. She was kept under opium. Flatus was passed on the second day and she made a perfect recovery, leaving the hospital five weeks after the operation. The stone was egg-shaped, one end being fractured, and this lay uppermost or nearest the duodenum. It measured two inches in length, one and a half inches in diameter, and three and a half inches in circumference; it weighed 303 grains when dry. Around the broken end was a ring of dark pigment which looked as if this portion of the stone had been gripped by encircling mucous membrane and stained. The fracture was apparently a recent one. Mr. Newbolt saw the patient on June 5th last and she was perfectly well.

CASE 2. *Intestinal obstruction produced by a band.*—The patient, a single woman, aged 31 years, was first seen by Mr. Newbolt in consultation with Dr. W. Murray Cairns on July 16th, 1902 Her previous history was good: she had never had any digestive trouble but had had scarlet fever six months before and on examination a mitral murmur was present. On July 14th, two days before Mr. Newbolt saw her, she ate an ordinary midday meal of beef, &c., and one and a half hours later she was seized with acute pain in the umbilical region which doubled her up on account of its severity and made her vomit Her bowels acted twice after the pain began, the second motion being attended with a good deal of griping. She was not collapsed; her pulse was 60, her temperature was normal, and her illness simulated an attack of colic. Mustard poultices were applied to the abdomen. On the next day she was no better; there were constant pain, vomiting, and no passage of flatus. Dr. Barr saw her at this stage of her illness and diagnosed obstruction by band. On July 16th, when Mr. Newbolt was called in with a view of operative proceedings, the patient was still vomiting, no flatus had been passed, and slight distension of the abdomen appeared; the vomit was becoming feculent and the pain was constant. On examination her pulse was 70 and her temperature was normal; her face was of a good colour; the urine was scanty; the abdomen was not moving with respiration and was tender all over with a marked tympanitic area. Mr. Newbolt had her removed in an ambulance to the Royal Southern Hospital. Here he opened the abdomen in the middle line by an incision four inches long with the umbilicus at its centre Distended small intestine at once presented and was allowed to escape. Contracted gut appeared in the left iliac region and tracing it back Mr. Newbolt came upon the seat of the obstruction which was low down in the ileum. A thin white fibrous band exactly like a vocal cord was attached at one end to the mesentery; it encircled the gut and was again attached to the mesentery on the opposite side. It was a separate structure and not a thickening of the peritoneal coat; there was no trace of old peritonitis and the band looked as if it might be of congenital origin. It was cut away close to its origin and insertion. The abdominal wall was closed in layers and the patient was given a saline injection per rectum. Flatus was passed on the third day and the patient made a good recovery. During convalescence she had an acute urticarial rash all over the body followed by some bronchitis. She went home five weeks after the operation. Her further history, for which Mr. Newbolt is indebted to her brother-in-law, is interesting. In September, 1902, she went to Palestine and did well till early in November when whilst at a hotel in Damascus a recurrence of the symptoms of obstruction suddenly supervened. She was taken to the Scotch Mission Hopital in that town and was there operated upon by the surgeon in charge. A firm fibrous band was again found in the lower portion of the ileum and was divided with complete relief to the symptoms. She again made a good recovery.

CASE 3. *Intestinal obstruction produced by an omental band in a patient twice operated upon for strangulated umbilical hernia.*—A married woman, aged 60 years, was admitted to the Royal Southern Hospital on July 8th, 1902, suffering from symptoms of intestinal obstruction. 12 years previously she had been operated upon for strangulated umbilical hernia by a Liverpool surgeon and on Sept 4th, 1901 (ten months before), Mr. Newbolt had operated upon her for a recurrence of this condition. She then had a huge umbilical hernia which took one and a half hours to unravel, but though at her first operation she was told that she would never survive a second, yet she made an unimpeded recovery. When called to see her by Mr. M. J. Campbell on the occasion of her third attack she told Mr. Newbolt that 48 hours previously after lifting a heavy weight she had been seized with sudden pain in the left iliac region, that vomiting at once set in, and that she had passed no flatus since. On examination she did not look very ill, her pulse was 80, and her temperature was normal. No vomiting had taken place. Knowing, however, her previous history Mr. Newbolt persuaded her to go into hospital as soon as possible. It might be stated that she was under the influence of opium. An enema brought away some scybala and it was thought that some flatus was passed; the ward sister, a woman of much experience, was so certain of this that Mr. Newbolt decided to wait for further symptoms. She vomited some bile-stained fluid once in the afternoon and once the night that she was admitted, and as the effect of the opium passed off she complained of pain at the umbilicus. Very little urine was passed and the treatment practically was starvation. On the next day (the 9th) there were no change in her condition and no obvious distension, though she was a very stout woman. With a view, therefore, of eliciting symptoms she was given one grain of calomel. Within an hour this was followed by violent fæcal vomiting. Operation was at once proceeded with and the abdomen was opened through the old hernial scar. Coils of matted intestine presented themselves and were separated one from another, but after doing this for half an hour Mr. Newbolt came to the conclusion that the intestine he was dealing with did not account for the trouble. On searching the left iliac region he came upon some coils of distended intestine and on tracing them downwards found a thick omental band which was binding the small intestines down and causing the obstruction. Mr. Newbolt thought that the band was a piece of omentum tied at a previous operation which had become attached to the posterior wall of the abdomen and under which a knuckle of gut had slipped. On dividing the band and ligaturing and removing the ends the bowel was at once released. The wound in the abdominal wall was closed with silk sutures and the patient was put back to bed. As before she made an uninterrupted recovery, her pulse never rising above 96, and when seen in July of this year she remained well.

CASE 4. *Acute appendicitis complicated by intestinal obstruction.*—The patient, a married woman, aged 37 years, was sent to Mr. Newbolt by Mr. S. Kellett Smith and was admitted to the Royal Southern Hospital on April 7th, 1903, suffering from symptoms of intestinal obstruction. On April 3rd the patient was taken ill with a severe bilious attack and her bowels acted on the following day. After this no flatus was passed and she was sick occasionally. Pain started in the left iliac region and gradually spread all over the abdomen. She had taken a purgative without effect and an enema brought away scybala. Though married for some years she had had no children; menstruation was regular and there was no history of any uterine trouble. On admission the patient, a well-nourished and healthy-looking woman, presented the following symptoms. The pulse was 100, the temperature was 101·4° F., the abdomen was tender all over and distended, and the tongue was dry. Nothing could be made out per rectum or per vaginam. Liver dulness was somewhat obscured by distended intestine. The patient being under chloroform, her abdomen was opened in the middle line when a good deal of peritonitic fluid escaped and distended intestines were seen. An examination showed that the intestines were bound down in the pelvis and so the Trendelenburg position was adopted. On enlarging the incision downwards it was evident that there was inflammatory mischief in the cæcal region and on attempting to free adhesions a large abscess was opened; sponges were packed in and the Trendelenburg position was at once abandoned. An incision was now made over the appendix and an abscess was opened deep in the pelvis on the right side. After some trouble the appendix, which had perforated at its base, was removed together with a stercolith which lay in the abscess cavity. This cavity, which was lined with a [illegible] ugh [illegible] ing [illegible] tes- [illegible] ary [illegible] by an omental band. After freeing this flatus at once was passed. Some four or five pieces of omentum which were adherent to the pelvis were removed, the parts were thoroughly sponged out, and the wound was closed, a glass tube being left above the pubes. Two hours after operation three grains of calomel were administered and the bowels acted freely through the night. On the next morning the distension was less, the pulse was 84, and the temperature was normal. The tube was removed from the vagina on the second day and a gauze drain was left in two days longer when on syringing through the iliac wound there was a free drain through the vagina. There was free discharge from both abdominal drains and some sloughs separated but the rest of the incisions healed well. The patient made a slow but good recovery, her chief trouble being intense pain in the bladder and frequency of micturition, though her urine was quite normal. These symptoms abated as the median drain track closed and no doubt were due to some inflammatory trouble involving the bladder wall. A cross examination elicited the fact (unobtainable before the operation) that she had had attacks of "cold in the stomach" on one or two occasions previously.

CASE 5. *Intussusception of the ileo-cæcal variety.*—The patient, a female child, aged nine months, was taken ill suddenly on the afternoon of May 21st, 1903, with pain in the stomach and vomiting. She was sent into hospital by Dr. W. G. Williams for operation. When Mr. Newbolt saw her 24 hours after the onset of the attack she was somewhat collapsed and had passed no motion since being taken ill, but there were blood and mucus on the diaper. Nothing definite could be felt through the abdominal wall, but on examination per rectum the finger passed up as far as possible together with pressure on the abdominal wall from above was just able to touch the apex of an intussusception. The child did not resist examination, being too collapsed. The pulse was 128 and the respirations were 28. On opening the abdomen in the middle line by a two-inch incision with the umbilicus at its centre an intussusception was at once seen and Mr Newbolt was able to reduce the greater part of it from within the abdomen, but the last portion had to be brought outside and was reduced with difficulty, a portion of the ileum near the valve being much thickened and congested. The abdomen was rapidly closed with silkworm gut. The child was very ill for 48 hours; she was put to the breast soon after the operation and the bowels were moved in 36 hours. Recovery was uninterrupted and she is now in good condition.

Remarks by MR. NEWBOLT.—An interesting point in Case 1 was the fact that although the patient had been vomiting fæcal matter for at least 24 hours before the operation, and this I afterwards learned was undoubtedly so, yet she had not the distressed appearance which is usually associated with this condition. The stone was no doubt passed by ulceration from the gall-bladder into the duodenum and two cases which I have recently seen substantiate this view. In one the gall-bladder was adherent to the colon and full of pus which would but for surgical interference have opened into that viscus. In the other the gall-bladder, full of stones, was adherent to the duodenum and the stones would doubtlessly have ulcerated through had circumstances allowed them to do so. In one of the cases quoted by Barnard in his paper in the *Annals of Surgery* for August, 1902, the stone could be passed post mortem back along the duodenum through the aperture into the gall bladder whence it started. The idea that big stones passed through the dilated ducts is evidently fallacious. In my case I passed my hand up to the liver in order to feel for other stones, but I failed to discover anything abnormal and the patient's condition did not justify any prolongation of the operation.

In Case 2 the occurrence of a second obstruction of the same nature as that which necessitated the first operation is interesting; moreover, it shows the value of a guarded prognosis in these cases. In Case 3 the fact that the patient underwent two severe but successful operations for strangulated umbilical hernia and one for obstruction by a band says much for the vitality of an unpromising looking patient with a very feeble pulse. The administration of calomel with a view of eliciting symptoms was, I think, justifiable on account of the difficulty in coming to a definite diagnosis and the feeling one had that an obstruction existed. Of course, everything was in readiness for immediate operation. Case 4 emphasises the value of early operation in cases of appendicitis whereby complications such as were met with in this case may be avoided. I am of opinion that had I opened the appendicular abscess from the right side in this case a second operation would have been necessary in order to relieve the obstruction caused by a binding down of the large intestine by inflammatory trouble, no doubt secondary to the appendicitis. I may add that on those few occasions on which I have been tempted to deviate from the rule of opening the abdomen in the middle line in cases of obstruction I have always regretted it. In Case 5—the intussusception—the more one sees of these cases the more one feels inclined to operate at once and not to waste time in employing other and less trustworthy methods of reduction.

BURY DISPENSARY HOSPITAL.

A CASE OF TRAUMATIC TETANUS; RECOVERY.

(Under the care of Dr. J. W. COOK.)

FOR the notes of the case we are indebted to Dr. A. G. Wilson, late senior house surgeon.

A youth, aged 19 years, a labourer, was admitted into Bury Dispensary Hospital on July 2nd, 1902, suffering from a severe crush of the right great toe. The injury had been caused by the fall of a piece of timber. Amputation was not considered unavoidable; the toe was dressed with boric lint soaked in boric lotion, the dressing being changed every four hours. On the third day after admission a slight blush was observable extending about half an inch from the wound; the latter was commencing to discharge a large quantity of pus. His temperature was 99 4° F. The dressing was changed to lint soaked in creolin solution of the usual strength and changed every four hours. During the next few days a portion of the toe sloughed and the wound discharged very foul pus. The evening temperature was usually 99·2° and the morning temperature was normal. The wound gradually became cleaner and on the tenth day after admission the dressing was changed to iodoform gauze. The patient was apparently progressing favourably but on the morning of the sixteenth day after admission (July 18th) he woke up complaining of slight stiffness of the neck and difficulty of opening the mouth. On examination the muscles of the neck were not abnormally hard and the mouth could be opened to almost its usual extent but risus sardonicus was present to a very considerable degree, the lips being drawn back, exposing the teeth, and the corners of the mouth being depressed. His temperature was normal. The patient, although he was in a state of intense fear at the idea of having lockjaw, grew no worse during the day. The wound which looked healthy was well rubbed with solid silver nitrate. On July 19th the patient had had a good night but on waking complained of severe pain in the back of the neck. He could open his jaws to the same extent as on the previous day. He complained of difficulty in swallowing and refused all but liquid food. One drachm of solution of hydrochlorate of morphia was given His diet consisted chiefly of milk and eggs beaten up in milk. The temperature in the mouth was normal. There was no albumin in the urine. On the 20th the patient's condition was identical with that of the day before. His temperature was normal and there was no albumin. One drachm of solution of hydrochlorate of morphia was given to relieve the pain. On the 21st the muscles of the neck felt hard. There were no spasms. The temperature and pulse both morning and evening were normal. The patient had very little pain and was not at all exhausted but was very restless and continually wanted to be propped up in bed. On the 22nd the neck and masseter muscles felt like wood. The head was somewhat retracted and the patient complained of pain in the back. He had a few very mild spasms arching his back and neck during the day. His temperature was 99·4°. He took bread and milk and eggs and milk. On the 23rd the neck, back, and abdominal muscles were very rigid and hard. The temperature was 99·8°. The muscles of the jaw were rather better, those of the legs, arms, and hands being quite unaffected. The patient had not much pain. There were no spasms. Three drachms of syrup of chloral were given during the day and 20 cubic centimetres of Pasteur's antitetanic serum were injected. On the 24th the muscles of the neck and back were still rigid; the abdominal muscles were rather better. The tongue was foul. The pulse was 90 and the temperature was 99 6°. Four drachms of syrup of chloral were given during the day. On the 25th the muscles of the neck and back were unchanged and the abdominal muscles were more rigid. His temperature was 99·8°. Three drachms of syrup of chloral and 20 cubic centimetres of antitetanic serum were administered during the day. On the 26th the muscles of the thigh were rather rigid; there was much pain in the back of the neck. Ten cubic centimetres of serum were injected. There were no spasms. On the 27th the legs, back, and abdomen were much better. There was less pain. Ten cubic centimetres of serum were injected. On the 28th there was decided improvement. Ten cubic centimetres of antitetanic serum were injected. On the 29th the patient was better. There was no pain. Ten cubic centimetres of serum were injected. By August 2nd the patient was quite free from all muscular stiffness and was discharged on August 16th with the toe practically healed.

Remarks by Dr. WILSON.—The above case of traumatic tetanus may be found interesting owing to the mild character of the onset of the disease and to the long time which elapsed before the affection was at all severe. The following points in the case are of interest. The incubation period was above the average, as is usual in cases which recover. During the period of four days from the morning of the 18th to the evening of the 21st the patient did not get any worse. His temperature was never above normal and he slept well. During this period the risus sardonicus was extremely well marked. The patient was of a very neurotic type. Illustrating this on two occasions before the onset of the tetanus he complained of sleeplessness at night. He was given one drachm of water in a minim glass which he thought was solution of hydrochlorate of morphia. He not only slept all through the night but complained of excessive drowsiness all through the next day. This fact, together with the non-progress of the disease from the 18th to the 21st and the knowledge that immediately he complained of stiff neck the other patients told him he had lockjaw, suggested the possibility of his simulating the disease. On the morning of the 22nd, however, the true nature of the affection was unmistakeable. No local treatment beyond the one cauterisation with silver nitrate was undertaken. The injections of serum seemed undoubtedly to relieve the tension of the muscles as when they were stopped for one day he had a slight relapse. It is probable, however, that he would have recovered without them as he never seemed at all exhausted.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Annual General Meeting.—Presidential Address.—Adaptation and Compensation.

THE annual general meeting of this society was held on Oct. 12th, Mr. A. PEARCE GOULD, the President, being in the chair. The annual report was taken as read. The treasurer's report and balance-sheet were presented and adopted, it being pointed out that unusual expenditure had been incurred owing to the necessity which had arisen for legal proceedings in the enforcement of the terms of the lease of the premises occupied by the society. Votes of thanks to the retiring officers were proposed and adopted and the incoming President, Dr. F. DE HAVILLAND HALL, then took the chair.

At the ordinary meeting which followed Dr. de Havilland Hall delivered his presidential address, taking as his subject a brief retrospect of certain of the papers relating to diseases of the circulatory and respiratory systems which had been read before the society in the last 25 years. He directed attention to the two discussions on intrathoracic aneurysm, one having been introduced by Sir R Douglas Powell in

December, 1889, and the other by himself in 1900. Besides these there had been numerous other papers on the same subject. The earliest communication within the period referred to was a paper read by Dr. T. Gilbart Smith in November, 1878, which illustrated the extreme difficulty of diagnosing cases of aneurysm with pressure upon the root of the lung, especially if there were pleural effusion in addition. The possibility [illegible] borne in mind in all [illegible] President commented upon the absence of any definite statement as to the position of the left vocal cord in cases of intrathoracic aneurysm. He had almost always found it fixed in the cadaveric position, whereas the late Dr. W. M. Ord had usually found the vocal cord fixed in the position of abduction. This was a point which might certainly be cleared up without much difficulty. In most of the papers the action of iodide of potassium was commented on. Sir Benjamin Ward Richardson could see "no physiological reason for its value." Remarkable diversity of opinion existed on the subject. Was there any more general consensus now, 18 years after the discussion, and was not this a question which required to be settled? One thing iodide of potassium certainly did, it relieved pain. As early as March, 1881, the attention of the society was directed to the subject of malignant endocarditis. The mode of entrance of the germs producing the disease was discussed as well as its nomenclature. Dr. Sidney Coupland suggested "septic" [illegible] name for the disease. In a p[illegible] Coupland commented on the [illegible] malignant character was graft[illegible] changes in the valves. In one of the cases recorded recovery followed after the administration of sulpho-carbolate of sodium. The President expressed a hope that in the discussion which was to take place on the use of serum and other inoculations in pyogenic infections some reference would be made to the treatment of malignant endocarditis. In commenting on a case of relapsing or intermittent pneumonia communicated by the late Sir Andrew Clark in 1884 the President drew attention to the statement that in about one third of his hospital patients there was absence of cough and expectoration and he remarked that pneumonia occurring in gouty subjects was particularly liable to be so characterised. The President agreed with the caution which Sir Andrew Clark expressed as to the necessity of not overloading the system by too much nourishment, and also with the view that on the whole stimulants did more harm than good. The important subject of venesection in pneumonia was raised by Dr. F. Lucas Benham, and the cases he quoted were most convincing as to the good effect of this method of treatment in certain cases of pneumonia. The diseases of the pleura had been the subject of numerous and valuable papers. The first in the period under consideration was in 1880 by Sir William H. Broadbent who pointed out how the physical signs were modified when the lung was large and consolidated and deeply immersed in the fluid. Two most important discussions had taken place upon empyema and its treatment. The first was based upon a paper by Dr. Thomas Churton of Leeds. He divided cases of empyema into three sets or species—(1) those on the outer aspect of the lung; (2) those at the base between the lung and the diaphragm; and (3) those on the inner aspect between the lung and the spine and the mediastina. It was from a failure to recognise the varied situations of an empyema that mistakes in diagnosis occasionally arose, but the diagnosis of a small empyema between the lobes of the lung was a mattter of the greatest difficulty. The discussion upon the treatment resolved itself mainly into whether simple incision or resection of a portion of one or more ribs should be practised and the President expressed himself in favour of the latter. The two most weighty communications on pneumothorax and pyopneumothorax had been made by Dr. Samuel West which had led the President to modify the view which he formerly held as to the undesirability of interfering with pyopneumothorax due to pulmonary tuberculosis and he alluded to a case recently under his care to prove that even advanced disease of the lung was no necessary contra-indication to incision and drainage of the pleural cavity should pyopneumothorax be present.

Dr. G. A. **GIBSON** (Edinburgh) read a paper entitled "Adaptation and Compensation," illustrated by lantern slides. The anatomical changes in acromegaly, arterial hypermyotrophy, arterio-sclerosis, cardiac degeneration, and other degenerative changes were brought forward and described in illustration of the processes of adaptation and compensation. (This paper will shortly appear in our columns.)—Dr. J. **MITCHELL BRUCE** remarked on the application of these same processes in therapeutics.—Dr. A. G. **AULD** recalled many observations by the late Professor Coats of Glasgow showing that sclerotic changes in the arteries depended on deficient nutrition.—Dr. **GIBSON** replied.

CLINICAL SOCIETY OF LONDON.

Erosive Gastric Ulceration successfully treated by Operation.—Cases of Acute Hæmorrhagic Pancreatitis.

A MEETING of this society was held on Oct. 8th, Dr. **FREDERICK TAYLOR**, the President, being in the chair.

Sir **DYCE DUCKWORTH** and Mr. **H. T. BUTLIN** communicated a paper on a case of Erosive Gastric Ulceration with Severe Hæmatemesis; Operation; Recovery. The patient was a woman, aged 29 years, who was admitted into St. Bartholomew's Hospital on Nov. 21st, 1902. There was a history of three weeks' pain after food but no vomiting or hæmatemesis until the day before admission. The bleeding continued to recur in spite of adrenalin chloride, rectal feeding, and other measures. On Dec. 4th Mr. Butlin took over the care of the patient and with the assistance of Mr. O. B. Lockwood opened the abdomen and made an incision in the anterior wall in the long axis of the stomach. Nothing that could be called an ulcer was found on examining the interior of the organ, but in the greater curvature near the pylorus the mucous membrane over several square inches was pink and markedly different from the rest of the membrane which was of an ivory yellow tinge. At various points on this pink area were found slight excoriations, fissures, and tiny points from which blood slowly oozed. Nine of these points were ligatured with a purse-string suture of fine silk thread and the opening in the stomach was closed by a continuous silk suture which embraced all three coats. The abdominal wall was closed by three layers of continuous silk sutures the ends of which were left out at each end of the wound. The operation lasted three-quarters of an hour and was well borne, not more than a drachm of blood being lost. Some vomiting followed the operation. On Dec. 5th the temperature fell from 101° to 99° F. Three ounces of acid green fluid were vomited but no blood. Feeding was carried on by the bowel, while saline solution, one pint, with a drachm of liquor calcis saccharatus in it, was also administered by the rectum. By Jan. 9th the patient was taking boiled fish and on the 14th minced meat. By Feb. 4th she was well and was sent to the Convalescent Home at Swanley. The case afforded confirmation of the observations of other investigators on the occurrence of oozing of blood from several small points at once as distinct from ulceration. The condition of the gastric mucous surface discovered in this case was probably the starting point of most, if not of all, gastric ulcers and it seemed probable that if the hæmorrhages dependent on it proved fatal in any instance the actual lesions would not be detectable after death.—Mr. C. W. **MANSELL MOULLIN** recalled the paper which he had read before the Clinical Society three years ago on this subject and which was published in THE LANCET.[1] He had operated in 11 cases of erosive ulcer and he discussed the differences in the appearances of the mucous membrane during life and after death. He urged that operation in these cases should be undertaken before the patient had become too exhausted. It had been stated that hæmatemesis was only fatal in 3 per cent. of the cases of gastric ulceration but he pointed out that no one had ever proposed to operate in every case of gastric ulcer. Only about 10 per cent. of the cases were really serious and these only concerned the surgeon. The indication for operation was the occurrence of a succession of severe hæmorrhages, especially if associated with intense anæmia and if medical measures had failed.—Dr. F. **DE HAVILLAND HALL** agreed as to the indications for operation but demurred to the statement that 10 per cent. of the cases were serious, adding that in nine years at the Westminster Hospital, although he had seen many cases of gastric ulcer, not one of them had proved fatal and in only one instance had operation been performed. While admitting the occasional need for operation he believed it was only rarely called for.—Mr. **ARTHUR E. BARKER** advocated the operation of gastro-duodenostomy which not only tended to bring about cessation of the bleeding but also gave the stomach rest and enabled it to empty its contents.—Mr. F. C. **WALLIS** commented on the difficulty of making out the situation of the ulcer from external examination of the stomach and he advocated making an incision into the organ for that purpose.—Dr. **WILLIAM PASTEUR** discussed the differential diagnosis of hæmatemesis from gastric erosion and that due to gastric ulceration. In the former the hæmorrhage was, he believed, constantly recurring.—Mr. C. R. B. **KEETLEY** observed that the practice of operating to find the bleeding spot might be all very well when every possible facility was available but it was hardly practicable in every case. In a severe case of his own he experienced considerable difficulty in locating the bleeding spot, although he had opened the stomach pretty freely. He ultimately found that the ulcer was adherent to the diaphragm. He separated the adhesions and packed the cavity and the patient recovered, though she subsequently had to undergo gastro-enterostomy, an operation which he held in great esteem. He referred to a paper by Mr. Willonghby Furner.[2]—Mr. **BUTLIN**, in reply, remarked on the enormous hæmorrhages which might occur from tiny bleeding points in the stomach, just as they could in similar circumstances from the nose. While admitting the difficulty of discovering these points he thought it better, speaking as a surgeon, to attack these bleeding spots directly whenever that was possible. If they could not be located gastro-enterostomy might be performed but even this did not always check the hæmorrhage.—Sir **DYCE DUCKWORTH**, in reply, emphasised the necessity of recognising the type of case in which operation was called for—namely, that in which sudden profuse and successive hæmorrhages occurred. This was a character which he believed attached to erosions as distinct from simple ulcer of the stomach. Other differential features were the suddenness of the onset without much previous history and without pyrosis. Discussing the etiological factors, he remarked on the frequent association of gastric ulcer with intense anæmia and with the wearing of tight corsets.

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[1] THE LANCET, Oct. 20th, 1900, p. 1125.

Mr. **ANTHONY A. BOWLBY**, C.M.G., communicated a case of Acute Hæmorrhagic Pancreatitis. The patient was a man, aged 41 years, who was seized with severe abdominal pain and vomiting on Nov. 19th, 1902. During the next two days there was some complaint of flatulence and constipation and the vomiting continued. The abdomen was tender but no swelling could be felt. The bowels acted well after enemata. On the third day of the illness the patient became delirious and from that time onwards suffered from delusions. The urine was very greatly diminished in quantity. On the fifth day after the illness commenced there was a sudden attack of pain with severe vomiting, followed by great and rapid distension of the abdomen and complete obstruction. For the relief of this his abdomen was opened and there was found to be some general early peritonitis with old adhesions but no mechanical obstruction of the bowel. A coil of the small intestine was opened to relieve the distension but failed to save the patient's life. The post-mortem examination showed a very large hæmorrhage surrounding the pancreas and extending down to the pelvic region. The pancreas also was engorged with blood and there was general peritonitis.

The **PRESIDENT** also made a communication on a case of Acute Pancreatitis. The patient, aged 68 years, was admitted into Guy's Hospital on Feb. 3rd, 1899. At a public-house he had ordered some rum and had filled up his glass from a bottle supposed to contain water and had drunk the whole. This bottle was afterwards said to contain oxalic acid of unknown strength. Emetics were given and he vomited freely. Though not apparently much affected at first he afterwards became collapsed, tremulous, and cyanosed, but recovered towards the evening. On admission the mouth and lips were slightly excoriated. He was suffering from emphysema and slight bronchitis. On the following day he appeared to be well and left at his own urgent request. He went home by train a distance of five or six miles, arriving very feeble and ill, and two days later he returned to the hospital. He was then cyanosed, feeble, with rapid pulse and breathing. There was now no soreness of the mouth or epigastric pain or pain on swallowing. His bronchitis was worse and this became the prominent feature, with increasing feebleness of the pulse, until his death on the 23rd. Post mortem there was emphysema of the lungs, with purulent bronchitis and pleurisy. Ten ounces of blood were found in the substance of the great omentum and the pancreas presented a condition of interstitial hæmorrhagic pancreatitis, was enlarged, hard, and infiltrated with blood. There was neither peritonitis nor fat necrosis. The kidneys were slightly granular. The President discussed the relation of the condition of the pancreas to that of the chest and to the ingestion of the oxalic acid. The entire latency of the pancreatic lesion was pointed out as the two other conditions combined to mask the symptoms which might have been attached to it.—Mr. **BARKER** remarked on the copiousness of the vomiting in these cases and asked if this had been noted by Mr. Bowlby and the President.—Mr. L. A. **BIDWELL** referred to a case in which he had operated last year. He had at first diagnosed pus in the gall-bladder but at the operation the gall-bladder and ducts were found to be healthy and in pursuing his exploration he let out a quantity of fluid from a cyst, after which the patient recovered. He had heard, however, that the patient had subsequently died and he supposed that a fresh collection had formed.—Mr. **BOWLBY**, in reply, said that the vomited matter in his case was very copious considering how little fluid the patient took.

SOCIETY FOR THE STUDY OF INEBRIETY.—A meeting of this society was held on Oct. 13th at the rooms of the Medical Society of London, Dr. Harry Campbell, the President, being in the chair.—Sir William J. Collins delivered an address entitled "The Institutional Treatment of Inebriety." He said that he approached the question rather from an administrative than a therapeutic standpoint. As first chairman of the London County Council Inebriates Acts Committee he had taken part in founding the certified reformatory at Farmfield, Horley, and as a visitor of Aylesbury Gaol he had watched the establishment and working of the State Inebriate Reformatory for women recently opened there. The Inebriates Act of 1898 had initiated an entirely new method in the treatment of the habitual offender and opened up new possibilities in their whole penological system. Some had regarded the process of amelioration of the lot of the sinner and the sot as having gone too far and denounced with Spartan rigour the softness of this degenerate dispensation. In administrative matters softness of heart was an insufficient compensation for the lack of hardness of head. In view of the difficulties encountered in housing even the industrious working classes in their large towns at rents alike payable and paying, he confessed he sometimes felt that in some directions they were in danger of making the way of the transgressor too soft. Having said this, he fully indorsed the view that in regard to the inebriate it was right to make the experiment—for as an experiment he looked upon it—of seeing what could be done under the optional powers given to county and borough councils by the Act of 1898. The old miserable round of repeated short sentences had proved a sorry and revolting farce as a means of reclamation. The prison, the asylum, the hospital, and the reformatory had all their uses in their social betterment, but up to the present the sorting of their contents had sometimes been somewhat perfunctorily performed. The greatest discrimination was required in so-called "borderland" cases in order to decide how to classify and how to treat the particular individual. Questions of moral responsibility were raised which required the thoughtful consideration alike of the philosopher, the physician, and the jurist, and the practical coöperation both of the large-hearted philanthropist and the common-sense scientist. They were in danger of the official and the commonplace so scornfully denounced by Charles Reade in that splendid contribution to solid fiction, "It's Never Too Late to Mend." Inebriety was called a disease, but it was a *disease of the will.* As with the hysteric, the inebriate said, "I cannot"; it looked like "I will not"; it was "I cannot will." Its successful treatment involved the problem of how to rehabilitate a human will. To restore the physical norm was the first essential but it was only the beginning of treatment. Alcohol in any form should be absolutely and at once withdrawn, both as drink and drug. It was on the moral plane they must work if they were to reconstruct character and not merely regulate conduct. Hedonism and necessitarianism would prove false guides and uninspiring mentors in the task of individual reclamation and social regeneration, even though they pursued the paths of despotic philanthropy so much in vogue in certain circles. Appeal must be made to higher sanctions than those of pleasure or even prudence. Frank recognition must be conceded to a conscious partnership of each individuality in the architecture

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[2] THE LANCET, Dec. 31st, 1898, p. 1761.

of his or her own character Means which did not appeal to a will free to choose, a will actuated by ideals which transcend natural and merely physical sanctions, might suffice to mould an automaton but would not restore a character To this end all treatment should be directed Removal from old associations, from town life back to nature, to work in the field or on the farm—work that grows and progresses under the hand by preference, exciting interest and perseverance towards an end in view Habits of industry and fixity of purpose were thereby inculcated Voluntary coöperation must be enlisted
on the personal influence of
to the world it was of the
help and supervision were
secured The work demanded tact and patience and the highest qualities of head and heart A social experiment it was, but one which, in view of their national vice, deserved to be well and truly tried

FORFARSHIRE MEDICAL A
of this society was held in the
on Oct 2nd, Professor A M St
Mr D M Greig read notes of a case of Gunshot Wound in the Chest in which a Mauser rifle bullet had traversed the right chest and at its exit had fractured the tenth rib As a sequel to this the tenth intercostal nerve had been caught and compressed by the cicatrix This was followed by the onset of an unusual spasm of the respiratory and of the extra respiratory muscles Excision of the fractured rib and resection of the nerve had been followed by immediate and permanent relief from the symptoms —Dr A McGillivray read a paper on the Use of Protargol in Ophthalmic Practice He considered that protargol was one of the most valuable therapeutic agents at present available in the treatment of certain conjunctival affections It possessed obvious advantages over nitrate of silver, for it was not precipitated by the chloride of sodium of the tears and it did not really coagulate the albumin of the tissues A 1 per cent solution dropped freely into the eyes thrice daily in catarrhal conjunctivitis gave better results than any remedy he knew of In certain forms of epiphora it might be combined with a solution of chloride of adrenalin of a strength of 1 in 10 000 In purulent conjunctivitis of the newly born he obtained excellent results by the use of a 10 per cent solution of protargol freely dropped into the eyes after the removal of all discharges by copious flushing with tepid normal saline solution —Mr Greig said that a weak solution of protargol was a most valuable remedy for the treatment of specific urethritis —Dr J Orr said that he had used 15 and 20 per cent solutions which had caused severe pain Now he was accustomed to use from 2 to 5 per cent solutions and had heard no complaints of their painfulness —Mr G Halley read short notes of ten cases of Strangulated Hernia He mentioned that though the number of the cases was small they were representative of sufficient varieties to be of interest The oldest patient was 80 years of age and the youngest was five months In only one case was the bowel gangrenous This was resected and an end to end anastomosis was performed The patient, however, succumbed on the next day One other patient died seven days after the operation In this case the bowel was healthy and was returned but the patient's condition was not good

BRITISH GYNÆCOLOGICAL SOCIETY —A meeting of this society was held on Oct 8th, Dr Heywood Smith, the President being in the chair —The President showed the following specimens, reading notes of the cases 1 A large Fibroid Tumour in Calcareous Degeneration removed from a sterile married woman still menstruating though 50 years of age The ovaries were cystic and were first removed, an elongated pedicle attaching the tumour to the fundus was ligatured and divided, and as the uterus was found to be studded with fibroids a supra vaginal amputation was then performed. The tumour was everywhere permeated with calcareous matter and there was much difficulty in making a section of it 2 Pyosalpinx (gonorrhœal ?), Enlarged and Cystic Ovaries and Parovarian Cysts 3 Sclerotic Ovaries from two cases each marked by menorrhagia and dysmenorrhœa, the ovarian envelope in the one being smooth and in the other corrugated like the surface of the brain —Dr H Macnaughton Jones showed, amongst other specimens 1
Degenerating Fibroma f
pause 2 A Microscop
an isolated encapsuled
tissue of the axilla ;
mamma of the same side, weighing over three pounds, was subsequently removed but disclosed no trace of malignancy 3 Temperature Charts and Tumour from a case in which an apparently perfect convalescence after hysterectomy in a woman, aged 55 years, was interrupted on the twentieth day by necrosis of the stump and cellulitis, leading to a hard infiltration extending half way to the umbilicus 15 days later, the condition of the patient being desperate, he made an incision from the pubes to the left iliac crest and as aspiration failed he, without opening the peritoneum, carried his incision down into the pelvis and reached a necrotic slough and a cavity containing pus (not fœtid), this was cleared out and disinfected and with subsequent drainage the patient made a good recovery —Dr Bedford Fenwick showed a Uterus with Multiple Submucous Fibroids removed from a woman, aged 54 years, seven years after the menopause For four years she had suffered from irregular and sometimes profuse hæmorrhage, relieved but recurring after the removal of a polypoid growth projecting from the cervix, again by that of a hard almost calcareous growth, and similarly on several subsequent occasions, the last mass taken away was like a piece of an orange Lately the bleeding had become more profuse, the discharge more offensive, and she had rapidly lost flesh and strength On admission to hospital a soft friable mass could be felt just inside the cervix, to the touch just like malignant disease She had a temperature of 102°F and a pulse of 110, and from the history a diagnosis of sloughing intra uterine fibroid was made The case exemplified the fallacy of supposing that fibroids did not grow after the menopause and was interesting from the manner in which it suggested malignant disease An earlier radical operation might have saved her much suffering but she made a good recovery from the operation —In the discussion which followed Mr A W Mayo Robson said that he did not think that the calcareous degeneration of fibroid tumours could be explained by deficient circulation through a small pedicle, though generally superficial it was not always so —Dr C H F Routh and Dr J A. Mansell Moullin related
itis reported by Dr
Jessett, Dr Richard
r, Mr T Rushbrooke,
also spoke and the
President and Dr Macnaughton Jones shortly replied.

PATHOLOGICAL AND CLINICAL SOCIETY OF GLASGOW —The first meeting of the session for 1903-04 took place on Oct 12th, Mr A. E Maylard, the President, being in the chair —Dr J K Kelly showed (1) a specimen of Hydronephrosis which simulated a Parovarian Cyst, and (2) specimens of Uterine Myomata removed by Operation —Dr A. N McGregor showed a girl, aged 15 years, with a large Diffuse Venous Nævus of the Thigh It had been increasing in size but treatment by ligature of several of the largest veins had led to considerable consolidation and apparent arrest of the growth —Dr John Patrick showed a specimen of a Large Congenital Umbilical Hernia The sac ruptured about 36 hours after the birth of the infant and was therefore removed, the hernia reduced, and the wound closed The patient died apparently from shock in a short time —Dr R Barclay Ness described the clinical features of a case which presented post mortem a Chronic Gastric Ulcer and Miliary Tuberculosis Specimens from the case were demonstrated by Dr A R Ferguson —Dr J MacGregor Robertson demonstrated a new form of Hæmoglobinometer (Dare's of Philadelphia) which appeared capable of particularly easy and rapid application

INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH – The annual general meeting of this society
was held at
Dr Joseph C
an address o
medical office
said that spe
tamination furnished the large majority of the rural population with water while a comparatively small minority were supplied by springs from the older rocks and deep wells not liable to pollution Most of the surface water sources of supply would probably not satisfy the sanitary test of wholesome water but to a large extent their use was inevitable An agricultural drain pipe projecting through a bank and discharging water from land drainage into a ditch was a boon to many a cottager and as the pipes were laid

at a good depth to avoid the plough the water, though liable to contamination, was not necessarily unwholesome and it was often soft. Wells were the chief sources of domestic water-supply in most rural districts. The majority were surface soak wells and in the agricultural villages they were usually dip wells situated in vegetable gardens highly fertilised with pig and human manure. The simplest way to obtain a water-supply for a parish was to go to the head of a perennial stream, high up on the side of a hill if possible, to collect the water as it left the rock in a sufficiently large reservoir and to convey it in pipes to the parish. If such a plan was not practicable water must be pumped to a height from which every house in the parish could be supplied. After discussing the various methods of pumping the President concluded by saying that if he were asked how a medical officer of health might be enabled to indicate to his authority the existence of a porous stratum in which enough water was held up to supply a particular parish or combination of parishes he would say that every medical officer of health of a rural district should be familiar with the elements of the science of geology. Then with local knowledge and the aid of the drift map and the sections of the district prepared by the Geological Survey the medical officer would not be likely to lead the local authority astray.

NORTH-EAST LONDON CLINICAL SOCIETY.—This society opened its fourth session with a meeting held at the Tottenham Hospital on Oct. 8th, Dr. J. W. Hunt, the President, being in the chair.—Dr. G. E. Herman read a paper on Midwifery from the Point of View of Preventive Medicine and a discussion followed.—The officers of the society for the session 1903–04 are as follows: President: Dr. T. W. Hunt. Vice-Presidents: Dr. F. H. Daly, Mr. W. Edmunds, Dr. F. de Havilland Hall, Dr. R. Murray Leslie, Dr. E. Hooper May, Mr. J. S. Sequeira, Dr. T. Gilbart Smith, and Dr. F. J. Tresilian. Treasurer: Dr. Arthur E. Giles. Council: Mr. C. Billson, Mr. R. P. Brooks, Dr. S. E. Dore, Dr. R. E. Foott, Dr. E. A. Lermitte, Dr. G. N. Meachen, Dr. D. Petty, Dr. A. S. Ransome, Mr. T. Rushbrooke, Mr. R. F. Tomlin, Dr. A. J. Whiting, and Dr. C. H. Wise. Secretaries: Mr. H. W. Carson and Mr. C. E. Hutt.

TORQUAY MEDICAL SOCIETY.—At the opening meeting of the session held on Oct. 9th, the President, Dr. J. H. Harris, being in the chair, an address was delivered by Mr. W. Watson Cheyne entitled "Modern Surgery," in which the lecturer insisted that the great advances in operative surgery after the introduction of asepticism were due to what might be summed up in the one word "thoroughness," illustrating this by numerous cases drawn from his own practice and covering nearly the whole range of operative surgery.—The annual dinner was held in the evening and was well attended, Mr. Watson Cheyne being the chief guest.

Reviews and Notices of Books.

The Imperfectly Descended Testis: its Anatomy, Physiology, and Pathology. By W. MCADAM ECCLES, M.S. Lond., F.R.C.S. Eng., Assistant Surgeon to, and Demonstrator of Operative Surgery at, St. Bartholomew's Hospital, &c. With 44 Plates. London: Baillière, Tindall, and Cox. 1903. Demy 8vo. Pp. 140. Price 7*s.* 6*d.* net.

THE importance of the imperfectly descended testis from a pathological point of view is only now beginning to be fully recognised. Much has, indeed, been written on the subject and many cases have been reported, but very little has been done to study systematically the various misplacements of the testis and the morbid conditions to which this malposition tends to give rise. Therefore Mr. McAdam Eccles's work, which is based on his Jacksonian essay, is of the greater value as it forms one of the earliest attempts to consider adequately this important subject. Many of the abnormalities which we find in the human body are explicable only by a full knowledge of the embryology of the structure concerned and this is also to some extent true of diseases and new growths. Therefore it is natural that this work should commence with an account of the development of the testis. This is sufficiently full to explain many of the abnormalities of the organ and the description of the descent of the testis shows that its various malpositions are due to an arrest of the testis as it passes downwards. Then follows an account of the anatomy of the testis which has imperfectly descended and Mr. Eccles points out that the histological characters are very different from those exhibited by the organ when normally situated. The seminiferous tubules are smaller, shorter, and fewer in number and the amount of interstitial tissue is correspondingly increased. As to the physiology of the misplaced organ Mr. Eccles considers that the generally accepted view that it is incapable of forming healthy spermatozoa is not universally true though the exceptions are rare. This fact is of some importance in connexion with the question of the removal of misplaced testes. Moreover, though double ectopia or arrest may as a rule mean absolute sterility, yet it is probable that the internal secretion is still formed, for the virile voice and appearance are present. The succeeding chapters deal with inflammation and new growths of the undescended testis and a very interesting account is given of torsion of the cord of such an organ; several chapters are devoted to the very important subject of hernia in relation to imperfect descent. There is a close association between the two conditions as is shown by the frequency with which they occur together. The book is clearly and carefully written and, moreover, is of great interest.

Hystérotomie et Hystérectomie en Obstétrique. By Dr. V. BUÉ. Paris: F. R. de Rudeval. 1903. Pp. 454. Price 6 francs.

IN this work, for which Dr. Bué was awarded the Prix Tarnier by the French Academy of Medicine in the year 1902, the author has studied the indications for the performance of the operations of hysterotomy and hysterectomy as met with in obstetric practice. With the aid of personal observations and the experience of others he has considered in detail all the varying conditions in which one or other of these procedures may be required. In coming to a decision on this most important question it is obviously impossible to lay down any hard-and-fast rules that will be applicable to all cases, and Dr. Bué has therefore been content with quoting the opinions of all those who have written upon this debatable subject. The scope and completeness of the work will be apparent when we point out that in some 13 chapters the author passes in review the treatment of contracted pelves, eclampsia, atresia of the vagina, rigidity of the cervix, intra-uterine putrefaction of the fœtus, and pregnancy complicated by fibroid tumours or cancer of the uterus. He also considers the results to be obtained by removal of the uterus in cases of rupture of that organ and in cases of acute septic infection. The rarer indications afforded by such conditions as ovarian tumours complicating pregnancy, hydatidiform moles, inversion of the uterus, retraction of the ring of Bandl, and placenta prævia are also discussed in their relationship to hysterotomy and hysterectomy. The last two chapters are devoted to vaginal Cæsarean section and the technique of the various operations under consideration. In an appendix are given the details of nine cases of Porro's operation from the clinique of Professor Gaulard.

This monograph does credit to the author's industry and, containing as it does a large number of the opinions and observations of various writers, will prove of value as a work of reference to those interested in this important subject.

LIBRARY TABLE.

The Private Nurse's Own Note Book. By Sister EVA. London: Bemrose and Son. Pp. 96. Price 6*d.*—This is a little book containing hints to private nurses by a nurse with regard to their behaviour. The hints are sensible and, we think, needed. Sundry recipes for

"Dainty Dishes" are given, some of which are good but we cannot agree that wine jelly should be made with cornflour. The proper way to make it is with calves-feet, isinglass, or gelatin. Moreover, cornflour should not be put into a custard. Custard is, or should be, milk and eggs, with sugar and flavouring if desired. The collection of recipes which is headed "Recipes" is good. It might be as well in a future edition to explain the word "marc," for we doubt whether the average nurse knows what it means.

Practical Guide to Surgical Bandaging and Dressings. By W. JOHNSON SMITH, F.R.C.S. Eng. London: The Scientific Press. Pp. 167. Price 2*s.*—Mr. Johnson Smith is well known as an admirable teacher and in this little book we find all the clearness and practical common-sense which characterise his oral instruction. The information given will be found invaluable by nurses and dressers and even by young practitioners just starting in practice. For a young practitioner who may have been a house surgeon sometimes finds that when he starts in practice he is a little at sea without the aid of his dressers, his nurses, and the ward sister, and possibly the practitioner who has not held a resident post is in worse case, but this little book will put both of them in the right way.

Polyphase Currents in Electrotherapy. By GEORGE HERSCHELL, M.D. Lond. London: Henry J. Glaisher 1903. Pp. 44. Price 2*s.* 6*d.*—Dr. Herschell has already given some account of the therapeutic use of polyphase electric currents in his "Manual of Intragastric Technique," and in the present monograph, which is a reprint of a paper read before the British Electro-therapeutic Society in February, 1903, he has treated the subject of these particular currents in much ampler detail. He has found that the external application of triphase currents has a remarkable effect in increasing the tension and amplitude of the pulse tracing and also in increasing the excretion of urea when it happens to be subnormal. Three electrodes are used with triphase currents and for the purpose just mentioned each of them consists of a piece of felt having an area of 24 square inches and placed one on each side of the spine and one in front of the abdomen. More important still is the action of the current on unstriped muscular fibre, which renders it useful in the treatment of atonic dilatation of the stomach and in the relief of chronic constipation due to intestinal atony. On account of its effect on the blood pressure the triphase current is also indicated in various forms of neurasthenia associated with arterial hypotension. The apparatus used by Dr. Herschell for the production and application of the currents is described at some length and shown in drawings.

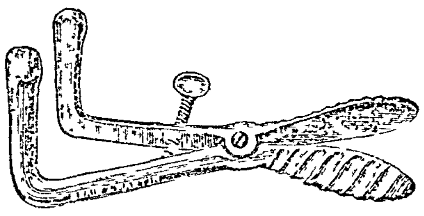
First Aid. By R. J. COLLIE, M.D. Aberd., and C. F. WIGHTMAN, F.R.C.S. Eng. London: George Gill and Sons. 1903. Pp. 125, including index. Price 6*d.* net.—It was the wise man who said "Of the making of many books there is no end," and his dictum is specially true of manuals on first aid. But the little work before us, which is by the superintendent and a lecturer respectively of the ambulance classes of the London School Board, is an excellent example of its kind. It deals with really "first aid" and does not attempt to teach too much anatomy and physiology. The book is illustrated with reproductions of photographs evidently taken from scenes which have occurred in the ambulance classes, but we think that the photograph on p. 46, showing the application of a tourniquet to the femoral artery applied *over* a boy's knickerbockers is a mistake, for anyone learning from the book without a teacher might think that the tourniquet should be applied in this way. Of course this is a mere oversight, for on p. 92 in a paragraph on the management of the clothes in a street accident the reader is told, "*Never* remove the clothes in a case of accident unless absolutely necessary—e.g., in cases with bleeding." In the paragraph on sprains, p. 27, we see that cold water is recommended; we think that hot water should have been mentioned too. Some patients much prefer hot water to cold and less harm is done if the warm application is not continuous, but if cold be employed the parts should not be allowed to become warm between the applications. The directions for the emergency treatment of poisoning are very good and so clearly written that anyone of ordinary intelligence cannot fail to understand them.

Practical Nursing. By ISLA STEWART and H. E. CUFF, M.D. Lond. Vol. II. London and Edinburgh: William Blackwood and Sons. 1903. Pp. 201. Price 3*s.* 6*d.*—When we reviewed the first volume of this excellent work we said that nurses would doubtless wait with eagerness for the second volume. They have had to wait some time, but their patience has been amply rewarded. Vol. I. was devoted to nursing in general while Vol. II. deals with the nursing of special medical and surgical cases. The first two chapters describe the nursing of enteric fever and diphtheria and are altogether admirable, more especially the directions for the feeding of a patient. Matters have certainly changed since the time of Graves who, it will be remembered, desired that his epitaph should be "He fed fevers," and nowadays we think that the tendency is to overfeed rather than to underfeed. If a fever patient shows a marked distaste for food—i.e., milk—he may, we consider, be generally left safely for 24 hours with no nourishment but plain water, or possibly water with a little egg albumen dissolved therein. Scarlet fever, measles, and whooping-cough are dealt with together in Chapter III.; but in our opinion in a future edition some reference should be made to the hæmorrhagic form of measles though possibly the authors consider that such a rapidly fatal disease has but little need for either nursing or treatment. In the chapter on respiratory diseases we are glad to see a reference to bleeding in pneumonia but no mention is made of this treatment for bronchitis; leeching, however, is given as a remedy for the acute pain of pleurisy. We need not go on to consider the rest of this work in detail, for we have said enough to demonstrate its qualities. We will only add that it is eminently practical and full of useful "tips"—e.g., the hint on p. 137 for removing the wool on a Playfair's probe by unrolling it under water and the caution against overfeeding patients suffering from extensive burns.

New Inventions.

A NEW COLOTOMY DILATOR.

I HAVE had constructed a dilator which has proved to be very satisfactory in a case under my care in which colotomy was performed. A few weeks after the operation cicatricial contraction became very troublesome. I tried two or three different kinds of dilators but found them ineffective. I therefore used rectal bougies, but their passage required considerable force and caused severe pain which frequently produced syncopal attacks lasting an hour or two. This new dilator, which is made of steel and is nickel-plated, has the general appearance shown in the illustration. Its total length is three inches and the projection of the blades, which are placed at right angles to the plane of the shanks, is one and a quarter inches. The blades are rounded off into bulbous enlargements at their ends, the inner face being kept flat so that they can be brought close together for insertion. The total separation allowed for when the blades are open to the fullest extent is two inches. The instrument has a thumb screw with a quickly running thread. After being inserted into the wound the blades are separated by means of the screw. The whole instrument has been made to occupy as little space as possible, so that when in position it lies flat against the surface of the body without any awkward projection and allows the dressing and clothes to be arranged in the same manner as when the instrument is not in use. It can be left in position as long as may be desired without causing any inconvenience to the patient. The amount of force used in producing or maintaining dilatation can be regulated to a nicety by means of the screw. I also find that it does not cause any cracking of the skin. It retains its position accurately and not only allows but facilitates the passage of flatus and discharge, the latter of which is often abundant towards the end of cases of rectal cancer. With it dilatation can be effected thoroughly and yet so gradually that it is practically painless. To maintain dilatation the instrument can be used for an hour or so each day.



I have to thank the makers, Messrs. Brady and Martin of Newcastle-on-Tyne, for the admirable manner in which they have carried out my ideas.

Dursley. R. ADAMS BREWIS, M.D. Edin.

# Analytical Records
FROM
THE LANCET LABORATORY.

(1) TABLOID IRON, ARSENIC, AND DIGITALIN; AND (2) TABLOID BUTYL CHLORAL HYDRATE AND GELSEMINE.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL BUILDINGS, LONDON, E.C.)

(1) In the compound tabloid of iron, arsenic, and digitalin the iron occurs in the form of soluble phosphate which, whilst readily assimilable, does not give rise, it is stated, to constipation. This salt is said also to be without objectionable effect on the digestive processes. Each tabloid contains three grains of soluble phosphate of iron, $\frac{1}{100}$th of a grain of arsenious acid, and $\frac{1}{100}$th of a grain of digitalin, the whole combination forming an obviously useful chalybeate tonic and cardiac stimulant. (2) The tabloid of butyl chloral hydrate and gelsemine represents a combination that is known to relieve acute neuralgia of the fifth nerve. Each tabloid contains three grains of butyl chloral hydrate and $\frac{1}{200}$th of a grain of gelsemine hydrochloride. The combination, of course, contains powerful drugs which need to be administered with particular caution.

PLASMON TEA.

(THE DIGESTIBLE TEA SYNDICATE LIMITED, 22, FENCHURCH-STREET, LONDON, E.C.)

Plasmon tea consists of a selected tea to which 10 per cent. of plasmon—the pure unaltered proteid of milk—has been added by an ingenious mechanical process. There can be little doubt of the dietetic advantages given to the tea by this proceeding. Part of the plasmon is calculated to render the tannin insoluble and inactive and part is dissolved in the beverage so that its nutritive value as well as its degree of digestibility are increased. Our analysis shows that this is the case. On estimating the amount of tannin contained in a five minutes' infusion of ordinary tea it was found to be 5 per cent. In an infusion prepared in exactly the same way but with plasmon tea the active tannin found was 2·85 per cent., so that the addition of plasmon reduces the tannin of tea by about 50 per cent. It is probable that even the tannin remaining in solution is physiologically inert and without action upon the digestive processes as it would appear to be in a neutral state combined with the proteid. The addition of more than 10 per cent. of plasmon to the tea, moreover, does not appear to remove more tannin, for the infusion contains a slight excess of plasmon, as is shown by the facts that sulphate of copper gives a decided precipitate of proteid as does hydrochloric acid also. The infusion of plasmon tea is opalescent and has a very soft and agreeable flavour recalling that of the delicate China teas. In other respects the results of analysis were normal, as, for instance, as regards the amount of caffeine and mineral matter. The nitrogen in plasmon tea-leaf (dry), however, was found to be 1·876 per cent. in excess of that of ordinary tea. This nitrogen represents approximately the amount of plasmon added. On account of this addition of plasmon there is little risk of "overdrawing" the tea and obtaining a physiologically bad infusion, whilst there remain intact the refreshing and stimulating qualities for which tea is widely appreciated. By this method the objectionable astringency of tea is removed.

ELISABETH IRON WATER (ZAANDAM, HOLLAND).

(THE ELISABETH IRON WATER AND IMPERIAL NATURAL TABLE WATER ADMINISTRATION, 9 AND 10, SOUTHAMPTON-STREET, HIGH HOLBORN, LONDON, E.C.)

The Elisabeth spring is situated at Zaandam, Holland. The samples which we examined in bottle were well charged with carbonic acid gas. The water is perfectly clear and bright and is of a yellowish-green colour. On boiling until all the gas was driven out the water still remained bright; we therefore conclude that it is free from earthy or metallic carbonates. The taste is decidedly inky and somewhat acid. According to our analysis the water yields a residue equal to 9·064 grammes per litre. These consisted of 6·290 grammes of chloride of sodium, 1·600 grammes of chloride of magnesium, 1·122 grammes of chloride of calcium, and 0·052 gramme of ferric oxide (Fe_2O_3) We do not agree with the published analysis which is to the effect that at any rate in the bottled aerated water the iron exists as bicarbonate. We rather maintain that it is present as protochloride with traces of perchloride. The water is no doubt a useful hæmatinic in certain cases and the association of salts such as the chlorides of magnesium, sodium, and calcium is valuable. The water is slightly aperient; it has been used with favourable results in the treatment of chlorosis and anæmia and in other conditions in which iron is indicated.

"LA NU" BISCUIT.

(JOHN M. MITCHELL AND CO., 33, HOPE-STREET, GLASGOW.)

"La nu" is a very palatable biscuit which shows on analysis good nutritive value. By the process of its manufacture part of the carbohydrates has been reduced to the soluble state. Thus slightly over one fifth part of the biscuit was found to be soluble in cold water. The total proteid amounted to 18·32 per cent. The biscuit is of good flavour and is crisp and uniform in texture.

BANANINE FLOUR AND BREAD.

(W. ALFRED JONES AND CO., MAY BUILDINGS, 51, NORTH JOHN-STREET, AND J. APPLEBY AND SONS, LIVERPOOL.)

There can be no doubt of the nutritious character of banana flour and the starch in it is peculiarly easy of solution and digestion in the alkaline digestive juices of the body. Banana flour is readily dissolved, for example, by the saliva. Our analysis of bananine gave the following results: moisture, 14 60 per cent.; mineral matter, 2·20 per cent.; proteid, 19·22 per cent.; fat, 2·00 per cent.; and carbohydrate, 61·98 per cent. The flour has the peculiar flavour and odour of fresh banana fruit. We have received also a sample loaf made with bananine flour. The flour proves to make a very acceptable loaf, uniform in texture and permanently moist and of a golden colour. Contrary to that which has been stated banana flour is much richer in proteid than is wheat flour and it also contains more fatty matter. Accordingly its nutritive value is decidedly higher than is that of wheat flour.

THE LANCET.

LONDON: SATURDAY, OCTOBER 17, 1903.

King's College Hospital.

As a special court of the governors of King's College Hospital held on Monday last (an account of which will be found at p. 1110 of our present issue) the removal of that institution to a site in South London was approved and formal motions were passed to enable the council of King's College and the committee of management of the hospital to acquire a suitable and adequate site and to apply to Parliament for an Act to confer the necessary powers to effect the proposed removal. In passing these resolutions the governors are supporting the unanimous recommendation of the medical staff which had previously been submitted to prolonged and anxious consideration by the council of the College, by the committee of management of the hospital, and by a special committee of influential men appointed to investigate the advisability of removing the hospital.

The most sanguine supporters of such an important change must have expected some degree of opposition. This was but natural, since in every hospital there are hallowed associations which cannot be transplanted; beds, wards, and operating theatres bear names intended to commemorate former benefactors and former workers whose labours have contributed so largely to the relief of suffering humanity and to the advancement of medical science. The names of the various wards,—Todd, Cheere, Twining, Wigram, Craven, Bambrooke, Fergusson, and Johnson—amongst King's College men evoke memories of familiar forms and though it is doubtless intended to retain these names in the new hospital they will seem less real when remote from the scenes of their work. These sentimental considerations, together with a spirit of conservatism, have perhaps weighed much with the members of the committee of the hospital who resigned when it became evident that their opposition to the scheme of removal was clearly out of harmony with the wishes of a large majority.

On the other hand, the reasons for urging the removal appear to be of overwhelming force. Dr. BUZZARD, in a conciliatory speech, briefly enumerated the chief arguments, referring frequently to a more detailed document addressed to the governors and signed by numerous members of the council and of the committee of management of the hospital. It is evident that although the hospital was originally admirably planned to supply the needs of a crowded district and to afford adequate training for medical students, it has for many years past inevitably fallen behind modern requirements. Sufficient space was originally devoted to medical, surgical, and obstetric cases, and as planned the hospital was light, cheerful, and well ventilated in all parts. In time, however, numerous special departments were created and for their proper development these required some ward space as well as properly lighted out-patient rooms. Frequent efforts were made to imp the accommodation and by re-arrangement to prov for these new departments, but the result has been produce overcrowding and consequent inconvenience in working of almost every department. The structural al tions could not be effected satisfactorily without remodelli or rebuilding a large part of the hospital. For a long ti the authorities have felt that it was imperative to constr new out-patient rooms, new quarters for the resident office and new wards for the special departments. Upon ground belonging to the hospital it has been found possible to achieve all these objects even if funds could ha been collected for this purpose.

Meanwhile, although within the hospital there have be continual growth and activity, the local need of the insti tion has been steadily diminishing owing to alterations in surroundings The building of the Law Courts and m recently the Strand improvements have cleared and populated large areas which formerly supplied numer casualties to this hospital, to St. Bartholomew's, and Charing Cross. The distribution of the hospitals in Lon has long attracted the attention of those engaged in allotment of the various charitable funds. The opinion often been expressed that while some districts are too ric supplied with facilities for obtaining gratuitous medical a surgical treatment, there are wide areas densely popula with poor people who have to travel some miles before th can obtain relief. In hospital management it is a tru that large numbers of patients invariably come from gr distances to attend the out-patient departments; that th is a process of selection or exclusion which cannot prevented and can hardly be explained. In hospitals, in private work, certain individuals or certain departme have a reputation for skill and kindliness that serves an attraction which outbalances distance or difficulty access and in this way, although through depopulat the supply of casualties may be greatly reduced, so special departments may become inconveniently crowd Those concerned with the distribution of charitable fu look, however, to an ideal distribution of the h pitals in the immediate neighbourhood of the great congestion, of the greatest distress, and from this sta point it is obvious that the Strand and Fleet-street are well supplied while South London languishes Meanwh it is on all hands admitted that ground in central Lon is so valuable that lavish expenditure must be made by a hospital attempting to put its house in order on mod lines. The rent of a requisite area would absorb too la a proportion of the income of any hospital in which it w desired to centre the best clinical teaching in every depa ment and it must be remembered that the best teach leads to the most efficient work of a hospital.

The present position of King's College Hospital in cent London possesses numerous advantages which cannot lightly overlooked. It is of easy access from all suburbs, that students may be drawn to it through almost any of channels linking town and country. It is close to College, it is close to the Royal College of Surgeons England and to the Examination Hall It is so n to the medical district that daily visits offer no gr difficulties to members of the staff. All these advanta are, however, being put aside in the desire to move with the times, to transplant the hospital to a site where it is more urgently needed and where it will be possible to construct a hospital replete with every modern device for the general and special treatment of the sick. The initial outlay involved must necessarily be very great but it is to be hoped that the self-denial and public-spiritedness of the staff in making this great step in obedience to the needs of South London will receive that financial support which will enable the scheme to be carried into effect at a very early date.

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The Children's Committee of the Metropolitan Asylums Board.

A DEPARTMENTAL committee of the Local Government Board was appointed in 1894 to consider the whole question of the treatment of children under the care and jurisdiction of the Poor-law and its report strongly recommended the formation of a central authority with the duty of making special provision for these children within the metropolitan area. This was the origin of the children's committee of the Metropolitan Asylums Board which was constituted in 1897 and which has recently issued its fifth annual report. The committee receives from the guardians the following classes of children: those suffering from ophthalmia, ringworm, and tuberculosis, those requiring treatment in country homes, and those children who, being mentally or physically defective, are cared for in homes in London. Homes have been opened by the committee for the reception of children under magisterial remand who, it will be remembered, were formerly, and most unfortunately, sent to the workhouse. The groups of children thus indicated, some with bodily illness and others with mental or moral deficiency, have to be cared for and educated by the State, and the report of the children's committee shows the machinery employed and the result. The sick children appear to us to be excellently treated, while the cases of psychological interest at any rate command every care. But very great skill and scientific experience should be brought to bear upon the betterment of these unfortunates.

The varied phases of educational work demanded by the conditions and special needs of mentally defective children call for much labour and special knowledge on the part of the committee, and it is impossible for us not to recognise that the *personnel* of the committee includes few among its members who are prominent in the medical and scientific world for their first-hand acquaintance with modern methods of training as adapted to the necessary end. This might, we think, be set right. The Local Government Board has the power to nominate a certain number of representatives to the Metropolitan Asylums Board in addition to the members sent by the boards of guardians, and it would be well if opportunity were made to add to the children's committee some educational authorities with the necessary knowledge and training who might assist in the discharge of the difficult and important duties which are continually extending as new social problems have to be solved in the public interest. We observe that boards of guardians do not make all the use that they might of the accommodation provided by the Metropolitan Asylums Board for mentally defective children, a condition of affairs which would probably be remedied if the children's committee were reinforced by one or two members who would be universally regarded as experts. It must be remembered that efforts for the improvement of children who are feeble-minded and physically defective necessitate the services of a more highly trained staff than may be required in cases of sickness. The children are collected from the metropolitan Poor-law schools and boarded in small homes in London under the care of a matron, so that they may attend "special classes" in the neighbouring board schools. It would probably prove more advantageous to the children, for whom town life is not desirable, if the children's committee saw its way to provide suitable homes for them out of London and a more complete educational scheme to be carried out under its own direction. Were this plan followed we should have more hope of its success in dealing with these cases after the age of 16 years; the methods of training might be continuous, each stage being planned to impart ability for future work in industrial life.

The kind of expert knowledge which, in our opinion, the children's committee somewhat lacks is in the matter of psychological training for the children who are mentally defective: those physically ill appear to be well cared for. As to the latter cases Dr. T. COLCOTT FOX, for example, gives a most encouraging account of the treatment of the children under his supervision who are suffering from ringworm. The average period of treatment required to effect a cure of the children so affected was about nine months. Dr. FOX has carefully tabulated 317 cases in his report arranged in two groups, cases of microsporon and cases of trichophyton. The former cases constitute something like 90 per cent. of the cases met with at the hospitals in the metropolis, but in the board schools it is to be noted that some 40 per cent. suffer from what has been considered a much rarer disease in London—viz., trichophyton. These latter cases came mostly from Hackney, Southwark, and Poplar. The conclusion that Dr. FOX draws is that the trichophyton may go unobserved for a long time and form centres of contagion especially apt to spread in institutions where children are collected. We instance Dr. FOX's report as an example of the kind of systematised knowledge that we should like to see infused into the treatment of the children who are mentally defective. The children's committee ought to be in a position to deal with analogous reports from psychological experts, but we find in its own report only slight indications of any effort to improve the ill-developed brains of the children under its care on any definite plan. The mere fact of a child being ignorant, dull, or stupid does not prove that he is feeble-minded; physical signs seen in defective action should be carefully noted and pointed out to the teachers as special objects for their attention. There appears to be a general idea among educational authorities that weak-minded children should have only short periods of teaching during the day, but the experience of those who are conversant with their care is that active control of these children by trained teachers throughout the day is most valuable to effect a healthy growth and to implant good methods of action. Whatever plans may be adopted in the future for the care of feeble-minded children the need of skilled teachers specially trained for these duties must be obvious.

Quackery.

ON Oct. 13th at Bow-street police-court a man named LEWIS LAMB BAILLES pleaded guilty to two summonses taken out by the Medical Defence Union, one of which charged him with using the title or description "Doctor," implying that he was registered under the Medical Acts, while the other alleged that he unlawfully, wilfully, and falsely assumed the title or description "M.B." Under the first summons the defendant was ordered to pay a fine of £20 and £21 costs or to go to prison for two months. Under the second summons a fine of £5 was imposed with the alternative of 21 days' imprisonment. The facts disclosed in the statement made by Mr. BODKIN, who appeared for the prosecution, were such as amply to justify the infliction of severe penalties and should be to some extent a warning to credulous members of the public who allow themselves to be attracted by the specious advertisements of the quack.

BAILLES, it appears, was at one time on the Medical Register with the qualifications of Bachelor of Surgery and Bachelor of Medicine of the University of Durham. He was, however, in 1894 convicted of rape and sentenced to five years' penal servitude and as the result of this conviction his name was ordered by the General Medical Council to be removed from the Register and the University of Durham deprived him of his degrees. Since his liberation from penal servitude BAILLES is said to have at one time inserted advertisements in the newspapers describing himself as having the degree of M B, but no proceedings were taken against him. At some more recent date, however, fixed by his own admission at a little more than 12 months ago, he entered the service of an American quack trading as "The Dr. McLaughlin Company" and carrying on business in England at, among other places, 164, Strand, London. The advertisements of MCLAUGHLIN must have been observed by many of our readers as well as by the general public. In some of these a statement is made to the effect that persons desiring "Electro Vigour" treatment will be under the care of a properly qualified person, and in consequence of this clerks sent by the solicitors of the Medical Defence Union visited 164, Strand, consulted BAILLES, and received from his own lips representations as to his qualifications which indorsed those made on his behalf in the advertisements. With regard to him personally we have little or nothing to say. He is no longer a member of the medical profession, having been convicted of a crime which of all others rendered him wholly unfit to practise it. Other avenues of industry are open to him and in one of these it would be wiser for him to endeavour to expiate his past and to earn an honest livelihood than to do as he has been doing. The general public, however, are liable to be soothed into security by the quack's promise of advice given gratis by a "qualified practitioner" in his employ and it should be pointed out to them that members of the medical profession who value their independence and their good name or who have a good name to lose do not hire themselves out as jackals to the advertisers of quack "remedies" for disease. Although the patients who offer themselves as victims to traders of the MCLAUGHLIN class may not fall into the hands of persons who have been convicted of felony, they will necessarily find in those who profess to treat them either men without training or qualification or men whose names should have no place upon the Medical Register, and in any case persons in the pay of unscrupulous rogues, bound by the terms of their service to push the sale of fraudulent goods to the profit of their employers.

At the hearing of the recent summonses at Bow-street police-court Mr. BODKIN said of the literature circulated by the McLaughlin Company which was in his hands that "if it were sent open through the post it would be suppressed" and that "the illustrations it contained certainly ought not to appear except in a medical work under proper supervision." No reasonable man who has ever seen any of these documents will dissent from the opinion expressed by one of the most experienced counsel practising in the criminal courts, except in so far as it suggests that the absurdities of the McLaughlin literature might find themselves reproduced in medical works. We have before us two books or pamphlets both emanating from "The Dr. McLaughlin Company" and both advocating the merits of "Electro Vigour" and the sale of the apparatus by which "Electro Vigour" is to be imparted. The illustrations, in addition to views of the McLaughlin Company's places of business, consist of pictures of men and women clothed in little or nothing but so-called electric belts and of diagrams of the belts themselves. An endeavour is made to render these pictures attractive and convincing by zigzag lines apparently representing flashes of electric sparks emanating from the belts and playing over the figures of those who wear them. Illustrations of belts for men with electric flashes radiating from suspensory attachments are evidently intended to bring home to the would-be purchaser that his sexual powers will be increased by an appliance which sets an electric current moving round his genital organs. It is to the class of persons who are ever ready to fall into the hands of the quack owing to some real or imaginary sexual weakness that the McLaughlin literature is principally addressed. Such lines as the following are specially printed in red ink in one of the pamphlets: "Second Stage of Seminal Weakness," "A Strong Appliance Cures in Three Months," "Electricity is Grand for Impotent Men." In the text we find the following passage: "Excessive indulgence in sexual intercourse has so far exhausted the power of the veins whose duty it is to throw the blood into the seminal vesicles that no response is given to the mental excitement. This is the most aggravating form of weakness—when the desire is strong in the mind but the parts do not respond. The negative current of our Electro Vigour is directed to them in those cases." While we congratulate the Medical Defence Union on its successful prosecution of an individual we cannot forget that he was merely an agent incidentally guilty of a legal offence, the trade of whose principal is not checked by the conviction obtained. We observe that before he passed sentence the magistrate desired to be informed whether anyone had been injured by the use of the "Electro Vigour" appliances. He was told that they were absolutely ineffectual for good or evil and appears to have taken this as a mitigating circumstance. It does not appear to have struck him that the sale of goods by means of statements as to their uses which are not justified by fact may involve the obtaining of money by false pretences. It seems likely that from this point of view the trade of quack medicine vendors may often be assailable where no infringement of the Medical Acts takes place, although convictions in the circumstances might not easily be obtained. In conclusion we cannot too strongly point out to those of our lay contemporaries who publish the advertisements of "The Dr. McLaughlin Company" and other such wicked enterprises that money thus obtained is dirty, filthy money, the taking of which in the long run will react unfavourably on their reputation and usefulness.

Annotations.

"Ne quid nimis."

THE USE OF THE RED TICKET IN IRELAND.

ALTHOUGH we have from time to time to call attention in THE LANCET to the treatment which is accorded to district medical officers in Ireland by boards of guardians which fail to appreciate at their just value the work of these devoted public servants, it is but rarely that we are able to record that the defaulting guardians have had to make amends for their misdeeds before a tribunal of the law. As a rule it is an expensive and uncertain process to invoke the aid of the law and, moreover, it is, generally speaking, not in the interests of a medical practitioner to enter the law courts as a plaintiff. But on this occasion we are very glad to be able to chronicle the fact that Mr. E. F. Stephenson, who is medical officer of the Woodstown dispensary district near Waterford, has succeeded in obtaining judgment against the Waterford board of guardians for payment of his claim, as also costs on the higher scale. Unfortunately, the account of the proceedings which has reached us is not as complete as we could wish but generally the salient features appear to be somewhat as follows. A vessel came into Waterford harbour from Rosario in South America and on arrival in the harbour a member of the crew was found to be suffering from small-pox. The case was duly reported to the Waterford corporation but it does not seem that that body was prepared to deal with it. However this may be, the medical officer of health apparently decided to have the patient entered as an inmate of the Waterford union workhouse and he was then sent to the isolation hospital which is situated in Mr. Stephenson's district, the medical officer of health notifying to him that the case had been sent to that institution. Mr. Stephenson thereupon visited the patient but on discovering that it was a ship-borne case suffering from small-pox he wrote to the master of the Waterford union stating the facts and asking to be informed immediately if provision had been made for medical attendance on the case. To this the master replied by wire: "Got no orders. Use your own discretion." In these circumstances Mr. Stephenson, interpreting discretion by the light of the humanity common to all medical men, visited the case, naturally expecting that the guardians would pay him for his attendance, more particularly as the clerk had previously telegraphed to him asking from what disease the patient was suffering. Subsequently Mr. Stephenson, after having treated the case for several days, wrote to the guardians asking to have his position defined, but as a result of this correspondence, in which Mr. Stephenson naturally claimed payment, he was served with a red (urgency) ticket to attend the patient, the guardians expecting by this means to relieve themselves of all responsibility as to payment. Other cases of small-pox were also sent to the hospital but these were, it appears, attended by the port medical officer of health. His honour, the judge, in delivering judgment held, we are glad to be able to record, that "the guardians from the first assumed responsibility for the case and then thought to protect themselves by throwing a red ticket at the medical officer's head." It is clear that in this case a very important principle has been at stake. Had the verdict gone against Mr. Stephenson it would have implied that a port sanitary authority might send all its ship-borne cases into the adjoining union, make them paupers, and have them treated as a matter of routine by the district medical officer. This would certainly be a convenient method by which both the shipping authorities and the port sanitary authorities could relieve themselves of their moral and statutory duties. But fortunately there are limitations to the irregular use of the red ticket and we cordially congratulate Mr. Stephenson upon his success.

SUBSTITUTION RAMPANT.

AGAIN and again in our columns we have written in strong terms in regard to the increasing practice of fraudulent substitution which would seem to respect no trade; the practice is universal and every word we have written is justified by daily events. We appeal once more for a system of strenuous control over this pernicious practice. Much of that which we eat, drink, or even wear is not what it professes to be and it seems to us that the public are for all practical purposes unprotected. Need further examples be quoted than the following which we have often quoted before? A mixture of linen and cotton is sold as pure linen, a mixture of wool and cotton is sold as all wool, a mixture of silk and cotton is sold as pure silk, goods bought as pure silk are heavily loaded with mineral matter to give a spurious impression of heaviness, grain spirit is sold as grape spirit or genuine brandy, the same spirit is sold as malt spirit or whisky, Indian tea is passed off as China tea, "plantation" coffee is sold as real Mocha, and cotton-seed oil is palmed off as genuine olive oil. Again, in jam and marmalade glucose is substituted for cane sugar and glucose is also used in place of malt for making beer. The latest addition to this infamous list is the use of cardboard wickedly sandwiched between the leather of the soles of boots offered for sale and guaranteed as "solid." A "solid" boot in the trade means an all-leather boot. The very necessity of the term implies fraud, as does all-malt in the whisky trade. And there are those in the boot and shoe trade, judging from the proceedings in a recent case, who would hold that boots with "insoles" of cardboard and brown paper might correctly be described as "solid" boots. We are glad that Judge Emden, before whom the case (a civil action be it remarked) was brought, thought differently and decided in favour of the plaintiff who sought to recover damages from the defendant for fraudulent misrepresentation in regard to the sale of boots. We have had the opportunity of inspecting a specimen of the kind of boot which was supplied in answer to the description of "solid." On ripping up the outer sole the fraud is at once brought to view in the shape of strips of cardboard inserted between the outer and upper soles. So far no other means seems to be available for laying bare the deception and it is monstrous that such a wicked fraud cannot be dealt with as a false description under the Merchandise Marks Act. A hall-mark is wanted, so to speak, which hall guarantee a "solid" boot and any misuse of the mark hould be met with the severest penalty. Anything more *razen than calling a boot solid* when by reason of its cardoard stuffing it would fall to pieces in wet weather is hard o imagine. The case of calling a piece of silk "fine heavy ilk" which is heavily loaded with mineral matter of a robably injurious kind is not one whit better. A few days go we had occasion to examine a piece of silk that ormed the sleeve of a blouse which set up an acute rritation of the skin. Analysis disclosed that the material was loaded with no less than 40 per cent. f mineral matter consisting, as further examination howed, of the oxides of aluminium and tin, with istinct traces of arsenic. Thus nearly half of the weightiness of this "silk" was due to metallic oxides. Is t wonderful that such a material worn next the skin hould set up irritation? When is the scandal of ubstitution—which is but a mild word for fraud—in such ases as we have quoted going to be adequately checked y the State? At present the evil is growing apace; dis-ussion about it soon subsides and nothing is done. If it e true that English trade is going to the dogs we think hat we can find at least one reason for this decline. To be andid, there is far too much dishonesty about it.

REPORT OF THE GOVERNMENT BACTERIOLOGIST OF HONG-KONG FOR THE YEAR 1902.

JUST at present it is the fashion to seek both commercial and *scientific salvation in the methods of every country but* our own and to echo the cry, Can any good thing come out of England? It is not easy to trace the grounds for this pessimism in the face of such a report as that now under onsideration, containing as it does a record of much sound cientific work and valuable additions made to our knowledge of practical hygiene and sanitation. That similar good work comes from all parts of the empire the article by Dr. J. Ashburton Thompson, the chief medical officer of he Government of New South Wales, which appears in he current issue of THE LANCET, gives proof. Perhaps in England there is an inherent tendency to belittle ourselves and to believe what others say in their own *promise, but one cause of the prevailing gloomy view* seems to be ignorance of the good work done, an ignorance due in many cases to the conservative traditions of many Government departments which leads to the hiding, sometimes to the extinction, of their lights under a bushel. In the Colonial office, however, at any rate this tradition should be a thing of the past. In addition to the ordinary bacteriological investigations the care and management of the public mortuary and of the Government Vaccine Institute are included in the duties of the Government bacteriologist of Hong Kong. In the public mortuary no fewer than 2816 bodies were examined in the year and Dr. W. Hunter, the bacteriologist, remarks that no institution, given suitable accommodation, apparatus, and assistance, would afford greater scope for pathological and bacteriological research. Though apparently without suitable accommodation and hampered by the loss by shipwreck of the whole of his original outfit of bacteriological apparatus Dr. Hunter has shown that this is true. Plague investigations formed, of course, a most important part of the work and between 2000 and 3000 rats were examined weekly. A most valuable series of experiments was undertaken in conjunction with Dr. W. J. R. Simpson and forms part of his report to the Colonial Office on the Causes and Continuance of Plague in Hong-Kong. By these experiments it was definitely shown that human plague was communicable to a large number of domestic animals and birds, such as calves, pigs, hens, and *ducks, and that, further, the* disease from which these animals suffered was infectious. The facility with which infection was secured by feeding is also a most important point and one not in accord with some previous work. The chronic character which the disease assumed in some of the animals would serve to explain certain peculiarities noticed in the epidemic spread of plague. Direct infection of man by food can, however, hardly be regarded as frequent and the work of Dr. Thompson goes far to show that the hypothesis of Simond that the parasites of the rat play an important part in the spread of plague is highly probable if not completely proved. As had been noticed at Capetown cats were shown to be susceptible. An epidemic of cholera gave opportunity for the important observation that in the many cases of pregnant women dying from the disease no cholera-producing organism was found in the fœtus. Investigations of certain epidemic cattle diseases and the preparation of Haffkine's vaccine and curative plague serum were also undertaken but the latter had to be given up owing to lack of suitable accommodation. The value of such a year's work is self-evident and it is to be hoped that the authorities will provide such further facilities as are required to make future work still more important.

IS IT NECESSARY TO FEEL WHETHER THE CORD IS ROUND THE CHILD'S NECK AFTER THE BIRTH OF THE HEAD?

IN almost every text-book of midwifery, whether written for the use of students or midwives, the attendant is recommended in a case of normal labour after the birth of the head to feel whether or not the cord is placed round the child's neck. If it be found in this abnormal position then he is told to slip it over the child's head or over the shoulders, or if these two manœuvres be found impracticable to divide it between two ligatures. In the *Centralblatt fur Gynäkologie* of Sept 19th is a very interesting article by Professor Schultze in which he throws grave doubts upon the correctness of this teaching. As he points out, the dangers of such a position of the cord are threefold. There is, first, the danger of the pressure of the cord upon the vessels of the neck, producing stoppage of the circulation through the child's brain; secondly, the danger of the *pressure to which the cord is in its turn subjected by the* neck arresting the circulation through the former; and lastly, the danger of the cord being compressed between the neck of the child and the anterior wall of the pelvis towards the end of the second stage of labour. Naegele was the first writer to call special attention to the last of these dangers. Veit has recorded 2250 cases of vertex presentation, in 442 of which the cord was round the child's neck. Amongst these latter the fœtal mortality was 1 in 61, and the number of children born asphyxiated was 1 in 7. In the cases in which the cord was not round the neck the corresponding numbers were 1 in 92 and 1 in 25. If, however, we consider the figures for primiparæ and multiparæ separately we find that amongst the former when the cord was round the neck the number of children born asphyxiated was three and a half times as great as when it was not and the mortality was almost twice as great, whilst amongst the latter there were no deaths, although the number of cases of asphyxia that occurred was four times as great as in cases of normal labour. Since the conditions as regards the pressure of the cord on the vessels of the neck and the pressure of the neck in its turn on the vessels of the cord would be the same in the two series of cases these figures tend to show that the main danger of this abnormality is almost entirely due to the compression of the cord between the neck of the child and the anterior pelvic wall. It is obvious that the chances of such compression *occurring to a dangerous degree are considerably greater in* the case of the prolonged second stage in primiparæ than in the relatively short second stage that occurs in the majority of multiparæ. Professor Schultze points out that as soon as the child's head is born any such danger disappears, since it is no longer possible for the cord to be compressed in this manner. In any cases, however, where after the birth of the head there are present signs of impending asphyxia of the child or of danger to his life we must proceed at once to hasten the delivery of the shoulders quite irrespectively of the position of the cord. In these circumstances, therefore, the fact that the cord is round the neck is not the ground upon which we interfere. The coiling of the cord round the neck of the child at the time the head is born does not then of necessity furnish any indication for interference and the routine practice of introducing the fingers into the orifice of the vagina at this stage of labour is not without danger. Abrasions and tears of the mucous membrane are present in many instances and the danger of septic infection is the greater in that the hand most commonly employed for this purpose will be the right one which has been guarding the perineum and is very likely, therefore, to be soiled with fæcal matter. For these reasons we may well question with Professor Schultze whether the current teaching as to the dangers of this complication and the necessity for its immediate correction does not stand in need of revision.

CULPABLE OVERLYING.

In a paper contributed to the *British Journal of Inebriety* Dr. W. Wynn Westcott discusses the subject of intemperance among women in its relation to the overlying of infants. The statistics quoted by him in this connexion are sufficiently instructive to make the most casual reader feel not a little uneasy. He informs us that during the last ten years no fewer than 15,009 infants have thus been killed by suffocation in England and Wales and that the yearly average of such deaths in London is 600 and in Liverpool 150. He further states his impression that a considerable number of cases which ought to be classed in the same category escape detection under the euphemism of "convulsions." We are also assured that deaths from overlying are exceptional on the continent and that in many German towns they are unknown. This immunity is not attributable solely to the comparative rarity of drunkenness among French and German women; it is also explained by the far more prevalent use of children's cradles in those countries than in this. In view of such facts as these it seems almost incredible that effective measures have not already been employed to bring home to the poorest class of our towns, among whom the overlying evil is usually met with, the absolute necessity of providing proper sleeping places for their infant children. There is no question of expense. An open box or basket can be utilised as a child's bed. The poor in country districts in this country use cradles. Dr. Wynn Westcott states that in the event of a verdict of manslaughter being obtained in a coroner's court when a child has been overlain it will not be confirmed in the criminal court without formal evidence of culpable neglect which, as a rule, is obviously impossible in existing circumstances. We are thus at a deadlock and it appears as if we are invited in legal terms to fold our hands in the presence of a cruel and avoidable social offence from which our continental neighbours by the exercise of a little ordinary care, assisted also by a certain humane rigour of authority, have kept themselves practically free. Intemperance is doubtless a contributory cause of overlying. We have never known it to be classed as an extenuating condition. The omission to provide suitable separate bedding for an infant is certainly neglect of a dangerous kind and being avoidable, even easily avoidable, it is certainly culpable. In what way it may best be punished we will not pretend to decide, but until it is penalised there seems but little prospect that overlying will cease to claim a still increasing number of victims.

THE RÔLE OF SOAP.

Whilst the suggestion made by a correspondent writing from Cape Colony in the *Times* of Oct. 13th that the liberal use of soap is possibly connected with the falling off in physical strength of certain classes of the community of England may on the face of it appear chimerical, yet it is difficult not to admit that the continued application of soap to the skin must rob it constantly of its natural oil. On this account soap is not calculated to make the skin supple or "velvety," a quality which is impossible without oil. Since soap removes oil it would seem perfectly correct to suggest that if soap must be used the skin should be immediately afterwards anointed with oil. Those who possess delicate complexions and who find even the best soap detrimental to the skin gain relief by the application of a soothing fat such as cold cream. The correspondent referred to writes: "The Almighty has given us a natural oil on the body to protect our skins and man gives us stuff to remove it and so expose the body to rheumatism, chills, and diseases of all kinds. Soap opens the pores of the skin, disease and dirt get in, and the body gets inoculated with any vile matter flying about." This view would be all very well if it were not for the tenacity of dirt, and this tenacity depends either upon the grease of the dirt itself or upon the natural oil of the skin. Such dirt would be hard to remove without the use of soap—plain water would never detach some kinds of dirt—and in civilised communities or in crowded cities soap thus becomes absolutely a modern necessity. In localities where grime is a rare constituent of the environment, as at sea or in the open country, the need for continual lavage with soap is not so great. There are not a few people who manage to maintain personal cleanliness without the use of soap, for there are many detergent agents besides soap, of which oil may be mentioned as the chief. But on the whole intemperance in the use of soap is not a universal habit even in civilised countries, and abstinence may answer very well on the veldt or in places far from the factory and chimney. We are convinced that soap is a really sanitary adjunct which has raised rather than lowered the standard of public health. That in isolated cases it may be used to excess we admit, but the standard of purity of soap in this country is very high and such as is calculated to prevent any injurious effects which might otherwise arise.

THE RANGOON LYING-IN HOSPITAL.

We have received a letter from Dr. T. F. Pedley of Rangoon in which he asks our opinion upon a matter of considerable interest to all those who have the charge of small hospitals in this country or in the colonies. It appears that in the year 1887 a lying-in hospital with a training school for midwives was opened in Rangoon. This hospital contained 15 beds for obstetric cases and three beds for gynæcological cases. The honorary medical staff consisted of the three senior non-official medical men practising in Rangoon and the junior civil surgeon, the senior civil surgeon acting as consulting physician. For some 15 years this institution seems to have done good work and during this time the Burma branch of the Countess of Dufferin's Fund managed to raise enough money to build a new hospital. Since the completion of the new building, and apparently by the orders of the then Lieutenant-Governor, it has been turned into a general hospital into which all classes of cases are admitted and has been placed under the charge of the chief civil medical officer of the province and the two civil surgeons, the latter gentlemen being already in exclusive charge of the Rangoon

General Hospital of some 460 beds. The cost of the new building, amounting to Rs. 109,000, was almost entirely defrayed by public subscriptions, the Government contributing only Rs 10,000. It is difficult for us to judge of the rights or wrongs of what at first sight seems to be a very high-handed procedure on the part of the local officials. It is, however, quite permissible for us to express the opinion that *the work of the hospital can hardly be very efficiently* performed by three medical men, two of whom are already in charge of a hospital of 460 beds. The question put to us by Dr. Pedley is the very important one as to whether a hospital into which lying-in cases are admitted should be used for the treatment of general cases, both medical and surgical. We say most emphatically that it should not be so used. The whole experience of those in charge of modern lying-in hospitals tends to show that they should be employed for that purpose and for no other. In this way alone can the practice of antiseptic and aseptic midwifery properly be carried out and the inmates adequately guarded against the dangers of septic infection. The transformation of this hospital intended for the reception of some 30 lying-in patients into a general hospital seems to have been initiated against the advice of the majority of the members of the medical staff, who were expelled from their honorary appointments by the orders of the Lieutenant-Governor. We presume that this gentleman did not act without some medical advice upon so purely professional a matter. His advisers, whoever they were, have incurred a very grave responsibility in running counter to the opinion of every obstetrician of note in this country or on the continent. We gather from Dr. Pedley's letter that in all probability the hospital will by the orders of the new Governor be handed over again to the local committee. We hope that this may be so and we trust that when this change is made it will be restored to the purpose for which it was built. In this way alone can the best interests of the institution and of its inmates be served and the danger as far as possible avoided of the occurrence of cases of septic infection—an occurrence which in the existing circumstances would be little less than a public scandal.

THE VALUE OF TETANUS ANTITOXIN.

THE exact value of tetanus antitoxin is even now still *sub judice*. That it is able to neutralise the toxin if injected before or soon after the injection of the toxin has been conclusively shown in animals. In man, however, where the experimental method of investigation is inapplicable, the only cases in which we can observe the action of the antitoxin are those in which the disease has already developed. From the knowledge we possess of the pathology of tetanus we can be quite sure that by the time symptoms of spasm become first manifest the disease has progressed so far that the antitoxin is not capable of exhibiting all its curative power. There is still much that is obscure in the pathology of tetanus but we know that the phenomena of the disease are produced not by the direct action of the specific bacillus but by the toxin to which this bacillus gives rise. The bacillus is confined to the wound and the toxin alone is absorbed. After absorption into the blood stream it is carried to the central nervous system and there the greater part of the toxin enters the nerve cells and forms a very stable compound with the cell substance. When the antitoxin is introduced it can neutralise any "floating" toxin which is still in the circulation but it is unable to break down the very firm union between the toxin and the cells of the central nervous system. Therefore it is clear that as soon as any spasms appear the time has gone by for the most valuable action of the antitoxin, for the action of the toxin on the nerve cells has already commenced. It is true that the antitoxin can still render innocuous that portion of the toxin which is unfixed and any further amount of toxin which may subsequently be absorbed, but the effect already produced on the nervous system may have been sufficient to lead to a fatal issue. Without the employment of the antitoxin recovery ensues in a certain proportion of cases of tetanus, especially when the incubation period is long, that is, over 12 or 14 days. When a large quantity *of the toxin has been absorbed the symptoms develop* rapidly and even if the antitoxin be administered early it cannot exert its beneficial action, for a large amount of toxin has already attacked the cells of the central nervous system. Thus it comes to pass that the mortality of the cases in which the antitoxin is administered early is very high. Ullrich collected 41 cases in which the antitoxin was injected within 30 hours of the commencement of symptoms and the death-rate was over 72 per cent., while in 72 cases in which the antitoxin was injected between the second and fifth days the mortality was less than 46 per cent. In spite of these statistics there is good evidence that antitoxin is of distinct value in tetanus, especially if it be administered early, and in the present issue of THE LANCET we publish an account of a case under the care of Dr. J. W. Cook at the Bury Dispensary Hospital. In this case the antitoxin was injected and improvement appeared to follow and when the injections were omitted on one day a slight relapse occurred. We consider that the successful result was rendered more certain by the use of the antitoxin, though the patient might have recovered without it as it was not an acute case. The employment of the antitoxin, however, should not lead us to neglect the local treatment. The bacillus lives only in the wound where it forms toxins which are absorbed. To permit, therefore, the tetanus bacillus to continue its formation of toxin in the wound is to invite failure. The wound should be opened up and cleansed with the greatest care, all foreign bodies and necrosed tissue being removed and the wound being rendered aseptic. By thus cutting off the supply of toxin the surgeon is better able to deal with the quantity which has been already absorbed.

THE CLASSIFICATION OF PAUPERS.

THE holding of conferences is apt to be rather unproductive as regards practical results, mainly because any suggestion of value is lost in the sea of words which inundates it. Only too frequently have the meetings of guardians and Poor-law officials served to illustrate this statement but we trust an exception to the rule may be provided in the case of the delegates from the Lancashire and Cheshire unions who met lately at Blackpool under the presidency of Sir John T. Hibbert, K.C.B. Quite an unusual amount of common-sense seems to have been brought to bear upon the important matters of workhouse management and parental responsibility but a paper on the Combination and Classification of Workhouses by Mr. H. P. Cleaver, clerk to the West Derby Union, invited and received special attention. In advancing a plea for the improved classification of paupers Mr. Cleaver expressed the opinion that the difficulties met with in the treatment of pauperism could be dealt with to better purpose by some system of voluntary amalgamation and he suggested the formation of joint committees of boards of guardians to look, respectively, after vagrants, imbeciles, lunatics, and the other classes into which the indigent fall. It was decided to submit these views to a special conference convened for the purpose. If properly carried out the idea of separating the various groups of paupers by housing them in distinct buildings is an excellent one. Any virtue that lay in the proposal to transfer the administration of the Poor-law from boards of guardians to the county councils was dependent on the opportunities which would thus have been afforded of elaborating a scheme of classification. In

London the problem would be a fairly simple one, since by a combination of the various unions the existing buildings could be allotted to the different subdivisions which it might be found convenient to recognise. Improved classification is at any rate urgently demanded to overcome the numerous abuses to which the present system gives rise and if the members of the north-western conference can help to devise a workable arrangement they will earn the gratitude of the many who have the interests of the poor at heart.

SUDDEN RISE OF BLOOD PRESSURE AS AN EARLY SIGN OF PERFORATIVE PERITONITIS IN TYPHOID FEVER.

THE trend of surgery, as was recently shown in Mr. Donald Armour's paper,[1] is to treat intestinal perforation in typhoid fever by immediate operation. The dictum of Keen to wait until shock has passed off is being abandoned. Hence the great importance of early diagnosis of perforation. In the Boston *Medical and Surgical Journal* of Sept. 24th Dr. J. B. Briggs, resident house officer of the Johns Hopkins Hospital, at which so much work has been done to advance the surgery of typhoid perforation, has recorded some new observations showing that the blood pressure rises with the onset of perforative peritonitis before pain or other symptoms develop. Whether his conclusion that this rise is a trustworthy guide to early operation be borne out by wider experience or not his observations are a valuable contribution to pathology. In the past two years Dr. Briggs has frequently observed with the Riva-Rocci sphygmomanometer a sharp rise in the systolic blood pressure on mechanical stimulation of the peritoneum during laparotomy. Dr. Harvey Cushing suggested that a similar rise possibly occurred at the onset of perforation in typhoid fever from peritoneal irritation and might prove of value in early diagnosis. Dr. Briggs found that in acute peritonitis except when the patient is moribund the pulse tension is high. During the past year the pulse tension of the patients suffering from typhoid fever in the Johns Hopkins Hospital was closely observed. In two cases in which there were symptoms that led to laparotomy the observations of blood pressure are of great interest In the first case a young man was admitted about the end of the second week of a severe attack. During the next ten days the abdomen was soft and natural and from 20 to 200 measurements of systolic blood pressure were made daily. The pressure ranged from 98 to 115 millimetres of mercury and tended to fall as the disease progressed. At 8 P.M. one night the pressure was 106 millimetres. At midnight it was 144, when there were no abdominal symptoms. At 4 A.M the patient suddenly cried out with severe abdominal pain; his knees were drawn up, abdominal respiration was restricted, and there was great tenderness over the lower part of the right rectus muscle which was rigid. The symptoms rapidly developed, laparotomy was performed five hours later, and two perforations were found in the ileum. There was rapidly spreading peritonitis and pus was found in the pelvis. Before operation there had been no sudden fall of temperature and the leucocytes showed no change in frequent counts. The blood pressure remained high, falling slightly in the hours preceding operation. In the second case a young woman had a severe attack of typhoid fever. At the end of the first week of a relapse and on the fifty-seventh day of the attack grave abdominal symptoms occurred. In the preceding six weeks the blood pressure ranged between 104 and 125 millimetres of mercury. For some days abdominal pain had occasionally been complained of and there had been some tenderness on deep palpation which was never well localised. The abdominal distension rapidly increased, the pain became greater and more constant, and the tenderness increased while remaining general. The distension progressed and could not be relieved by the administration of turpentine by the mouth or by enemata. The pulse rose from 150 to 172 and the leucocytes from below 7000 to 17,000 per cubic millimetre. As perforation was thought probable laparotomy was performed. During the relapse the blood pressure ranged slightly below 120 millimetres and during the period of abdominal symptoms it was about the same, rising occasionally to 125 In the absence of any abrupt rise of blood pressure Dr. Briggs expressed the opinion before operation that perforation had not occurred. None was found and a filmy covering over two ulcers was the only sign of peritonitis. In the first case it is remarkable that the rise of blood pressure occurred so long before other symptoms of perforation. At the operation the peritonitis appeared to be of eight or ten hours' duration, which would correspond with the sudden rise of blood pressure. Dr. Briggs thinks that perforation must have preceded the rise of pressure. Perhaps extravasation took place first among the intestinal coils and pain was not felt until the inflammation reached the parietal peritoneum. Magendie long ago stated that pain could not be provoked in a part supplied by the sympathetic nerve—a view recently confirmed by Professor Lennander of Upsala.[2]

THE LUNACY PROBLEM IN LONDON.

THE fourteenth annual report of the Asylums Committee of the London County Council refers to the character and growth in numbers of the insane in the county of London during the year ending March 31st, 1903. The report begins by stating that once more it is necessary to chronicle a large increase in the number of certified lunatics. Thus on Jan. 1st, 1903, the total number of patients chargeable to the county of London was 16,689, being an increase of 639 over the corresponding number for the previous year. In a table dealing with the entire pauper lunacy population of London since 1890 it is shown that whereas on Jan. 1st, 1890, the lunacy population amounted to 16,358 patients, in 1895 it reached 18,541, in 1900 it amounted to 21,393, and in 1903 to 22,952. Taking, however, the pauper lunatics whom the London County Council alone, apart from other public bodies, is called upon to find accommodation for the figures are 10,100 for 1890, 12,108 for 1895, 15 061 for 1900, and 16,689 for 1903. It is thus evident that during the period 1890 to 1903 the total pauper lunacy population of London under the jurisdiction of the County Council and of other bodies has shown a steady increase. This is graphically illustrated in a chart (Table 2) attached to the report, showing the comparative rates of growth year by year of lunacy and of pauperism in relation to the general population. A simple calculation founded on the figures embodied in the chart shows that whereas during the 14 years (1889 to 1902 inclusive) the general population of London has increased by 11·4 per cent., its total lunacy population has increased by 38·9 per cent. It would appear from this that lunacy in London increases at a much more rapid rate than does the general population. There is, however, some doubt whether the increase is quite as rapid as the table indicates, for whereas 20 years ago a considerable number of unregistered lunatics lived with their relatives and friends nowadays they are taken with less reluctance to receive asylum care and treatment. Such a factor cannot operate, however, for an indefinite period of time and, moreover, its effect tends to be reduced to uniformity after a few years. The public asylums of London have been under the jurisdiction of the County Council only during a period of 14 years and the increase shown within that period seems to be mainly in continuity with the increase of the decade preceding it, so that the mere factors of "accumulation" of chronic cases and greater inclination to enter an asylum lose their force in an attempt to account for the steady and accelerating rate of increase of lunacy. Attention to these points, which are necessary to enable correct conclusions to be reached in regard to this question, has been drawn in leading articles and annotations in THE LANCET[1] in previous years. The London County Council has been vigorously coping with this increase of lunacy by building several asylums since it took charge of the lunatics of the county. Thus within the last decade it has opened asylums at Claybury, Bexley Heath, and Horton, and has provided an epileptic colony at Ewell. Since the last report a plan for a new asylum has been, and now is, under the consideration of the subcommittee for the housing and treatment of lunatics. The report refers to the recent disastrous fire at Colney Hatch Asylum and to the precautions taken at all institutions subsequently to that event in order to deal with unexpected outbreaks of fire. The special returns from the several asylums show that the average numbers of patients resident in each were as follows: in Hanwell Asylum it was 2544, in Colney Hatch 2490, in Banstead 2453, in Cane Hill 2139, in Claybury 2398, in Bexley Heath 2079, in the Horton Asylum 958, and in the Manor Asylum (Epsom) 685. The average number for all the asylums was, therefore, 15,746 patients. The total number of patients admitted to the asylums during the year was 4978. Of these 4579 were first admissions. The number discharged as recovered amounted to 1159 or 7·36 per cent. of the average number resident. The deaths during the year amounted to 1519, or 9·6 per cent. as calculated on the same basis. During the financial year ending March 31st, 1903, the weekly cost of maintenance has averaged 11*s.* 5*d.* per patient and the uniform weekly rate charged to the parishes and unions within the county was 11*s.* 8*d.* The result of the year's working has been an aggregate profit from this source of £12,925.

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[1] THE LANCET, Oct. 3rd, p. 933.

[2] See Mr. C. W. Mansell Moullin's paper in THE LANCET of August 22nd, 1903, p. 514.

GASTRIC EROSIONS.

IT is now fully established that there exists a condition of the stomach in which profuse gastrorrhagia may occur and yet no real ulcer may be present. On the gastric mucous membrane are found minute erosions from which during life blood may be seen to pour in an almost continuous stream. Dieulafoy, who first described gastric erosions, distinguished two varieties; the one he called simple erosions and described them as mere surface abrasions of the mucous membrane, and the other he named "exulceratio simplex," in which the lesion is sufficiently deep to lay bare the vessel under the muscularis mucosæ. These distinctions are probably of no great importance but both of these varieties can give rise to the most profuse hæmorrhage, and yet after death the simple erosion may be easily overlooked but during life the blood is seen to come from numerous points in the mucous membrane. The onset is generally very sudden; in fact, the suddenness of onset may be of some little value in diagnosing the erosion from a gastric ulcer, for in the case of the gastric ulcer it is quite exceptional for the onset to be sudden. Another point to be considered is the profuseness of the hæmatemesis. A sudden and profuse hæmorrhage from the stomach is much more likely to result from an erosion than from a gastric ulcer. The most suitable treatment for this condition is still undetermined but surgery offers the best chance, for gastric rest and the administration hæmostatics, even of adrenalin, seem to be of little avai When the stomach has been opened the bleeding area c be surrounded by a purse-string suture and thus the bleedir may be controlled. A case of gastric erosion successful treated in this manner was in St. Bartholomew's Hospital the end of last year under the care of Sir Dyce Duckwort and Mr. H. T. Butlin, who communicated a paper on the ca at the meeting of the Clinical Society of London on Oct. 8t a report of which will be found on p. 1057 of our prese issue. The severity of the hæmorrhage seems to preclu any delay and the procedure adopted by Mr. Butlin appea to give the best chance of a favourable issue.

THE BIRMINGHAM CREMATORIUM.

THE opinions of men whose minds are diversely swaye by science and by religion may well be expected to disagr on such a subject as the disposal of the dead. Happil however, not only are scientific men often religiou but also religious men are often scientific. The possib harmony between representatives of the two types intelligence was well illustrated at the recent openin ceremony of the Birmingham crematorium. Sir Henr Thompson and Sir Oliver Lodge were more explicit o but no more enthusiastic upon, the advantages of crem tion than were the Bishops of Worcester and of Coventr That there is still in this country a great deal of objectio to cremation, based upon ideas of mistaken sentiment an mistaken religious feeling, is undoubted. We hope th the words of the Bishop of Worcester on the occasion which we refer will come to the eyes of all who hold thos erroneous ideas. The Bishop said in a letter read at th opening ceremony of the crematorium, "What I shoul desire when I myself die is that my body should reduced rapidly to ashes, so that it may do no har to the living, and then in accordance with Christia feeling be laid in the earth." Similarly the Bishop Coventry wrote that "in spite of strong sentimental obje tions very naturally entertained, we shall come to see th under the conditions of modern life cremation is not onl preferable from the sanitary point of view, but that it is als the most reverent and decent treatment of the bodies of th dead." Sir Henry Thompson's address dealt with the histor of the cremation movement from its origin in 1874. H referred to the passing of the general Act last session and the certain increase of cremation in the future. The pr ceedings at the opening of the Birmingham Crematoriu should go far to impress the minds of any who study the with a sense of the desirability of cremation whether viewe from a religious or from a scientific and sanitary standpoint.

THE METROPOLITAN WATER-SUPPLY.

THE report on the condition of the metropolitan wate supply for the month of August has been published. Th Thames river water at Hampton, Molesey, and Sunbury wa in good condition from the first to the twenty-fourth and fro the twenty-eighth to the thirty-first days of the month; o the twenty-fifth and twenty-sixth days it was, according the statement of the engineer of the Chelsea Waterwor Company, of "bad," and on the twenty-seventh day indifferent, quality. In the absence of Dr. T. E. Thorp F.R.S., the chemist appointed by the Local Governme Board, the analytical work was apparently undertaken "H. J. Helm," for so the report is signed. One full analys was made of one specimen of the water supplied each company on August 18th. It was found that th relative amount of organic impurity in the waters examine might be numerically expressed as follows: Kent New River 19, West Middlesex and Grand Junction 3

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[1] The Lunacy Problem and Official Statistics, THE LANCET, August 31st, 1901, p. 603; The Lunacy Problem as it affects London, THE LANCET, Sept. 27th, 1902, p. 880.

Chelsea 37, Southwark 40, East London 42, and Lambeth 49. It does not appear that any specimen of the water supplied by any company was "fully examined" either during or after that period of the month during which the river water of the Thames was in an indifferent or bad state. This fact may be worthy of the attention of the London Water Board and of the representatives of the metropolitan borough councils.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

THE course of lectures for the winter session will be opened by Dr. S. H. Habershon by two lectures on Bronchiectasis on Oct. 21st and 28th at 4 P.M. These lectures will be illustrated by cases and are free to all qualified medical practitioners and to students of medicine. The lectures have hitherto been very badly attended. In fact, this is probably owing to the large number of other post-graduate courses in existence, and yet the Brompton Hospital for Consumption and Diseases of the Chest possesses ample valuable clinical material. The authorities have now decided to throw the lectures open to students as well as to qualified men and we most earnestly hope that advantage will be taken by both classes to attend these lectures which deal with forms of disease which are only too common, which are protean in their manifestations, and which are so very frequently met with in private practice.

THE autumn meeting of the South-Eastern Division of the Medico-Psychological Association will be held, by the courtesy of Dr. William Rawes, at St. Luke's Hospital, Old-street, E.C., of which he is medical superintendent, on Thursday, Oct. 29th. The programme is as follows: 1.30 P.M., members invited to luncheon; 2.15 to 3 P.M., inspection of the hospital; 2.15 P.M., meeting of divisional committee; 3 P.M., general meeting, when the time and place of the spring meeting of the division will be fixed and Dr. Rawes will give a short history of St. Luke's Hospital and Dr. F. W. Edridge-Green will open a discussion on "The Relation of Hysteria to Insanity." At 7 P.M. the members will dine together at the Café Monico, Piccadilly-circus, London, W. Communications should be addressed to the honorary secretary, Dr. Arthur Norman Boycott, Herts County Asylum, Hill-end, St. Albans.

THE medical officer of health of the Cape Colony reports that for the week ending Sept. 19th no case of plague in men or animals was notified, except at East London, where plague-infected rats were found. As regards the Mauritius, a telegram from the Governor received at the Colonial Office on Oct. 9th states that for the week ending Oct. 8th there were 91 cases of plague and 54 deaths from the disease.

THE Odontological Society of Great Britain announces that it is prepared to receive applications for grants in aid of the furtherance of scientific research in connexion with dentistry. For particulars and forms of application inquiry should be made of the honorary secretary, Scientific Research Committee, Odontological Society, 20, Hanover-square, London, W.

WE regret to announce the death of Sir George F. Duffey, formerly President of the Royal College of Physicians of Ireland, which occurred at his residence in Ireland on Oct. 13th. Sir George Duffey was in his sixty-first year.

MR. George Lawson, F.R.C.S. Eng., who was surgeon oculist in ordinary to Her Majesty the late Queen Victoria, died on Monday afternoon last at 12, Harley-street, Cavendish-square, W.

KING'S COLLEGE HOSPITAL.

THE governors of King's College Hospital have resolved to remove the institution from its present position in Portugal-street, Lincoln's Inn, London, W.C., to a site in South London not yet decided upon at a cost of upwards of £300,000, which it is hoped that the public will furnish. Founded 60 years ago as a local charity and a medical school for King's College the hospital is housed in a building which the medical staff of the institution has unanimously condemned as not only inadequate in accommodation but also obsolete in design, insanitary in arrangement, and wholly behind the hygienic requirements of the day; the method of construction and the extremely narrow limits of the site upon which the building stands being such that even the expenditure of £100,000 in patching it up would not bring it near the standards of modern science and hygiene. Moreover, while the hospital has undoubtedly long met a definite local need, the conclusion has lately been forcing itself upon its managers and others specially interested that it can no longer be said to do so because of the clearances in connexion with the Strand improvements and the migration of population from its neighbourhood to districts north of Holborn and south of the Thames. Only "a few poor streets" form its present "immediate vicinity" and for cases from among the dwellers there ample accommodation exists in St. Bartholomew's, Charing Cross, and the Royal Free Hospitals; but the vast area and population between Wandsworth and Greenwich particularly need the advantages which can be furnished only by a large general hospital. When removal was seriously put forward on the initiation of both the council of King's College and the committee of the hospital some members of the committee, regardful of the associations and sentiments which have arisen around the institution and the magnitude of the scheme involved, offered the proposal a mild opposition and followed that by resigning membership, and the majority left were not quite sure how the general body of governors would view the matter.

A special court of the corporation of the president, vice-presidents, and governors was held on Oct. 12th in the large theatre at King's College in order to put the question to a proper test. Mr. W. F. D. Smith, M.P., one of the vice-presidents, who had acted as chairman of the committee in connexion with the removal question, was called upon to preside there was a fairly representative attendance. The secretary (Mr. H. S. TUNNARD) read letters from H.R.H. the Duke of Cambridge, the Archbishops of Canterbury and York, Lord Lister, Sir Albert Rollitt, M.P., and others, expressing inability to be present and their approval of the proposal.

Mr. SMITH explained that as the hospital had been founded under an Act of Parliament it was impossible to deal with the building or the land upon which it stood without an amending Act, the promotion of which it was necessary should be sanctioned by the governors. The legal aspect of the case had been examined by the solicitors to King's College who had framed a motion empowering application to Parliament for a Bill. He hoped that the policy embodied in the motions to be proposed would be adopted by such a majority of those then assembled as to render further meetings on the subject unnecessary.

Dr. T. BUZZARD, in the absence of Lord Lister, moved:—

> That this court approves of the proposal to remove King's College Hospital to a site in South London.

In supporting this proposal he said that the hospital was one which by lapse of time had become inefficient for its purposes as a hospital, because the science of hospital construction and arrangement had progressed very much indeed since it was built. Moreover, from other circumstances it had ceased to be of the value to the poor which it originally possessed. He was a resident medical officer in the original King's College Hospital 50 years ago and he could tell of the extraordinary change which had taken place in the neighbourhood in that half century. So great was the alteration that he had not the least doubt of the necessity for removal and he hoped the governors would agree to his motion, for he could assure them that the scheme had met with the most studied and careful consideration of those who were responsible for it. He thought they would be doing a great public duty in removing from central London, where so many large hospitals were crowded together at no great distance from each other, and in finding a place comparatively in the suburbs to which [illegible] every hour. They must not [illegible] was an important part of the [illegible] p pace with the advance in medicine and surgery it was imperative to obtain more room and greater extension of equipment than the present building could furnish. The existing deficiency was acting prejudicially against the medical school, for students would not come where the requirements of modern science were not to be had.

Mr. C. AWDRY, in the absence of the Bishop of Exeter, seconded the motion. As treasurer he had carefully considered what was their duty at this juncture in view of the large amount of money the scheme involved and he had reluctantly come to the conclusion that it was necessary to remove the hospital to a site where it would more fully meet the generous and charitable designs of its founders.

Mr. S. J. WILDE, one of the oldest subscribers, said he must vote against the proposal. He had known the district for a great many years and while it was quite true that the character of the neighbourhood around the hospital had changed there were many people living there still. Charing Cross Hospital was not in a poor neighbourhood, yet it was being extended at a very large cost, which showed the necessity of its continuing where it was. He was afraid that removal would be a step towards severing the hospital from the College. If, however, removal was necessary this was a very inopportune time for it because so many other central hospitals were begging at present and the sum wanted for the new King's College Hospital was a very large one.

Lieutenant-Colonel CLIFFORD PROBYN moved as an amendment—

> That the further consideration of the motion to remove the hospital be postponed for a period of two years.

He believed that by that time many of the poor who had been disturbed by the Strand improvements would be re-established in the district and they would then know better what to do

Mr. WILDE seconded the amendment.

Mr. H. S. COLLINS, who had given £1000 to the hospital entirely because of local sentiment, pointed out that if removal took place such contributions would cease. He regarded the expenditure on Charing Cross Hospital as a great waste of money and thought that on charitable grounds there should have been some communication between that hospital and King's College to see whether the two could not be brought together.

The Rev. Dr. HEADLAM, Principal of King's College, stated that it was quite true nine or ten members of the committee of management had resigned, but he understood that their opposition arose not from objection to the removal but on account of the difficulties that would have to be faced in connexion with the scheme. They all felt there would be difficulties, but if they were convinced that removal was right and would be beneficial they ought to face these difficulties, put their needs before the public, and do their best to carry out the proposal. The enlargement of Charing Cross Hospital was a reason for the removal of King's College, because there was room for one but not for two, and their medical students had to go further and further afield for the training that was necessary to them. He hoped that in moving to South London they might be able to meet a great need and be able to build a hospital which was up to the standard of modern requirements.

Mr. M. M. McHARDY urged that the site to be looked for should be adequate and suitable for a building to provide 600 beds.

On a show of hands the amendment, which secured only six supporters, was rejected. The motion was then carried, only five hands being held up against it.

Mr. SMITH, in answer to questions stated that there would be plenty of money available to secure at least a suitable site which in his view should be "on the centre of the fringe of South London."

On the motion respectively of Dr. D. FERRIER, seconded by Mr. W. WATSON CHEYNE, and of Colonel FELLOWS, seconded by Mr. WILDE, the joint committee appointed by the council of King's College and the committee of management of the hospital was authorised to acquire a suitable and adequate site, and to apply to Parliament for an Act to contain any powers necessary to carry out the removal of the hospital and power to sell, mortgage, lease, or otherwise dispose of the present site.

ANNUAL REPORT (1901-02) OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.[1]

III.

BEFORE concluding our notice of the inspections made in 1901–02 by the medical staff of the Local Government Board (the details of which fill about 230 pages of Mr. W. H. Power's report), we think it right to comment very briefly on the question of sanitary administration generally, as suggested to us by a perusal of the reports of the several inspectors. Our library contains a goodly number of reports by successive medical officers of the Board, from Sir John Simon onwards, every volume of which furnishes particulars of local investigations made by experts of acknowledged competence concerning some of the more glaring instances of sanitary delinquency brought to light during the year. On turning over, at random, the pages of any one of these volumes we meet with case after case of grave neglect of statutory duty by sanitary authorities, almost always culminating in more or less serious outbursts of preventable disease. When it is realised that only in the rarest instances are these inquiries directed by the Board, unless either at the urgent request of some defaulting authority apprehensive of financial loss from deserted lodging houses, or else on the petition of actual sufferers from the neglect of their statutory protectors, we are constrained to ask what is the sum-total of loss of life and health that is caused annually in this country, and especially in our "health resorts," by the greed, the ignorance, or the apathy of the authorities who are the appointed custodians of the public health.

We do not possess the means to answer this question but it is certain that the Local Government Board—advised by its own medical staff and kept informed on health matters by an army of medical officers of health stationed everywhere for this very purpose—must be cognisant of the local sanitary shortcomings of which we are allowed to see an occasional example but the full extent of which the Board refuses to make public. The Board unquestionably possesses the power to call to account the authorities responsible for the neglect referred to and we are astonished that English public opinion has not long ago protested against the continued application of mere palliatives for the removal of an acknowledged national danger.

In numerous recent instances we have found it desirable on public grounds to direct attention in our columns to the accumulations of insanitary conditions against which medical officers of health have to contend in their efforts to conserve the health of the people—conditions of which Dr. H T. Bulstrode supplies a striking and typical example in his present report on the sanitary state of Whitehaven. As an excuse for inaction in similar circumstances it is often contended by sanitary authorities that in order to deal effectually with [illegible] wholesale demolition [illegible] permanent avail and [illegible] ople required by law would involve local financial ruin. We are, of course, familiar with this specious reasoning and equally so with the appeal *ad misericordiam* which often effectually accompanies it. Considerations of this kind may probably have weighed with the Local Government Board and may have induced it to deal leniently with authorities which unfortunately inherit statutory responsibility for defects not of their own causing and which are doing something at least for their removal. But what excuse can be made on behalf of district councils which are perpetuating the same evils in cottage property now actually in course of construction? Why does the central authority tolerate the covering of vast areas of land with dwelling-houses which, built in defiance of sanitary knowledge, will in a few years present conditions hardly better than those which render the slum property of our older towns unfit for human habitation? To both these questions the answer is too obvious to require formal statement.

The speculative builder of to-day avoids the territory of our great municipalities where, at any rate, some regard is paid to the durability of houses built within their jurisdiction. He directs his attention generally to the confines of populous towns, to suburbs where sanitary matters are in the hands of district councils composed mainly of petty tradesmen who equally with himself are anxious for the rapid extension of house building. Being in appearance a man of affluence the speculative builder readily obtains a seat on the district council and, devoting much attention to local affairs, he speedily rises to an influential position among his fellow councillors. He then proceeds to acquire possession of every available acre of land in the district and to erect thereon row after row of cottages which will stand long enough to enable him to dispose of them to his own satisfaction and to repeat the same process elsewhere, probably in a distant part of the country.

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[1] Previous notices of this report were published in THE LANCET of Sept. 19th (p. 839), and of Oct. 3rd (p. 972), 1903, respectively.

Within less than a score of miles from where we write, in districts fringing the metropolis and beyond the reach of London by-laws, thousands of cottages are now being erected, many of them are water-logged and others are on "made" land—cottages which if built within the metropolitan area would not pass muster for a day. But what is particularly distracting from the Londoner's point of view is this—that the sites now being covered with sparely built houses will almost certainly be absorbed into the metropolitan area not many years hence; in which event the successors of our present borough councillors will have to deal with what will then have become unhealthy areas after the manner in which certain of the older areas of London are at this moment being dealt with.

From the preventive standpoint that portion of Mr. Power's report which deals with the Board's administrative action in relation to the London small-pox epidemic in the period to which his report relates is full of interest and instruction. From the beginning of the epidemic to the end of March, 1902, the notification of cases of small-pox in London amounted to about 6000. But although this total is a large one it must not be inferred that London in its entirety suffered heavily from the disease. In the later months of 1901 St. Pancras, St. Marylebone, Holborn, and Bermondsey, and in the earlier months of 1902 Shoreditch, Bethnal Green, Stepney, Poplar, St. Pancras, Hackney, Southwark, Camberwell, and Battersea suffered most severely from the epidemic. But even in these boroughs the disease did not involve more than limited sections of the population, whilst not a few boroughs were from first to last comparatively free from small-pox. The Board in its capacity as the sanitary intelligence department of the State—always alive to the risk of the importation of small-pox from abroad and mindful of the scandalous neglect of vaccination in London to which we have already referred—took exceptional pains to bring about, through its medical staff, better administration of the vaccination law by the guardians, forcibly reminding them of their responsibilities in connexion with the epidemic.

Circulars were addressed to the borough councils urging upon them the necessity for energetic action with a view of limiting the spread of infection, such, e.g., as the medical examination of all notified cases and their immediate isolation in hospital, the disinfection of houses and bedding, and the vaccination of so called "small-pox contacts." The Board further adopted the unusual course of requesting that its medical department should be kept supplied with precise information of the measures which in each case had been taken by the local officers to check the spread of infection. The London School Board was also approached and its attention was directed to the large proportion of unvaccinated children in certain small-pox stricken parishes; it was urged to encourage the prompt vaccination of such children with the hope of preventing the spread of infection by contact in school. The School Board thereupon promptly resolved to afford facility under reasonable conditions to the vaccination officers of the metropolis to enter the schools belonging to the Board in infected areas and to examine the arms of children with a view of inducing parents to allow the vaccination of those who were unprotected. At a later date the Local Government Board communicated further with the metropolitan borough councils to the effect that cases of small-pox were frequently escaping detection owing to their being mistaken for chicken-pox; it was therefore suggested by the central authority that chicken-pox should be included in the list of diseases the notification of which is compulsory under the London Public Health Act. It will be remembered that this action of the Board led subsequently to the addition of notified cases of chicken-pox to the weekly returns of cases of infectious disease in London published by the Registrar General. Referring to the splendid services rendered by the Metropolitan Asylums Board in combating small-pox Mr. Power writes thus: "Here it is not necessary to say more than that, under circumstances of exceptional difficulty and pressure, the authority in question expanded and increased both its hospital accommodation and its land and river ambulance service so as to keep pace always with the demands of the metropolis. Throughout the epidemic no disadvantage to London arose by delay of removal of small-pox patients from their homes or of their reception and treatment in hospital. There can be no doubt at all that the efficiency of the Metropolitan Asylums Board, as hospital and as ambulance authority, largely contributed to such measure of success as was attained in dealing with London small-pox." Passing on to review, on the one hand, the exemplary conduct of the great majority of the municipal councils, and on the other, the reprehensible behaviour of certain boards of guardians in neglecting their statutory duties, Mr. Power deals leniently with the very few among the former which, reflecting, perhaps, the antagonistic spirit of their guardian colleagues, had incurred the special censure of the Board. He nevertheless pointedly alludes to, although he forbears to name, a certain recalcitrant council which paid the penalty of disobedience by losing the services of no less than five of its own officials through their being attacked by small-pox. Although, in the exercise of his discretion, Mr. Power has deemed it inexpedient to praise municipal borough councils the preventive action of which against small-pox deserved high commendation, or, on the other hand, to hold up to reprobation individual boards of guardians which in the face of a terrible epidemic exceptionably failed in the performance of a public duty, he feels called upon to mention one vaccination authority—the board of guardians of St. Giles and St. George, Bloomsbury—the action of which was in the highest degree commendable. Under this vaccination authority very thorough measures of vaccination and re-vaccination were carried out from the first. It is the municipal borough of Holborn which profited by the services of this public-spirited board of guardians. This borough was early invaded by small-pox and there is no doubt that but for the coöperation against small-pox here happily prevailing between independent authorities jointly responsible for the repression of the disease, the rapidly growing and severe epidemic in Holborn would have attained much graver proportions.

As regards preventive measures against importation into this country of cholera and bubonic plague Mr. Power refers to the routine records of the prevalence of cholera abroad which have, as in past years, been continuously kept by members of his staff, and to the exceptional action of the Board's inspectors during the year in respect of plague. Early in 1901, on the occurrence of certain cases of locally suspected plague in districts within the outer ring of London, the Board deemed it proper to direct two of its inspectors to visit a number of the districts referred to and generally to remind the local authorities concerned of their responsibilities as well as to advise them with regard to the precautionary measures desirable to be taken beforehand in dealing with actual or suspected cases of the disease.

As regards the final section of this report, which treats of the auxiliary scientific investigations undertaken on the Board's behalf during the year, inasmuch as they do not admit of summarising we have no alternative but to refer our readers for particulars to the report before us, fully one-third of which is occupied with the highly interesting and important details contributed by Dr. Klein, Dr. Martin, Dr. M. H. Gordon, Dr. A. C. Houston, and Dr. J. S. Haldane.

MEDICINE AND THE LAW.

The Analysis of Perishable Articles of Food.

THE first prosecutions instituted by the Norfolk County Council in respect of the addition of boric acid to milk came recently to an unfortunate conclusion. In one case which was gone into fully the milk was proved by analysis to contain 22·9 grains of boric acid per imperial pint. The defendant's solicitor, however, took the point that the certificate of the public analyst was silent as to whether any change had taken place in the milk that might interfere with the analysis. The magistrates, after retiring to consider the facts and the point of law thus raised, intimated that they were satisfied as to the addition of boric acid and also that its presence in the quantities shown was such as to render the milk injurious to health. On the ground, however, that the certificate of analysis did not contain the necessary statement as to the condition of the milk when analysed the bench dismissed the summons, and three other cases in which a similar omission had been made were similarly disposed of. In a sense the point raised may be described as a technical one and the Cromer magistrates themselves so referred to it, but although it is a matter of regret that legal proceedings of importance in the interest of the public health should fail upon technical grounds, the provision to which attention was thus called is a useful one as it prevents any discussion being raised at the hearing of a summons as to the condition of the article analysed at the time of its examination and any consequent questioning of the accuracy of the certificate. The Sale of Food and Drugs Act, 1875, under which the proceedings were taken, has only one schedule and this gives the form which the certificate of the analyst should take, to which are appended brief notes, the last of which concludes with the words: "In the case of a certificate regarding milk, butter, or any article liable to decomposition, the analyst shall specially report whether any change had taken place in the constitution of the article that would interfere with the analysis." It may be observed that the summons in the case heard at Cromer was taken out under Section 3 of the Act, which enables a fine of £50 (or in the case of a repeated offence a term of imprisonment) to be imposed upon any person who shall mix with an article of food any ingredient so as to render the article injurious to health, with intent that it may be sold in that state. The prosecutions under the Sale of Food and Drugs Act with which the public and its caterers are most familiar are those under Section 6, where the offence charged is selling to the prejudice of the purchaser an article of food which is not of the nature, substance, and quality of the article demanded. The penalty under this section is limited to a fine of £20.

Is a Funnel a Chimney?

It has been decided at the Mansion House police-court that the funnel of a steam-tug emitting black smoke is a chimney within the meaning of Section 24 of the Public Health (London) Act, 1891. It was stated in court that there would be an appeal upon this question and the result should be watched with some interest by those who live near rivers that are commercial thoroughfares as well as by owners and masters of steamboats. The section in question refers to "any chimney (not being the chimney of a private dwelling-house) sending forth black smoke in such quantity as to be a nuisance," and this passage is taken without alteration from the 91st section of the Public Health Act, 1875, so that it has had an existence of many years without the question of its applicability to steam vessels being raised and decided. This, however, is no doubt accounted for by the presence of another section in the Public Health (London) [illegible] ment on board ship in [illegible] owners and others are [illegible] the present prosecution must be looked on as a legal experiment. Attention was called recently in THE LANCET[1] to the fact that smoke must be black and not brown or of any other tint according to the Public Health Acts in order to constitute a nuisance. It is curious to find in the same sentence another expression which might have been improved upon in 1891 had the sub section been considered in all its bearings instead of being adopted from the existing Act without alteration.

Registration and Vaccination.

A man named Richard Green, of Barclay-road, Walthamstow, was recently fined 20*s* and 6*s*. 6*d*. costs for giving a false address as the place of birth of his child when registering it. This was done in order to avoid vaccination. It is not an uncommon device but it is one which gives some trouble to the vaccination officer who in the performance of his duty has to trace out the case. It is a trick, moreover, which deserves severe punishment not only in view of the difficulty which it imposes upon the proper carrying out of the law as to vaccination but because for other reasons the accurate registration of births is of importance to the public and to the infants registered.

Carbolic Acid as a Poison.

Carbolic acid is frequently used as a means of committing suicide and it also is the cause of death in a great many instances in which it is taken accidentally. The gross carelessness with which it is treated by persons who should be sufficiently well-informed to guard against such mishaps is shown at the inquests which follow in fatal cases. At one of these held recently at Derby upon the body of a man who had been the holder of an off-licence for the sale of alcoholic liquors it was proved that the deceased was in the habit of taking certain medicine which had been prescribed for him by drinking it out of the bottle in the dark without any measurement of the quantity taken. He kept the bottle of medicine on a shelf in his bedroom side by side with two other bottles, one of which contained port wine and the other carbolic acid. One night he drank carbolic acid instead of his medicine and died. It is not easy to protect the lives of persons so reckless.

ASYLUM REPORTS.

Monmouthshire Asylum, Abergavenny (Annual Report for 1902).—The average number of patients resident during the year was 1105, comprising 543 males and 562 females. The admissions during the year amounted to 247—viz., 127 males and 120 females. Of these 207 were first admissions. Dr. J. Glendinning, the medical superintendent, states in his report that the ordinary admissions were the highest in any year since the opening of the asylum and were 23 in excess of those admitted during 1901 and 27 more than the average annual admissions during the previous ten years. Many of these patients were very much enfeebled and debilitated. The principal causes of mental disorder among the admissions were bodily disease and debility in 60 cases, intemperance in drink in 34 cases, and hereditary predisposition to insanity in 47 cases. The number of patients in the asylum on Dec 31st was 1111, "and as the statutory accommodation in the asylum is for 1077 patients there has been considerable overcrowding both in the male and female divisions." This overcrowding will necessitate the removal of patients from the counties of Brecon and Radnor to the new asylum at Talgarth. The number of patients discharged as recovered during the year amounted to 102—viz., 51 males and 51 females—or 9·2 per cent. of the average number resident. The deaths during the year amounted to 112, or 10·1 per cent. as calculated on the same basis. Of the deaths two were due to senile decay, four to epilepsy, six to renal disease, eight to pneumonia, 12 to pulmonary tuberculosis, 14 to cerebral softening, 15 to general paralysis of the insane, 28 to cardiac disease, and the rest to other causes. The Commissioners in Lunacy state in their report that the general condition of the asylum was very good, that the patients were suitably lodged with due regard to safety and comfort, that the dormitories were in [illegible] bedding was scrupulously clean, that [illegible] to be satisfactory [illegible] and personal neatness was eminently satisfactory, and that the medical case-books and records were well kept, the former being illustrated with excellent photographs. The committee of management states in its report that part of the "Maindiff Estate," together with a good range of farm buildings and cottages standing thereon, was purchased for the sum of £9649, the extent of ground occupying 82 acres. Various improvements have also been effected in the farm, in the boiler-house, and in the stores.

Suffolk County Asylum (Annual Report for 1902).—The average number of patients resident during the year was 582, comprising 257 males and 325 females. The number of patients admitted during the year was 214—viz, 103 males and 111 females. Of these, 175 were first admissions. Dr. James R. Whitwell, the medical superintendent, states in his report that there was an increase in the gross admissions for the year of 45 as compared with the previous year and that this increase was very largely made up of new cases. Although the majority of patients admitted were in fair bodily condition "over 30 per cent. were in an enfeebled and exhausted condition, mostly owing to the fact that they were not brought under treatment sufficiently early." The number of patients discharged as recovered during the year amounted to 66—viz., 42 males and 24 females, or 11·3 per cent. of the average number resident. The deaths during the year amounted to 79—viz, 27 males and 52 females, or 13·6 per cent. as calculated on the same basis. Of the deaths three each were due to epilepsy and enteric fever, four to renal disease, 12 each to cardiac disease and general paralysis of the insane, 12 to pulmonary and other forms of tuberculosis, 18 to senile decay, and the rest to other causes. Post-mortem examination was made in every case of death except one. The casualties during the year were few and of no serious character. One patient was discharged within a short time of admission as an analysis of his case showed that he was suffering from deaf-mutism only. The average weekly cost of maintenance during the year has risen from 10*s.* 6¾*d.* to 11*s.* 1½*d.*, of which 5¾*d.* is due entirely to outside causes—namely, local rates. "This increase is one largely due to a multiplicity of causes inseparable from the transition stages of heating and lighting and to the condition of boarding out [patients] in other counties. ...... It is hoped that as our new buildings gradually become occupied the cost of maintenance will gradually resume a normal figure." The institution as a whole has been lighted with electricity since December, 1901, and it appears to be a safer, healthier, and more economical method of lighting than that which has hitherto been used. "The average annual increase of patients admitted to the asylum is, roughly speaking, about 11 and shows no sign of diminishing. ...... An actual increase of mental disease can be shown to exist out of proportion even to the population." The Commissioners in Lunacy state in their report that the wards of the asylum were found to be in excellent order, that the patients were very orderly and generally contented and in a satisfactory condition as regards dress and personal neatness, and that the medical case-books and post-mortem records were carefully and well kept. The committee of management states in its report that the whole asylum is now lighted with electricity and that fire alarms and telephones have been fixed throughout the building. The water-supply is excellent and the sewage works have proved themselves efficient.

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[1] THE LANCET, Oct. 10th, 1903, p. 1029.

Looking Back.

FROM

THE LANCET, *SATURDAY*, OCT. 15, 1825.

CAUTION TO PSALM SINGERS.

Dr. BLUNDELL, adverting, in his physiological lecture on Monday last, to the comparative anatomy of the maxillary joint in predaceous, and herbivorous animals, observed, in this respect, that man resembled the herbivorous class; but there was a greater extent of motion in the human jaw, and consequently a greater liability to dislocation. The learned lecturer mentioned a curious case in illustration of this fact. A devout person, of the Wesleyan persuasion, lifting up his voice in a hymn to its highest pitch, brought the condyloid process to the very edge of the glenoid cavity, and, attempting a shake at this critical moment, actually dislocated his jaw. We hasten to give publicity to this fact, that psalm-singers may not in future attempt to shake with their condyloid processes at the edge of their glenoid cavities. We may add too, that although psalm-singing is unquestionably one of the purposes for which jaws were given to man, yet their peculiar structure renders it doubtful whether the great Author of nature would not prefer a more moderate exercise of this function, than devout vocalists are wont to indulge in.

Bite of the Tarantula.

"There was a time when physicians believed that the bite of the tarantula destroyed sensation and life, and that the only remedies which could avert this fatal result were music and dancing. It was religiously believed at the time, that persons bitten by this insect evinced an invincible aversion to the colours of black and blue, while at the same time they manifested a decided predilection for white, red, and green. There were some who even went so far as to affirm that they had seen tarantulas dance in cadence to the patients, and there was no sort of absurdity broached by the people on this subject for which physiologists did not attempt to account. MEAD thought the poison acted directly on the blood, GEOFFREY on the nerves, and both these physicians, as well as GRUBE and SHUCHZER, were only followers, in this respect, of the celebrated BAGLIVI, who was a zealous supporter of these errors. The extravagance of the imposture operated as a cure for credulity. The courage of Dr. SANGINETTI, who caused himself to be bitten by tarantulas at the hottest period of the summer, without experiencing any serious inconvenience, and the excellent work of SERAO completely destroyed the romances to which physicians of the highest reputation had for three centuries given credit; and the malady was regarded only as a sort of hypochondriacal affection, to which the reapers are subject under the burning influence of the sun, in the vicinity of Tarentum. This last opinion which is now generally adopted, does not seem to accord with the case given by Dr. MAZZOLANI, and the attention of the physicians, who have opportunities of observing the effects of the bite of the tarantula may still be profitably directed to this subject."[1]

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8154 births and 4554 deaths were registered during the week ending Oct. 10th. The annual rate of mortality in these towns, which had been 16·5, 16·3, and 15 3 per 1000 in the three preceding weeks, rose again last week to 15·8 per 1000. In London the death-rate was 14·5 per 1000, while it averaged 16·3 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 4 7 in Hornsey, 9·1 in Handsworth, 9·6 in Croydon, 9·9 in Hanley, 10 4 in Reading, 10·5 in Derby, 10·6 in King's Norton, 10·9 in West Hartlepool, and 11·2 in Leyton; while the highest rates were 20·2 in Stockport, 20 3 in St. Helens, 20·4 in Merthyr Tydfil, 21·1 in Newcastle-on-Tyne, 21 2 in Ipswich and in West Bromwich, 21·4 in Middlesbrough, 22 8 in Rotherham, 23·4 in Sunderland, and 24·0 in Bootle. The 4554 deaths in these towns last week included 707 which were referred to the principal infectious diseases, against 918, 752, and 697 in the three preceding weeks; of these 707 deaths, 490 resulted from diarrhœa, 46 from whooping-cough, 45 from diphtheria, 45 from "fever" (principally enteric), 42 from scarlet fever, 34 from measles, and five from small-pox. No death from any of these diseases was registered last week in Hornsey, Reading, Burton-on-Trent, Handsworth, Barrow-in-Furness, Halifax, or West Hartlepool; while they caused the highest death-rates in West Ham, Wolverhampton, Warrington, Burnley, Preston, Middlesbrough, Sunderland, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Warrington, Bury, and Sunderland; from scarlet fever in Wolverhampton and Merthyr Tydfil; from diphtheria in Ipswich; from whooping-cough in Middlesbrough; from "fever" in St. Helens and Merthyr Tydfil; and from diarrhœa in West Ham, Wolverhampton, West Bromwich, Birmingham, Coventry, Warrington, Burnley, Preston, Rotherham, Middlesbrough, and Gateshead. Of the five fatal cases of small-pox registered in these towns last week two belonged to Bolton and one each to Leicester, Salford, and York. The Metropolitan Asylums hospitals contained 17 small-pox cases on Saturday last, Oct. 10th, against 41, 29, and 21 at the end of the three preceding weeks; two new cases were admitted during the week, against seven, one, and one in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1803, 1886, and 1877 at the end of the three preceding weeks, had risen again to 1881 at the end of last week; 240 new cases were admitted during the week, against 261, 293, and 235 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 128, 134, and 161 in the three preceding weeks, declined again to 146 last week, and were 21 below the number in the corresponding period of last year. The causes of 42, or 0·9 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Nottingham, Salford, Newcastle-on-Tyne, and in 47 other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Bootle, Sheffield, Hull, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal

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[1] Observations by M. Magliari, the editor of the *Osservatore Medico*, on a case published in that journal by Dr. Francesco Mazzolani of Naples. The patient was Giovanni Battista Petrini, a young Tuscan, about 15 years old, who was bitten on the second toe of the left foot while sleeping in the open fields at harvest time.

Scotch towns, which had been 16 1, 16 8 and 17 3 per 1000 in the three preceding weeks, declined again to 16 0 per 1000 during the week ending Oct 10th, but was 0 2 per 1000 in excess of the mean rate during the same period in the 76 large English towns The rates in the eight Scotch towns ranged from 9·3 in Perth and 14 2 in Aberdeen, to 18 0 in Greenock and 19 8 in Dundee The 525 deaths in these towns included 41 which were referred to diarrhœa, nine to "fever," eight to measles, six to whooping cough, four to scarlet fever, and three to diphtheria, but not one to small pox In all, 71 deaths resulted from these principal infectious diseases last week, against 51, 77, and 65 in the three preceding weeks These 71 deaths were equal to an annual rate of 2 2 per 1000, which was 0 2 per 1000 below the mean rate last week from the same diseases in the 76 large English towns The fatal cases of diarrhœa, which had been 44 and 42 in the two preceding weeks, further declined last week to 41 of which 21 occurred in Glasgow, ten in Dundee, three in Aberdeen, three in Greenock, and two in Edinburgh The deaths referred to different forms of "fever," which had been five, seven, and six in the three preceding weeks, rose again to nine last week and included five in Glasgow and three in Dundee. The fatal cases of measles, which had been eight, five, and four in the three preceding weeks, increased again last week to eight, all of which were registered in Glasgow The deaths from whooping cough, which had been ten, nine, and seven in the three preceding weeks, further declined to six last week and included three in Glasgow The fatal cases of scarlet fever, which had been three, four, and two in the three preceding weeks, rose again last week to four, of which two occurred in Glasgow The deaths referred to diseases of the respiratory organs in these towns, which had been 71, 84, and 88 in the three preceding weeks, declined again last week to 62 and showed a decline of 44 from the number in the corresponding period of last year The causes of 11 or more than 2 per cent, of the deaths registered in these eight towns last week were not certified

HEALTH OF DUBLIN

The death rate in Dublin, which had been 19 5 21 7, and 18 3 per 1000 in the three preceding weeks, rose again to 19 7 per 1000 during the week ending Oct 10th During the past four weeks the death rate has averaged 19 8 per 1000 the rates during the same period being 15 0 in London and 16 8 in Edinburgh The 143 deaths of persons belonging to Dublin registered during the week under notice were ten in excess of the number in the preceding week and included nine which were referred to the principal infectious diseases, against 17, 16 and five in the three preceding weeks, of these four resulted from diarrhœa two from whooping cough, one from scarlet fever, one from diphtheria and one from "fever" but not any from either small pox or measles These nine deaths were equal to an annual rate of 1 2 per 1000 the death rates last week from the principal infectious diseases being 2 1 in London and 1 0 in Edinburgh The fatal cases of diarrhœa, which had been five, 14, and three in the three preceding weeks, rose again last week to four The 143 deaths in Dublin last week included 32 of children under one year of age and 29 of persons aged 60 years and upwards, the deaths both of infants and of elderly persons showed a slight decline from the respective numbers recorded in the preceding week One death from violence and seven inquest cases were registered, and 64, or nearly 45 per cent, of the deaths occurred in public institutions The causes of five or nearly 4 per cent., of the deaths registered in Dublin last week were not certified

VITAL STATISTICS OF LONDON DURING SEPTEMBER 1903.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 6 5 per 1000 of the population, estimated at 4,613 812 persons in the middle of the year In the three preceding months the rates had been 6 0, 6 4, and 5 5 per 1000 respectively The rates were considerably below the average in Kensington, Chelsea, the City of Westminster, Hampstead, Stoke Newington, Holborn, and the City of London, while they showed the largest excess in St Marylebone, Ha [illegible] Stepney, and Deptford [illegible] a further marked decrease from that recorded during recent months, of the 27 cases notified during September, 15 belonged to Lambeth, four to St Pancras, two to Battersea, and one each to [illegible] minster St. Marylebone, [illegible] The Metropolitan Asylums [illegible] patients at the end of last month, against 57, 66, and 57 at the end of the three preceding months, the weekly admissions averaged five last month, against 12, 15, and nine in the three preceding months Scarlet fever was rather more prevalent during September than it had been in the preceding month, the greatest proportional prevalence of this disease occurred in Finsbury, Bethnal Green, Stepney, Poplar, and Deptford The number of scarlet fever patients in the Metropolitan Asylums hospitals, which had been 1614, 1697, and 1754 at the end of the three preceding months, had further risen to 1849 at the end of last month, the weekly admissions averaged 241, against 195 234 and 211 in the three preceding months The prevalence of diphtheria showed a considerable excess over that recorded during August. Among the various metropolitan boroughs this disease was proportionally most prevalent in St Marylebone Hackney, Poplar, Deptford, and Greenwich There were 671 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of last month, against 781, 840 and 716 at the end of the three preceding months, the weekly admissions during September averaged 114, against 119, 130, and 114 in the three preceding months The prevalence of enteric fever, which had shown a continued rise during the preceding five months, further increased last month; the greatest proportional prevalence of this disease was recorded in Stoke Newington, Hackney, Shoreditch, Stepney, and Bermondsey The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 88, 119 and 172 at the end of the three preceding months, had further risen to 247 at the end of last month, the weekly admissions averaged 40 against 17, 18 and 27 in the three preceding months Erysipelas was proportionally most prevalent in Kensington, Holborn, Shoreditch, Bethnal Green Southwark, and Bermondsey The 20 cases of puerperal fever notified last month included three in Paddington three in Southwark, two in Hammersmith, two in Fulham two in Hackney, two in Stepney, and two in Lambeth

The mortality statistics in the table relate to the deaths of persons actually belonging to the various boroughs, the deaths occurring in public institutions having been distributed among the boroughs in which the deceased persons had previously resided During the five weeks ending Oct 3rd the deaths of 6380 persons belonging to London were registered, equal to an annual rate of 14 4 per 1000 The lowest death rates in London last month were 10 0 in Hampstead 10 2 in Stoke Newington 10 8 in Hammersmith, 11 2 in Wandsworth 11 7 in the City of Westminster, and 12 3 in Lewisham, while the highest rates were 18 1 in Shoreditch, 18 4 in Southwark, 18 9 in Stepney 19 2 in Poplar, 19 5 in Finsbury, and 19 8 in Bethnal Green. The 6380 deaths from all causes included 1163 which were referred to the principal infectious diseases, of these three resulted from small pox, 54 from measles 26 from scarlet fever, 56 from diphtheria 77 from whooping cough 38 from enteric fever, and 909 from diarrhœa The lowest death rates last month from these infectious diseases were recorded in Chelsea the City of Westminster, Hampstead, Stoke Newington, Holborn and the City of London, and the highest rates in Fulham, Shoreditch Bethnal Green, Stepney Poplar, and Southwark The three fatal cases of small pox included two in Lambeth and one in the City of Westminster The 54 deaths from measles were 40 below the corrected average number, among the various metropolitan boroughs this disease was proportionally most fatal in Fulham, St Marylebone Stepney, Lambeth and Camberwell The 26 fatal cases of scarlet fever showed a decline of 46 from the average number in the corresponding periods of the ten preceding years, the greatest proportional mortality from this disease occurred in Paddington, Islington, Bethnal Green, Poplar, and Bermondsey The deaths from diphtheria, which had averaged 198 in the corresponding

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING SEPTEMBER, 1903.

(*Specially compiled for* THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1903.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,613,812	27	1363	683	1	350	8	20	424	—	2876	6·5	3	54	26	56	77	—	38	—	909	1163	2·6	6380	14·4	166
West Districts.																										
Paddington	146,032	—	55	24	—	6	2	3	13	—	103	7·3	—	3	3	4	1	—	—	—	18	29	2·1	181	12·9	164
Kensington	178,409	—	24	25	—	8	—	—	20	—	77	4·5	—	1	—	2	1	—	2	—	38	44	2·6	213	12·5	229
Hammersmith	115,803	1	31	18	—	10	—	2	5	—	67	6·0	—	—	1	—	1	—	1	—	26	29	2 6	120	10·8	147
Fulham	147,780	—	34	25	—	10	—	2	12	—	83	5·9	—	4	—	3	1	—	—	—	50	58	4·1	189	13·3	196
Chelsea	74,169	—	8	6	—	1	—	—	4	—	19	2·7	—	—	1	—	1	—	—	—	6	8	1·1	91	12·8	158
City of Westminster	179,052	1	32	13	—	12	—	—	8	—	66	3·8	1	1	—	—	—	—	1	—	15	18	1·0	201	11·7	136
North Districts.																										
St. Marylebone	131,234	1	41	38	—	12	—	1	17	—	110	8·7	—	3	1	4	2	—	1	—	9	20	1·6	191	15·2	71
Hampstead	85,197	—	20	8	—	2	—	—	7	—	37	4·5	—	—	—	1	—	—	—	—	6	7	0·9	82	10·0	117
St. Pancras	235,716	4	76	44	—	19	—	—	17	—	160	7·1	—	4	1	3	1	—	4	—	27	40	1·8	328	14·5	155
Islington	339,137	1	116	22	—	24	—	1	23	—	187	5·8	—	1	4	2	4	—	1	—	39	51	1·6	425	13·1	145
Stoke Newington	52,069	—	6	2	—	7	—	—	3	—	18	3·6	—	—	—	—	—	—	—	—	6	6	1·2	51	10·2	167
Hackney	224,082	—	57	46	—	45	1	2	24	—	175	8·1	—	—	2	5	2	—	7	—	33	49	2·3	269	12·5	132
Central Districts.																										
Holborn	57,845	—	11	2	—	3	2	—	7	—	25	4·5	—	—	—	1	2	—	—	—	1	4	0·7	95	17·1	85
Finsbury	99,717	—	61	10	—	9	—	1	9	—	90	9·4	—	1	—	—	3	—	—	—	26	30	3·1	186	19·5	191
City of London	24,539	—	4	1	—	2	—	—	2	—	9	3·8	—	—	—	—	—	—	1	—	2	3	1·3	35	14·9	94
East Districts.																										
Shoreditch	117,513	—	32	15	—	18	—	—	17	—	82	7·3	—	—	—	—	3	—	3	—	36	42	3·7	204	18·1	256
Bethnal Green	130,028	—	56	25	—	7	—	—	24	—	112	9 0	—	—	3	4	3	—	—	—	40	50	4·0	247	19·8	197
Stepney	302,153	1	152	42	—	46	—	2	36	—	279	9 6	—	11	2	7	13	—	7	—	101	141	4·9	548	18·9	194
Poplar	169,550	—	69	42	—	7	—	—	11	—	129	7 9	—	—	2	5	4	—	—	—	53	64	3·9	312	19·2	222
South Districts.																										
Southwark	207,369	1	50	23	—	15	—	3	32	—	124	6·2	—	4	—	2	5	—	1	—	67	79	4·0	366	18·4	197
Bermondsey	129,801	—	36	13	1	13	—	—	22	—	85	6·8	—	1	2	2	—	—	1	—	33	39	3·1	220	17·7	212
Lambeth	307,711	15	81	24	—	14	1	2	21	—	158	5·4	2	7	2	1	7	—	1	—	58	78	2·6	423	14·3	158
Battersea	173,422	2	36	26	—	7	—	—	18	—	89	5·4	—	2	—	1	8	—	1	—	36	48	2·9	216	13·0	152
Wandsworth	249,678	—	90	39	—	12	—	—	26	—	167	7·0	—	3	—	3	4	—	1	—	36	47	2·0	269	11·2	152
Camberwell	265,562	—	57	43	—	10	—	—	14	—	124	4·9	—	8	1	2	5	—	1	—	53	70	2·7	339	13·3	151
Deptford	112,537	—	47	35	—	2	—	1	11	—	96	8·9	—	—	—	1	3	—	—	—	29	33	3·1	143	13·3	167
Greenwich	99,824	—	14	37	—	9	—	—	8	—	68	7·1	—	—	1	2	2	—	—	—	27	32	3·3	120	12·5	161
Lewisham	136,405	—	46	17	—	8	—	—	7	—	78	6 0	—	—	—	1	—	—	4	—	15	20	1·5	161	12·3	116
Woolwich...	121,478	—	21	18	—	9	2	—	6	—	56	4 9	—	—	—	—	1	—	—	—	23	24	2·1	155	13·5	121
Port of London	—	—	—	—	—	3	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

periods of the ten preceding years, numbered only 56 last month; among the various metropolitan boroughs this disease was proportionally most fatal in Paddington, St. Marylebone, Hackney, Bethnal Green, Stepney, and Poplar. The 77 fatal cases of whooping-cough were 68 below the corrected average number; the greatest proportional mortality from this disease was recorded in Holborn, Finsbury, Stepney, Battersea, and Deptford. The 38 deaths from enteric fever were exactly one-half of the average number in the corresponding periods of the ten preceding years; among the various metropolitan boroughs the highest "fever" death rates were registered in Kensington, St. Pancras, Hackney, Shoreditch, Stepney, and Lewisham. The 909 fatal cases of diarrhœa were slightly in excess of the corrected average number; this disease was proportionally most fatal in Fulham, Shoreditch, Bethnal Green, Stepney, Poplar, and Southwark. In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was more than 21 per cent. above the average.

Infant mortality in London during September, measured by the proportion of deaths among children under one year of age to registered births, was equal to 166 per 1000. The lowest rates of infant mortality were recorded in St. Marylebone, Hampstead, Holborn, the City of London, and Lewisham; and the highest rates in Kensington, Shoreditch, Bethnal Green, Poplar, Southwark, and Bermondsey.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff Surgeon N. L. Richards to the *Barrosa* (dated Oct. 20th). Fleet Surgeons: W. Eames to Plymouth Hospital and A. L. Christie to the *Mars* (dated Oct. 12th). Surgeon L. S. Whitwam to the *Caledonia* (dated Oct. 12th).

ROYAL NAVAL VOLUNTEER RESERVE.

Sir Frederick Treves, Bart., K.C.V.O., C.B., to be Honorary Staff Surgeon (dated Oct. 6th, 1903) and Dr. Francis John Hannan to be Surgeon (dated Oct. 6th, 1903).

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Richard G. Thomsett retires on retired pay (dated Oct. 14th, 1903); Lieutenant J. T. K. Thomson, Glasgow Companies, Royal Army Medical Corps (Volunteers) to be Surgeon-Lieutenant (dated Oct. 14th, 1903).

T[illegible] officers proceed to England in [illegible]ops on homeward voyage as follows:—*Soudan*, Oct. 14th: Lieutenant-Colonel Emerson (in charge), Lieutenant-Colonel Stuart, Major Moore, Major Adamson, Captain Moore, and Captain Harrison *Plassey*, Oct. 24th: Major Fayrer, Major Boles, Captain Smith, Captain Grattan, Captain Campbell, and Captain Hayes. *Sicilia*, Nov. 4th: Lieutenant-Colonel Battersby (in charge), Lieutenant-Colonel Tyrell, Major Hennessy, Major Jackson, Captain Forrest, and Captain Warning. *Assaye*, Nov. 13th: Lieutenant-Colonel Mulvany (in charge), Lieutenant Colonel Dugdale, Major Norris, Major Nash, Major Windle, Captain Bliss, Captain Riddick, Captain Swabey, and Captain Hopkins. *Soudan*, Dec. 23rd: Lieutenant-Colonel Jones (in charge), Major Maher, Major Cocks, Major Hore, Captain MacDougall, and Captain Clements. *Plassey*, Jan. 1st: Lieutenant-Colonel Allfort (in charge), Lieutenant Colonel Thomson, Major Macdonald, Major Inniss, Major Forde, Captain Cockrane, Captain Morris, and Captain Marriott. *Sicilia*, Jan. 8th: Lieutenant-Colonel Seymour (in charge), Lieutenant-Colonel Cowen, Major Green, Major Maturin, Major Young, and Captain Huddleston. *Assaye, viâ* Cape, Feb. 16th: Lieutenant-Colonel Johnston (in charge), Lieutenant-Colonel White, Major Watson, Major Davoren, Captain Brogden, Captain McCarthy, Captain Bowen, and Captain Young. *Soudan*, Feb. 26th: Lieutenant-Colonel Maclean (in charge), Lieutenant-Colonel Carey, Major Cardozo, Major Cree, Major Griffiths, and Captain Collingwood. *Plassey*, March 8th: Lieutenant-Colonel Geoghegan (in charge), Lieutenant-Colonel Carmichael, Major Thompson, Major O'Donnell, Major Bullen, Captain Martin, Captain O'Grady, Captain Carter, and Captain Hall. *Sicilia*, April 7th: Lieutenant-Colonel Birrell (in charge), Major Weir, Major Power, Major Wright, Captain Carroll, and Captain Macpherson.

Captain E. Brodribb, from half-pay, to be Captain, with precedence next below G. M. Goldsmith (dated Sept. 21st, 1903).

The name of Lieutenant (on probation) Osborne Ievers is as now described and not as stated in the *Gazette* of Sept. 18th, 1903.

ROYAL ARMY MEDICAL CORPS (MILITIA).

Lieutenant J. W. Hopkins is seconded for service under the Foreign Office (dated Sept. 29th, 1903).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Sussex: Surgeon-Lieutenant F. Loud resigns his commission and is appointed Captain (dated Oct. 10th, 1903) *Rifle*: 1st Volunteer Battalion the East Yorkshire Regiment: Arthur Tinsley Sissons to be Surgeon-Lieutenant and to be borne as Supernumerary whilst doing duty with the Yorkshire Volunteer Infantry Brigade Bearer Company (dated April 4th, 1903).

VOLUNTEER INFANTRY BRIGADE BEARER COMPANIES.

Yorkshire: The appointment of Arthur Tinsley Sissons, which was announced in the *London Gazette* of April 3rd, 1903, is cancelled.

WAR OFFICE CHANGES.

The recent changes which have been made in the *personnel* of the War Office, besides being a matter of national interest, directly concern the army as a whole and with it army medical administration. The disclosures of the late War Commission have naturally aroused a strong feeling of indignant surprise not altogether unmixed with alarm. Whether the new appointment of Mr Arnold Forster as War Minister and of Mr. Bromley-Davenport as Financial Secretary to the War Office will be followed or not by those radical reforms that are called for remains to be seen. But Mr. Arnold-Forster has played a conspicuous part as an army critic and reformer and he will now have an opportunity of giving effect to some of those drastic changes of which he has so long been an advocate. What is obviously wanted at the War Office at the present time is a strong man but not a strong party man. As regards Mr. Brodrick it may be safely said that he undertook the most difficult task that could fall to the lot of any Minister at the time when he became the head of the War Office. As far as the medical service, at any rate, is concerned, it must be admitted that he has made very strenuous exertions to render it efficient.

Major M. T. Yarr, R.A.M.C., will, it is said, be appointed medical officer on the staff of Lord Lamington, the new Governor of Bombay. Major Yarr has given a great deal of time and attention to the study of ophthalmology and his services to the army as an expert in this direction have been of much value.

HOSPITAL ACCOMMODATION AT DEOLALI.

The proposals for additional hospital accommodation at Deolali, says the *Pioneer Mail*, are being considerably reduced in view of the fact that in the near future a hospital train from stations in the Punjab and Bengal commands will be available and will doubtless be able to run through to Bombay, so as to deliver sick soldiers direct on board the ships without stopping at Deolali. There is also the fact that a hospital ship will probably be despatched from Bombay on three separate trips to England with 100 invalids each time, thus reducing the number of sick proceeding by ordinary troopship.

HOSPITAL EQUIPMENT FOR THE ARMY IN INDIA.

The *Pioneer Mail* of Sept. 18th states that a comprehensive scheme is now being worked out for revising the equipment of general hospitals, field hospital store depôts, and base hospital store depôts in the army in India.

NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on Oct. 13th, Sir J. N. Dick, K.C.B., R N (retired), being in the chair, the sum of £45 was distributed among the several applicants.

The special corps dinner of the Royal Army Medical Corps is to be held on Oct. 21st at the Whitehall Rooms, Hôtel Metropole. Officers who have not yet notified their intention of being present are requested to do so without delay to the honorary secretary.

Correspondence.

"Audi alteram partem."

THE LUNG REFLEX OF ABRAMS.

To the Editors of THE LANCET.

SIRS,—The letter of Dr. Albert Abrams in THE LANCET of Oct. 10th, p. 1032, in which a recent annotation of your own[1] on the Cardiac Reflex of Abrams is supplemented by certain valuable observations, has prompted me to offer a few remarks on a kindred phenomenon which also bears the name of the same distinguished observer—viz., the lung reflex of Abrams.

There can, I think, be no doubt that notwithstanding the striking character of the work on this subject by the American physician and its signal importance in connexion with the diagnosis, the prognosis, and the treatment of many pulmonary conditions, it is but little known to the practitioners of our own country. I may add that for at least a year I have followed the practice of Abrams in eliciting the lung reflex on my patients and I am fully convinced of its value. There are two such reflexes: a reflex of dilatation and a reflex of contraction. In clinical work the former is the more important and generally useful. Briefly put, it consists in the fact that the lung has an *inherent* power of dilating, apart from the breathing forces or atmospheric pressure and this inherent capacity of dilatation can be readily evoked by simple stimuli applied either to the chest wall or to the interior of the nares.

Now it is evident that this inherent or essential expansibility of the lung is no newly propounded phenomenon. It was indeed affirmed long ago by Laennec who adduced many and ingenious facts, both physiological and clinical, to prove it. In his chapter on Spasmodic Asthma he remarks: "The study of respiration by means of auscultation furnishes us, both in health and disease, with still more numerous phenomena which leave no room to doubt that the lungs possess an inherent power of action, independently of the other powers of inspiration and expiration. ...... In regard to expansion its mechanism is so little understood that physiologists have been forced to admit in order to explain it a vital property under the name of *expansibility* or *expansile power*. Without investigating the probabilities of this theory, I shall here content myself with inquiring, as a matter of fact, whether the lungs are capable of an active expansion independently of that which they undergo from the effects of atmospheric pressure in following the dilatation of the walls of the chest during inspiration."[2] Such is the phenomenon which he goes on to prove. It was not, however, until recent years that anything like a satisfactory demonstration of the presence of broncho-dilator as well as broncho-constrictor fibres in the vagus was made by Roy and Brown and during the present year this seems to have been conclusively established by the work of Dixon and Brodie.[3] But it undoubtedly stands to the credit of Abrams to have proved at least seven years since by a simple clinical observation that the vagus must contain broncho-dilator as well as broncho-constrictor fibres.

Such an observation may be easily carried out as follows. The patient, stripped to the waist, is directed to lie on his back and after he has rested a few minutes and the breathing becomes as easy as possible the right edge of the superficial cardiac dulness is percussed out and marked with a dermograph. In like manner the upper and left edges of the superficial dulness are determined. The front of the chest is then briskly rubbed with a towel for a minute until a red glow is produced. On percussion now being made it will be found (normally) that the pulmonary resonance extends a considerable distance inwards beyond the dermographic lines. After waiting for from two to three minutes longer, the extension of resonance will have disappeared and the dulness will be restored to its original area. A similar phenomenon may be elicited at the basal borders of the lung. I have found in practice (although Abrams gives no instructions on the point) that the recumbent posture is the best, favouring as it does a restful position of the organs.

This reflex dilatation of the lung is due to the action of broncho-dilator fibres in the vagus, but when friction is made over the cardiac area also the dilatation is assisted by a simultaneous inhibition of the heart which causes a diminution in the amount of blood in the pulmonary capillaries. It was proved in the experiments of Dixon and Brodie that such a diminution causes increased distensibility of the lung.

The lung reflex of dilatation can also be produced by the inhalation of irritant vapours, such as ammonia, by plugging the nares with cotton-wool, and by vigorous percussion over the epigastrium. It would appear, however, that irritants commonly acting in the nose may produce either the lung reflex of dilatation or that of contraction, according as the irritant selects the broncho-dilator or the broncho-constrictor fibres of the vagus. Many cases of asthma are due to such irritation of the broncho-constrictors and it seems likely that certain purely emphysematous conditions are produced contrariwise. In either case the application of cocaine to the nasal cavities inhibits the phenomenon. In the experiments of Dixon and Brodie already referred to curious discrepancies were often obtained in different animals. Thus in the dog and rabbit direct vagal stimulation produced bronchiolar constriction, whereas in the cat it usually produced dilatation which lasted all the time the stimulus was applied, though many variations were found in the latter animal, such as an initial rapid constriction or first a relaxation and then a constriction.

Abrams has also shown that there normally exists in the lung certain areas more or less "atelectatic" in character. Such areas are specially marked just by the breast-bone beneath the clavicles and towards the angles of the scapulæ. These can be dispelled by repeated deep inspirations. A blow struck near the manubrium increases the atelectatic area there by causing the lung reflex of contraction, while the atelectasis so produced is immediately dispelled by a blow struck over the epigastrium. If the skin be previously irritated over the part or the nasal mucosa be cocained this reflex of contraction cannot be produced.

Sufficient has been said to show that in these reflexes we possess valuable clues to diagnosis and treatment. I have already made a considerable number of observations in which much light was shed on the state of the lungs by testing their response either in whole or in part to the normal reflexes and I believe that these reflexes ought to be tested as a matter of routine in the investigation of pulmonary and cardiac diseases, just as the reflexes are tested in the investigation of diseases of the nervous system. As regards treatment they yield beyond doubt a scientific basis for the practice of counter-irritation. A counter irritant applied to any part of the chest wall not only induces but maintains a pulmonary dilatation underneath. The relief afforded in cases of bronchitis, pulmonary collapse, &c., by such topical means is thus (at least partially) explained. It has been shown by Abrams that hot poultices continuously applied over the broncho pneumonic lungs of children are the best means of counteracting the condition of collapse which is commonly set up. Again, the intranasal treatment of cases of asthma and emphysema may be clearly indicated by the reflexes which are excited; generally speaking, the application of cocaine temporarily tending to dispel either reflex. In like manner in regard to inhalations the reflex of contraction is dispelled by such agents as ether and chloroform, while that of dilatation is dispelled by nitrite of amyl.

I am, Sirs, yours faithfully,

Henrietta-street, W., Oct. 10th, 1903. A. G. AULD.

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[1] THE LANCET, August 29th, 1903, p. 619

[2] Laennec: Forbes's Translation, 1884, p. 376.

[3] Journal of Physiology, March, 1903.

THE VISION OF MYOPES.

To the Editors of THE LANCET.

SIRS,—It is often interesting to note the little devices by which patients try to overcome their disabilities. In this way we may sometimes get unexpected information. It is well known that myopes can improve their vision by partially closing the eyelids and that this improvement arises from the cutting off of the circles of diffusion; indeed, the word myopia is, of course, derived from two Greek words signifying to shut the eye. "Many myopes have so very much accustomed themselves to approximate the eyelids that it actually belongs to their physiognomy, and they persevere in doing so, even when the use of concave spectacles makes it superfluous," says Donders. I was under the impression that the best method a myope of low degree could adopt to see more clearly at a distance without the aid of any optical contrivance was partially to close the eyelids. A patient some years ago taught me a method that was new to me and of which I have not yet seen an account. A boy, aged 17 years, with myopia of one and a half dioptres, showed me that he could greatly improve his distant vision by putting his finger on the external canthus of one eye and drawing the eyelids outwards. This observation I have confirmed on myself and others. If a + 2 D. spherical glass be put before an emmetropic eye so as to render it myopic, it will be found that the large letters of Snellen's types can be read at five metres much better by drawing out the upper eyelid by the finger than by approximating the eyelids in the ordinary way by the action of the orbicularis. The difference between the two methods is considerable; by the one vision equal to $\frac{5}{36}$ can barely be reached, by the other one can succeed after a [illegible] vision up to $\frac{5}{18}$ or even higher. [illegible] tion one can easily see that t[illegible] letters became more distinct when approximating the eyelids, and that both horizontal and vertical strokes, especially the latter, became plainer when the upper eyelid was stretched by the finger. This result was to me quite unexpected. One might perhaps have thought that the circles of diffusion could be cut off as well by one method as the other. A little experiment will, however, show at once the superiority of the method of drawing out the upper eyelid by the finger.

I am, Sirs, yours faithfully,
E. DONALDSON, B.A. T.C.D., L.R.C.S. Irel.
Londonderry, Oct. 10th, 1903.

PUBLIC VACCINATORS IN RURAL DISTRICTS.

To the Editors of THE LANCET.

SIRS,—As I am appointed to give evidence before the departmental commission of the Local Government Board on behalf of the public vaccinators in rural districts of England and Wales I should be glad to receive from those gentlemen information giving instances of excessive distances and any accurate statistics of the proportion of visits paid to the number of vaccinations effected. In all cases the various fees allowed to each vaccinator should be given. Correspondence may be addressed to me direct and must reach me within the next two weeks.

I am, Sirs, yours faithfully,
A. MAUDE.
Winterton House, Westerham, Kent, Oct. 12th, 1903.

THE M.D. DEGREE OF BRUSSELS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 10th Dr. N. Leonard gives a clear account of the general requirements of the M.D. Brux. examination but has surely omitted to state a fact which is generally not known and which detracts considerably from the value and status of the degree. That fact is that the M.D. Brux. confers no right to practise in Belgium, as it is not a "State University" examination and that it is therefore practically valueless from a legal point of view. The Belgians themselves take the "State degree," which is quite another matter.—I am, Sirs, yours faithfully,

P. A. NIGHTINGALE, M.D. Edin.
Ludgate-hill, E.C., Oct. 10th, 1903.

To the Editors of THE LANCET.

SIRS,—I have read with interest your annotation[1] on the M.D. degree of Brussels. I have thought for many years that those who have received their medical education in London have a most distinct grievance against the University of London. May I quote my own case. Before the age of 17 I matriculated at the University and within a month or two of joining a London medical school I passed the preliminary scientific examination. I then found that to pass the intermediate examination I should have to acquire an intimate knowledge of inorganic chemistry, a subject of which I knew little or nothing and for which I had no particular aptitude.

I found, moreover, that the time I should necessarily have to spend in acquiring this special knowledge would lose me my position among my contemporaries and my right to compete for certain prizes. In the circumstances I abandoned the London degree altogether. After all but ten years of practice I can conscientiously say that on no single occasion I can recall would such knowledge of inorganic chemistry as the University requires have been of the slightest use to me. I am, Sirs, yours faithfully,

Oct. 11th, 1903. F.R.C.S. ENG.

FEVER AND CONVULSIONS DUE TO ASCARIDES.

To the Editors of THE LANCET.

SIRS,—In regard to your recent annotation upon the above subject[1] and the subsequent correspondence thereon, may I point out that, owing to the almost universal presence of these parasites amongst the natives of India, this is a matter which has already received the careful attention of officers of the Indian Medical Service. One of the commonest causes of slight attacks of fever in that country is the presence of ascarides and, further, the most extraordinary and misleading symptoms are undoubtedly due to the presence in excessive numbers of this worm or to the wonderful journeys undertaken by this enterprising animal. If your readers will consult the writings of the late Norman Chevers or the files of the *Indian Annals of Medicine*, *Madras Quarterly Journal of Medical Science*, *Indian Medical Gazette*, &c., as well as the Transactions of the S. I. Branch of the British Medical Association they will find how thoroughly the matter has been investigated in that country. I myself believe that there is no room for doubt that this parasite is capable, by continued pressure, of forcing a passage through various tissues. *Per contra*, I do not believe in the "toxin" theory, which, by the way, is much older than the article by Dr. Wettendorff referred to in the original note.

The foregoing affords another instance of what is an undoubted fact—viz., that a large number of what are still regarded as being moot or as being fresh points, especially in "tropical" medicine, have long ago been investigated, discussed, and settled in India, as a careful study of the medical literature of that country, including many scarce and unattractive-looking "reports," made clear to me some years ago. So, also, as regards treatment, one too often sees methods or medicines recommended as original which have years before been tried and adopted or rejected in India. I had collected many examples of this kind of error with a view to ultimate publication, but for several reasons, of which ill health is perhaps the most effective, I cannot expect to accomplish that which I had planned. Fortunately there is no lack of men in the Indian Medical Service well able to undertake and to complete the task and I have great hopes that some officer of that service will devote himself to the printed records of medical work in India with a view to demonstrating the hidden wealth that is contained therein.

I am writing to the editor of the *Indian Medical Gazette* to suggest the publication of a special "Intestinal Parasites" number, which would, I feel certain, furnish most interesting reading and afford a means by which many of the accounts of the ascaris lumbricoides and the symptoms to which its presence give rise contained in British text-books could be both amplified and made more correct.

I am, Sirs, yours faithfully,
A. E. GRANT,
Ennore, Boscombe, Oct. 11th, 1903. Major, Indian Medical Service.

MEDICAL ACTS AMENDMENT BILL.

To the Editors of THE LANCET.

SIRS,—I am requested by the council of the Association of Physicians and Surgeons of the Society of Apothecaries, Limited, to draw your attention to the following resolutions on the above-mentioned subject:—

[illegible]

1. That all persons registered under the Medical Act of [illegible] in respect to qualifications to practise medicine shall henceforth be described as physicians and all persons registered in respect of qualifications to practise surgery shall henceforth be described as surgeons.

2. That all persons registered under the amending Act and under the Medical Act of 1886 shall be described as physicians and surgeons.

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[1] THE LANCET, Oct. 10th, 1903, p. 1030.

[1] THE LANCET, Sept. 26th, 1903, p. 893.

Dr. Vajda, Dr. Grünfeld, Dr. Nobl, and Dr. Weidenfeld); on the use of the Rœntgen rays (Dr. Schiff and Dr. Holzknecht); on mental and nervous diseases (Dr. Fritsch, Dr. Hollaender, Dr. Hirschl, Dr. Redlich, Dr. Elzholz, Dr. Sölder, Dr. Bischof, and Dr. Halban); on physiological and pathological chemistry (Dr. Mauthner and Dr. Fraenkel); on hygiene and bacteriology (Dr. Schattenfroh and Dr. Grassberger); and on forensic medicine (Dr. Kolisko and Dr. Richter).

In Vienna the cost of living is higher than in German cities. In the immediate vicinity of the General Hospital there are a great number of English "pensions" where the charges are from three to six florins a day, but many students prefer to live in single furnished rooms, the cost of which is from 15 to 40 florins a month, and to have their meals *à la carte* in a restaurant, except breakfast which is taken at one of the numerous coffee-houses, where also English and American journals may be read. Residence in Vienna is especially enjoyable in the summer season, when spare time may be spent in making excursions to the pleasant mountain resorts in the vicinity.

Vienna is the only city in which students can attend a complete medical curriculum without having to lose time in proceeding from one lecture to another. The courses for post-graduates are delivered during the whole year. The language of the lecturers is German but many teachers give special English courses and in many courses a short explanation is given in English if English students are attending them. The courses are mostly practical and the theoretical explanations given are as short as possible. Austrian patients submit to clinical examination with more willingness than is the case in other places. In some courses the students are permitted to perform small operations on patients. On account of the large number of subjects in the pathological institute Vienna is an excellent place for courses of operations on the dead body. The duration of most of the courses varies from four to six weeks, the fees for a single course varying between 15 and 50 florins (£1 10*s.* to £4). The number of attending students is generally limited to 10 or 15, in some courses (practical midwifery) even to four students. It is possible to make arrangements for private courses for a few persons at a special payment. Some courses are so overcrowded that it is necessary to make arrangements weeks or months before the beginning in order to get entrance. Gratuitous information with respect to courses of instruction, lodgings, and such subjects may be obtained from Dr. B Beer, IX. Maximilianplatz 13. Details as to lectures and laboratory courses are supplied by the Decanat of the medical faculty of the University.

Obituary.

WILLIAM JOHNSON WALSHAM, M.B., C.M. ABERD., F.R.C.S. ENG.,

SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

St. Bartholomew's Hospital and its Medical School have suffered great losses during the present year. Dr. P. H. Hensley, Mr. H. T. Butlin, and Professor Howard Marsh have resigned since last spring, and Mr. W. J. Walsham's untimely death has now caused profound sorrow to the many generations of students whom he taught so assiduously and with such pleasure first anatomy and afterwards surgery.

Mr. Walsham was born in London on June 27th, 1847, the elder son of Mr. William Walker Walsham of Wisbech, Cambridgeshire, and of Louisa Johnson his wife. He was educated privately at Highbury under the Rev. Dr. Johnson and early in life showed so great a mechanical bent that he was apprenticed to the engineering firm of Messrs. Maudslay. But the early hours and the physical labour required in the "shops" soon proved too much for his strength and he was compelled reluctantly to turn his attention to less exacting work. He studied chemistry for a time and it was through this source that his thoughts were first turned towards medicine. Late in September, 1867, he was walking down Chancery-lane to enter himself as a student at King's College, but on the way he met a friend who gave him so glowing an account of St. Bartholomew's Hospital that he straightway turned round and entered his name there. He was at this time a year or two older than the majority of his fellow students and he at once demonstrated his intellectual superiority and his manual dexterity by obtaining the chief prizes in the dissecting room, the treasurer's or junior practical anatomy prize being awarded to him at the end of his first winter session in 1868 and the Foster or senior practical anatomy prize falling to his lot at the end of his second winter session in 1869 In 1869, too, he obtained the senior scholarship in anatomy, physiology, and botany, having previously gained the junior scholarship. In each of these four events Mr. Alban Doran was placed second. Walsham also obtained a prize dressership under Sir James Paget and in 1869 was awarded the gold medal given by the Society of Apothecaries for proficiency in materia medica and pharmaceutical chemistry and was admitted an L.S.A. He afterwards went to Aberdeen, as was then the custom of many St. Bartholomew's Hospital men, and graduated there in 1871 as M.B, C.M., with the highest honours and with special honours for his thesis, and he returned to London to take the M R C.S. Eng. on Nov. 17th, 1871. He was nominated by Dr. Francis Harris to act as house physician at St Bartholomew's Hospital from May 1st, 1871, and this post he filled for nine months when he exchanged with Mr. Charles Irving and became house surgeon to Mr. Holmes Coote for three months. He then thought of going into private practice, but, an opportunity occurring, he was appointed assistant demonstrator of anatomy in 1872. In the next year he became full demonstrator, a position which he held until 1880, and the museum still contains some of his exquisite dissections. In 1880 he became demonstrator of practical surgery, in 1889 he was appointed lecturer on anatomy, and in 1897 he exchanged this lectureship for the post of lecturer on surgery. Mr. Walsham was elected to the office of assistant surgeon on March 10th, 1881. He was immediately afterwards appointed demonstrator of orthopædic surgery in succession to Mr. Howard Marsh and this position he held with immense advantage to the pupils in this department until his appointment as full surgeon to the hospital in 1897. He was elected surgeon to the Metropolitan Hospital and to the Royal Hospital for Diseases of the Chest in 1876 and he held the latter position for about eight years. At the Metropolitan Hospital he took charge of the department for diseases of the throat and he was elected to the position of consulting surgeon in 1896. Later, in the capacity of consulting surgeon, he became attached to the Sevenoaks Hospital for Diseases of the Hip and to the Bromley Cottage Hospital.

At the Royal College of Surgeons of England Mr. Walsham was elected a Fellow after examination on June 10th, 1875. He served the office of examiner in anatomy on the Conjoint Board from 1892 to 1897 and was a member of the Court of Examiners from 1897 to 1902 but found the duties of the latter office so trying that he did not seek re-election at the expiration of his first term of office. He filled several sectional offices in the British Medical Association and he was a member of the chief London medical societies.

During the present year Mr. Walsham had not appeared to be quite in his ordinary good health and it is certain that he had felt some failure of his usual energy, for he had made arrangements with his assistant surgeon, Mr. D'Arcy Power, to be permanently relieved of his night work at St. Bartholomew's Hospital, but it was not until within a few weeks of leaving for his holiday that some of his most intimate friends recognised that he was really ill. He was then advised to take a prolonged rest and left for Switzerland. He stayed for three weeks at Grindelwald but did not derive so much benefit from the mountain air as he had anticipated, and on August 27th he went to Wiesbaden. There, on the following day, serious symptoms of breathlessness developed. He was attended most assiduously by his brother, Dr. Hugh Walsham, and by Dr. H. Pfeiffer, whilst on two occasions Sir Lauder Brunton travelled from Switzerland to see him. The symptoms showed no signs of abatement and at his own earnest desire he was brought to England on Sept. 25th. His friends, Sir Lauder Brunton, Dr J. F. Goodhart, and Dr. F. de Havilland Hall, were unceasing in their attentions, but in spite of all that could be done he sank gradually and died peacefully in his sleep in the early morning of Oct. 5th. He married in 1876 Edith, the elder daughter of Joseph Huntley Spencer of Hastings, and had no family.

Perhaps the most marked features of Mr. Walsham's life were his fixity of purpose and his untiring industry. In physical appearance he must very closely have resembled his great predecessor at St. Bartholomew's Hospital, Dr.

WILLIAM JOHNSON WALSHAM, F R C S

William Harvey, the discoverer of the circulation of the blood. Indeed, the description of the one applies equally to the other. "A man of the lowest stature ...... rapid in his utterance, choleric." Yet he was beautifully made and in perfect proportion; his hand so small that he could easily pass it through an incision where another could not introduce more than three fingers, and he once wrote a paper to demonstrate the advantage of diagnosis by passing the whole hand into the rectum. His literary efforts were numerous and when he became busy with practice he still found time to give many addresses, some of which were published separately, whilst his works on diseases of the nose and deformities of the foot are well known. "The Theory and Practice of Surgery," which has reached an eighth edition, kept him fully employed, and there is too much reason to fear that the work of preparing the last edition proved the breaking strain for his powers already overworked. As a surgeon he was a neat and, when occasion arose, a daring operator, always ready to try new methods but usually falling back upon those to which he had accustomed himself. An accomplished mechanician he rarely troubled to use complicated appliances and was content to carry out his end with the simplest tools. His knowledge of anatomy often stood him in good stead and to the last the dissection of a difficult tumour or the avoidance of unnecessary bleeding by a knowledge of the position of the vessels was a source of unfailing pleasure to him. But if he was an excellent surgeon he was even more excellent as a teacher. A long training in the dissecting rooms and a prolonged tenure of office in the out-patient room made him a teacher of the highest order and enabled him to make all things clear to his hearers with a minimum of exertion on his own part. His hospitality and his social abilities were also of a very high order and gained him the respect and friendship of a large circle. He was especially prominent as a Freemason and attained to the position of Past Grand Deacon; he was very actively concerned in the founding of the Rahere Lodge, the first of the lodges established in connexion with the great metropolitan hospitals, and also in the founding of the William Harvey Chapter, of which he was, at the time of his death, one of the principal officers.

Mr. Walsham was buried at Highgate Cemetery on Oct. 9th, the funeral being attended by a large number of his colleagues and friends. There was also a memorial service in the church at St. Bartholomew the Less which was literally full to overflowing and was conducted in the presence of the whole staff of the Bromley Cottage Hospital who came up to London to testify to the respect in which they held their friend and consulting surgeon.

THOMAS JAMES PICKBURN, M.D., C.M. ABERD., M.R.C.S. ENG., L.S.A.

DR. THOMAS JAMES PICKBURN died suddenly at his consulting rooms, College-street, Sydney, just after seeing a patient. He had been in failing health for some time Dr. Pickburn was born in London in 1846 and was the son of Mr. J. T. Pickburn, founder and original proprietor of the London *Daily Chronicle*. His education was begun at the Aylesbury Grammar School and completed at the University of Aberdeen. His medical studies were pursued at St. Bartholomew's Hospital, London. After a successful course the deceased obtained the diploma of L.S.A. Lond. in 1868 and the degree of M.B. and C.M. Aberd. in the same year. Dr. Pickburn arrived in New South Wales some 35 years ago and began the practice of his profession at Braidwood. He was subsequently at Terara and was also assistant to the late Dr. Steer Bowker, M.L.C., at Newcastle. After spending a year in practice at Walcha he left for England where he took his M.D. degree. Upon his return to Sydney Dr. Pickburn established himself in College street, where he practised for the past 25 years. For the last six years he was in partnership with Dr. A. Maitland Gledden. The deceased gentleman was for some years honorary physician at St. Vincent's and Sydney Hospitals He was twice married and leaves a widow and a numerous family.

LONGEVITY.—The local newspapers report that a Mrs. Ann Howells, of Tonna, near Neath, is 106 years of

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THE
ELEVENTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

THE FOURTH SECTION.

Lead Poisoning.

AFTER the lengthy discussion on ankylostomiasis the Fourth Section took in hand the question of lead poisoning. Seven reporters had been appointed and their reports were printed separately. In fact, this was the method, or rather the lack of method, that prevailed throughout. On hearing that various reporters had been appointed to deal with each question it was natural to suppose that, for instance, the seven reporters on lead poisoning would issue a joint report giving the points and the recommendations on which they were all agreed. Instead of this each reporter issued a report of his own. It represented only his individual opinion and naturally there was a great deal of repetition, for the various reporters frequently travelled over the same ground. Then the section, instead of having to vote on some motions that represented the joint opinions of the reporters, found that it had to select from seven different sets of motions or recommendations. At the same time, it must be confessed that this was probably inevitable, as the reporters lived too far apart to be able to meet and to agree. In this case, for instance, two of the reporters live at Liège, while the other five reside at Bordeaux, Turin, Arnsberg in Germany, Newcastle-on-Tyne, and Selmeczbanya in Hungary.

Dr. THOMAS OLIVER in his able report presented a good description of the position of the problem in England and the recent attempts to improve the condition of the lead glaze in the hardware and porcelain making. Addressing the section, Dr. Oliver pointed out the similitude of the symptoms of lead colic and those of appendicitis. Then he explained that while employed in works where lead was used the workmen seemed to acquire an immunity which they lost if they ceased to work for some time, and therefore fell ill on returning to work. He agreed with the proposals which other reporters had made that all persons engaged in the manipulation of lead should be examined medically. If once attacked by the effects of lead such persons when cured should not be allowed to return to the work as they acquired a predisposition to further illness of this nature. The anæmic also should be forbidden to work in trades where lead was employed. When appointed by the Home Secretary to investigate the matter in Staffordshire he had recommended that only leadless glaze should be made. In this he was strenuously opposed by the manufacturers, yet he could demonstrate that it was quite practical at least in many if not in all cases. The manufacturers maintained, however, that it could not always be done as cheaply as when lead was used. In France, where the question was more advanced than in England, there had been a strong agitation in favour of zinc. The evidence given in England by the house painters and decorators showed that they were still in favour of white lead, but in many cases the French law prohibited the use of lead and the French engineers found that oxide of zinc was as good. He thought that the use of special drinks should not be encouraged as it produced a false sense of security. Finally, Dr. Oliver alluded to the prevalence of miscarriages among the women employed in the manipulation of lead.

Dr. FIRKET, reporter from Liège, spoke as to the necessity of improving the methods of drawing away the vapours or smoke from the smelting works.

Dr THISQUEN, the other reporter from Liège, pointed out that in Belgium statistics seemed to show that miscarriages were much more frequent among women who worked where lead was used than among those employed in the linen weaving or flax trades. But in the former case only married women were questioned, while in the latter case the unmarried women were included, and these had good reason not to record all the cases of miscarriage that occurred. It was a matter on which trustworthy statistics could not easily be obtained.

Dr. GLIBERT spoke as to the danger of the zinc smelting works where sometimes half the workmen suffered from anæmia. Yet these were people who lived in rural districts, [illegible] their own [illegible] joy good health, Also they were fairly well paid. But though the distillation of zinc was done as in the laboratories, the apparatus was not so carefully made. Leakages occurred and there was much smoke. In all this smoke there was oxide of carbon. The workmen, therefore, suffered from want of oxygen, and there was also arsenic in the ore. Then the lead and the zinc works were often side by side, so that what mischief the one failed to accomplish was caused by the other. Also there was a doubt as to what were the earliest symptoms of lead and zinc poisoning. A slight blue mark on the gum was not sufficient evidence. Mercurial poisoning and other causes produced this. The lead-like complexion might be due simply to insufficient washing, or the hæmoglobin might be lessened in the blood in proportion to the length of exposure to the influence of lead. Colic was by no means diagnostic. Cases of appendicitis had also been mistaken for lead poisoning. Therefore the recognition of the condition in the earlier stages was not always easy.

Some conversation ensued as to the presence of lead, zinc, and arsenic, and as to the category of workmen who suffered most in the smelting works, and then Dr. T. M. LEGGE, representing the British Home Office, made a very interesting speech. He first described the protective measures that had been adopted in England. The law facilitated the collection of information and yet they required still more light. Since 1895 every medical practitioner must notify all cases of lead poisoning or of poisoning from any other mineral. He was paid three francs for each notification. The managers of factories were also obliged to notify to the Home Office, but it was the medical attendant who decided whether the symptoms were sufficiently clear to justify such notification. In districts where lead was rarely employed and such cases did not often happen the local practitioner might be somewhat puzzled. To insure uniformity on all these points a memorandum was issued and sent to 2000 certifying surgeons. The latter had to examine all children under 16 years who wished to work. Dr. Legge had received in the course of four years 3000 notifications of cases of saturnine poisoning. Though Dr. Oliver thought there was at the present time a diminution in the number of cases it did not seem to Dr. Legge as satisfactory unless it continued for many years. He thought the only road of entrance for the poison was by the mouth, otherwise none of those who worked with their bare arms in lead all day long could escape. Nor was it due to dirt. It was the dust that should be suppressed. Carriage painters were poisoned by scraping off the dry paint. Nevertheless, respirators were not practical and many of the regulations suggested were old and of proved inefficacy. Dr. Legge's remarks were especially useful and appropriate when he described the independent positions of the surgeons who had to notify to the Home Office all cases of poisoning.

After some further discussion the section adopted a lengthy enumeration of precautions that should be taken. While at work it was urged that facilities should be provided for the frequent rinsing of the mouth and for gargling. More especially before eating should the mouth be carefully washed, as also the face, the hands, and the nails. Before leaving the works the workpeople should change their clothes and should not go home without first removing from their persons all trace of their work. In respect to diet the workers must avoid vinegar and acidulated articles, taking in preference that which was salt. Beer and alcohol must only be drunk in very small quantities. The workers must promptly seek medical advice even when only slightly indisposed. The factories and workshops must be kept scrupulously clean. The greatest precautions must be taken when dangerous substances had to be used. For the workpeople so engaged a dining room and a dressing room must be provided and this in a place well away from any injurious dust. All that was necessary for baths, for washing, gargling, cleaning of nails, changing of clothes, &c., must be provided. Neither eating nor drinking must be allowed in the works. The workpeople must be forced to take a complete bath at least once a week. Before employing anyone on the works the employer must demand a medical certificate of fitness. The medical men who examine the workers should be approved and authorised by the State. A special register must be kept to give a record of these medical examinations, and they should be renewed from time to time. No person should be allowed to continue working who presents symptoms of saturnine intoxication. Anyone who has suffered twice and severely from this cause should not be allowed to work where lead is used nor should any person who refuses to take the necessary precautions or who is addicted to drink be so employed. The above is but an abbreviation of the small pamphlet which was adopted as a sort of resolution. The following paragraphs represent what in England would be considered as resolutions and were also adopted :—

> The Congress expresses the desire that a regular medical surveillance placed under administrative control should be rendered obligatory i[illegible]toxication may occur and that t[illegible]ation should be compulsory. [illegible] f saturnine intoxication is still s[illegible] Congress expresses the desire that new investigations should be made in this matter and that the question be placed on the agenda of the next congress.

On the proposal of the French delegate, Dr. LEMIÈRE, the discussion on this subject was terminated by the adoption of this third motion :—

> Seeing the poisonous character of all lead compounds the Congress desires that investigations should be made in view of suppressing, wherever possible, the use of lead and demands that every encouragement should be given to all researches which have for their purpose the discovery of inoffensive substances that could be utilised instead of salts of lead and all experiments having for their object the generalisation of their employment.

Over-pressure.

Professors of the universities of Brussels, Montpellier, Turin, and Berlin, Dr. DEMOOR, Dr. IMBERT, Dr. TREVES, and Dr. ZUNTZ, had each presented a report on the very important but complex question of excessive mental strain and overwork. It is so easy to speak of strain, pressure, and overwork, but it is much more difficult to define and to divide wholesome fatigue from injurious exhaustion. What are the physiological symptoms? How can they be detected in a manner that can serve as a practical basis for legislation? When and how can it be proved that there has been an abuse of human labour force?

Dr. R. H. SALTET, professor of hygiene at the Amsterdam University, opened the debate on this subject by seeking to establish a connexion between the calories of heat and the labour force of the individual. It was generally estimated that manual workers spent three-quarters of their wages for the essential needs of their existence. What out of this went to the production of animal heat? These biological facts might supply a basis to work upon.

Dr. TREVES of Turin dealt with some of the main arguments of his report. The first difficulty was to define fatigue, how did it affect the nerve centres that governed all the acts of the worker? They must not wait till the output decreased to say that the man was tired. There was the question of the difference of energy developed and that which was utilised. Some only used a fifth of their energy and some much more to accomplish identically the same task. This should be measured. The methods tried should be applied to different trades and thus they might establish scientifically what could and what could not be done without injury to health. All scientific men sought to reduce the hours of labour.

Dr. IMBERT of Montpellier briefly related the main contentions of his report. He also insisted on physiological methods of defining fatigue and thought that such means were available, though those employed outside the laboratory could not be very precise. Dealing with ordinary fatigue, not with over-pressure, it was noticeable that the majority of accidents occurred when the workers were tired. The workman's brain saw or was conscious of the danger and would act accordingly. Experimentally it could be demonstrated how much time was required for this sort of nerve telegraphy to work. If the man was tired it worked more slowly and sometimes not quickly enough to enable him to get out of the way or to do whatever was necessary to avoid the accident that threatened him. There was much to be learnt by collecting statistics relating to labour accidents, not merely per day but above all per hour. He had collected such statistics in regard to 2000 stone workers and 1500 transport workers and the diagrams showed that there were twice as many accidents towards the end as there were at the beginning of the day. He then spoke at length as to the alteration of the muscular movements and of the method of doing a particular piece of muscular work as fatigue gained upon the worker. In a march, for instance, they had first the light, bounding, elastic step and then the dragging step of the fatigued walker. This modification might be chronicled by the use of kinematographic photography. For this no scientific instrument or even scientific knowledge was required. In the kinematograph they might find the means of recording and of proving the existence of over-pressure.

Professor **ZUNTZ** of the Berlin University thought that when *fatigue was produced by excessive muscular effort* there resulted a disturbance in the circulatory and respiratory systems. This was followed by trouble in the digestive and urinary organs and the most exact measure of the extent of the fatigue could be obtained by the comparative analyses of gaseous exchanges that took place before and after the work. They had to study the difference in the amount of the gases, the carbonic acid, the vapour and the secretions generally of the worker. The combustion of such gases increased in performing the same work when the worker was tired. The careful observation of the pulse, the increasing elongation of the systole, and the reduction of the diastolic pause were excellent criterions of fatigue. When they had a loss of weight caused by the fact that the activity of the digestive [illegible] in the same proportion as the [illegible] r proof that the work was excessive. When the enforced excess of work was very marked then it was the kidneys that should be more especially observed. The appearance of albumin and of cylindroids in the urine showed that there had been over-pressure, and if this be the only cause of these symptoms then they would generally and rapidly disappear when the patient was enabled to enjoy sufficient rest.

Mademoiselle J. **JOTEYKO**, M.D., demonstrator of physics at the Brussels University, spoke next and her observations were listened to with marked attention, for it was known that this lady had devoted much thought to the study of the subject before the section. Mademoiselle Joteyko first insisted that it was "the duty of all concerned not to allow persons to engage in work for which they were manifestly unfit." It was surprising how this obvious advice *was very widely disregarded. Children should be examined* while quite young with a view of determining what they were fit for. In such examination it was very necessary to take into account the condition of their nervous systems. For such purposes there already existed laboratories in Brussels, Paris, and Berlin. For instance, there were many trades which involved a special strain on the eyesight. Before entering these trades were the eyes of the person concerned tested? There was in this no difficulty, the eyesight could easily be tested. Then, also, those who worked by the piece could be carefully and usefully observed. Certainly the spirit of emulation tended to defeat the accuracy of such observations. Excitement and emulation might cause quite an exceptional amount of work to be done and this without any apparent strain. But this did not last. It was efficacious only in so far as *it was exceptional. The workers soon settled down to a* constant output under constant mental and physical conditions and then they could estimate whether this output was more than was good for them. Also they must take into account the effect of machinery; the rhythm of a machine was more injurious than muscular movements.

At this stage the discussion was adjourned and on its resumption Dr. **DEMOOR** of Brussels pointed out the great difference between the experiments made with the aid of instruments and machinery in a laboratory and every-day toil in a workshop or factory. Fatigue manifested itself in a score of different ways To examine one or two details did not prove anything. If the economist showed there was a better output as a result of an eight hours day than of a ten hours day the physiologist would conclude that this was nature's law, but the physiologist judged from a totally different standpoint. *To establish a comparison he would* want to experiment on persons who had each of them the *same strength, the same food, the same home, the same air,* and, above all, the same psychological conditions. To get all this was quite impossible, but they had statistical evidence; there were the death-rate and sick-rate, only these were collective and did not deal with individual dispositions. From all this they must not conclude that nothing could be done; but the sociologist must not expect the physiologist to supply him with precise data that would apply to everyone and would enable the legislator to say so much work might be allowed and no more. The laboratory observations must be transported to the workshop The medical attendant could estimate the vitality of the individual and say whether he was equal to the average strength necessary in each trade.

Dr. **GLIBERT** of Brussels argued that they might take it as a basis that if the production of animal heat exceeded the power of recoupment then injury was done. Maret had shown that in walking the expenditure was great at first, then it was reduced, and again later it was augmented. This was quite different from the work of a machine. They did not need individual statistics, but averages, and if on an average evil results accrued in a particular trade it was a clear proof that the hours of labour should be reduced.

Dr. **DEJACE** wanted to know what constituted capacity to labour. Medical men were asked for certificates to that effect. Of course, a child aged 14 years was not fit to do a pitman's work but he might do some other work.

Dr. **IMBERT** said that heat was a residue not a factor in movement. It was to be found at the cessation of the contraction of the muscles. A primitive energy had made the muscle contract. Work was an expenditure of energy which produced the exterior and visible labour. When the effort concluded the heat then occurred as a residue of the effort. They could not as scientific men give figures and say how many hours should be taken off from the week's work in different trades. The matter must be studied not in the laboratories but in the trades themselves. The investigator must quit his laboratory and go into the factory. He proposed that this should be done and reports as to the results should be submitted to the next congress.

Dr. **TREVES** replied that to some extent this had been done. A man manipulating a weight of ten kilogrammes for a fixed time showed no sign of fatigue. It was only when his nerve strength was tested that it became evident that he was affected. When set to do the same work with a six-kilogramme weight the nerve action was not affected.

Mademoiselle **JOTEYKO** observed that some were predisposed to consumption; it was evident that they should not be allowed to work where there was a great deal of dust. Further, she protested that mathematical calculations should *not be set aside in spite of the errors. They had not mathe*matically estimated cerebral fatigue. However erroneous collective figures might be when applied to individuals the mean was useful as applied to a class.

M. **FONTAINE** (civil engineer) pointed out that especially in piecework the best group of workers set the pace. They produced the maximum without over fatigue but the inferior workers to keep up to this standard did over-work. The only limit in their case was collapse. What, however, was meant by the term *sermenage* (over-pressure)? One muscle or set of muscles might be over-worked; that was not over-pressure. All that was needed was not to stop work but to change the sort of work. Over-pressure was excessive nervous strain, not over-muscular effort.

Dr. **IMBERT** thought they might say that there was overwork when a night's rest did not suffice to re-establish the *normal conditions.*

Dr. **JULES FELIX** (Brussels) protested that they need not, under the pretext of being very scientific, seek to create unnecessary difficulties. They had experimental methods, they could judge with the aid of instruments and also by simply watching the workers. There was a state of fatigue which did not amount to actual illness but which should nevertheless be studied medically, for the real object was to act before illness set in. The speakers had sought to define various categories of fatigue but everything was interdependent. The fatigue of the muscle affected the brain and the brain-worker felt muscular fatigue. Bertholet and Claude Bernard had demonstrated that nothing could be done without the expansion of physical energy and to-day they had to take measures so that in the struggle for bare existence on the one side and the greedy gold-grabbing on the other *should not produce a serious deterioration of the race.*

Dr. **TREVES** said that over pressure was the spending of *more energy than was assimilated.*

Mademoiselle **JOTEYKO** argued that if they could define over-pressure that would show they knew all about it. The utility of the discussion was, on the contrary, due to the fact that they did not know. They might say that over-pressure existed when the effects were injurious. Mosso defined it as a condition when with greater effort less was produced. Also it might undoubtedly be proclaimed that there was over-pressure where the usual rest did not suffice to efface all the effects of the work.

At last the discussion terminated and after a good deal of conversation the following motions were carried:—

1. That in all countries where no such institutions exist a special medical service should be established to watch over the workers.

2. At the legal age for beginning to work the worker must produce a medical certificate of physical aptitude.

3. The Fourth Section considers that, in consequence of the insufficiency of the scientific knowledge at present possessed, it is not yet possible to supply an absolute basis for the organisation of labour in regard to fatigue.

4. The Fourth Section expresses the desire that there should be inscribed on the agenda of the next congress the study of fatigue in one or several selected trades; this study should be made with the aid of the different methods actually known and particularly by noting the attitudes assumed during work and by complete medical observations.

5. In view of the realisation of the preceding resolutions, it is extremely desirable that the Governments should facilitate in the largest measure possible the studies in regard to professional and trade-created fatigue.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

University of Liverpool: Civic Celebration.

IN celebration of the inauguration of the University of Liverpool the Lord Mayor, on Oct. 5th, entertained at a banquet in the town-hall the Earl of Derby, the Chancellor, and a large number of representatives of other universities interested in education. The gathering numbered 160 and included (besides Lord Derby) Lord Kenyon, representing the University of Wales; the Lord Bishop of Liverpool, the Bishop of Bangor, Sir Alfred L. Jones, K.C.M.G., the Vice-Chancellor of the University of Cambridge, Sir William M. Banks, the Vice Chancellor of the University of London, and several mayors of neighbouring towns. The Lord Mayor, in an interesting speech tracing the origin of the University of Liverpool, proposed "The University of Liverpool," which was replied to by the Earl of Derby. His lordship said that the aspirations of their University were great—he would say illimitable. Having recited the number of chairs and lectureships connected with the University, he remarked that they represented the munificent sum of £186,300. The figures were large and if he were to say they were sufficient he would be in opposition to many around him. He hoped the governing body would endeavour to do its best to give all facilities to those desirous of obtaining degrees. The question had been asked whether the degrees of minor universities were to be regarded as having the honour of older universities. Many whose opinions were well worthy of belief thought that Germany had gained by the number of her institutions that had done much in spreading throughout the country instead of confining within comparatively narrow limits the means of learning. His colleagues and himself would endeavour to make this University what it should be. The toast of "The Makers" was submitted by Vice-Chancellor Dale who paid a warm tribute to the founders, and Sir Edward Lawrence and Sir John Brunner, two of the governors, responded. Other toasts included "The Victoria University of Manchester" and "The Universities in the United Kingdom," which were replied to by Dr. Hopkinson (Vice-Chancellor of Victoria University), the Vice Chancellor of the University of Cambridge, Lord Kenyon on behalf of the University of Wales, Professor Joly (University of Dublin), and the Rev. John Watson on behalf of the University of St. Andrews. The toast of "Education" was replied to by Professor Forsyth of Cambridge and Sir H. F. Hibbert, the chairman of the Lancashire education committee. The proceedings closed with the toast of "The Lord Mayor," which elicited the remark that a son of the Lord Mayor was the first student entered in the books of the new University.

The Medical Profession in Liverpool and St. Luke's Day.

The third annual service to members of the medical profession will be held on St. Luke's Day, Oct. 18th, which this year falls on a Sunday. The Ven. Archdeacon Madden has kindly granted the use of St. Luke's Church for the occasion. The sermon will be preached by the Right Rev. Dr. Jacob, the Bishop of St. Albans. All the necessary arrangements have been completed and there is every expectation that St. Luke's Church will be well filled by members of the medical profession (for whom the middle aisle will be reserved), by their wives and families, medical students, nurses, and the general public who will occupy the side aisles and west gallery. As on the occasion of the last two anniversaries, a collection will be made on behalf of the medical benevolent fund.

Health of Liverpool: Low Death-rate.

The death-rate of the city has not been so low for a number of years. The medical officer of health reported to the meeting of the health committee held on Oct. 8th that the death-rate was 17 6 per 1000 of the inhabitants, as against 21·9 per 1000 at the same period of last year. Small-pox has nearly been stamped out as there are only 21 patients in the corporation hospitals. Typhus fever is rather prevalent, there being at the present time 34 cases in hospital. There are 50 cases of typhoid fever, 38 cases of diphtheria, and 466 cases of scarlet fever in the hospitals. The committee expressed congratulations on the exceedingly low death-rate of the city and the approaching disappearance of small-pox cases.

Proposed New Corporate Public Baths.

The proposed new civic salt-water baths to be built at a cost of £75,000, the plans of which are awaiting the sanction of the city council, will be among the finest in the country. The accommodation will consist of one swimming bath 150 feet by 50 feet, a second one 75 feet by 40 feet, and one 60 feet by 30 feet for ladies; 125 private slipper, spray, and hydropathic baths; two suites of Turkish baths, one to accommodate 56 males and the other for 18 females; and also two suites of Russian baths for males and females. Between 500 and 600 bathers will be accommodated at the same time. The baths will be erected on the site of the present ones at the pierhead and the plans point to a very handsome edifice.

Birkenhead Borough Hospital: Opening of the Nurses' Home.

On Sept. 26th the nurses' home in connexion with the Birkenhead Borough Hospital was formally opened by Sir Elliott Lees, Bart, D.S O., M.P, in the presence of a large gathering of ladies and gentlemen interested in the institution. The proceedings, which took place in a large marquee erected at the side of the home, were presided over by Mr. Egerton K. Laird. The chairman briefly called on Alderman W. T. Fiddes, one of the oldest members of the committee, who gave a sketch of the institution since its foundation 75 years ago. He said that the present building was given to the town by Mr. John Laird in 1862, at which date he was the Member of Parliament for Birkenhead. Three wards were built and 25 years ago the late Mr. William Laird enlarged the building. Like all others the hospital had had a chequered career, generally being impecunious. A great deal had been done for it by benevolent townsmen, while Alderman Shaw, during his year of mayoralty (1895) stirred up the public to such an extent that £700 were produced to wipe off the debt and £100 were added to the list of subscriptions. In 1897 Mr. John Pennock, the then mayor, raised a fund of about £4500; £3200 were devoted to the cost of the public ward, Mrs. John Laird giving a large sum for furnishing the whole of the new building. From that time to 1900 the public were allowed a little peace but in the latter year further appeals were made for a new home which were met with exceeding generosity. For the furnishing and decorating of the magnificent dining and day rooms the committee was indebted to Mrs. William Laird and to the corporation, which had dealt liberally with the committee in the disposal of the site for the new home, grateful thanks were also due. Sir Elliott Lees was then called upon to declare the home open and, in doing so, he said that it had been suggested to him that, as he would that day meet many of his most influential constituents, it would be a good opportunity to declare his views upon the fiscal question. He could say, sincerely, that they were prepared to support preferential treatment of the sick and he earnestly hoped that the nurses might get adequate protection in their new home. To that he could add that they would welcome free imports from every quarter of the globe in the shape of subscriptions and donations He expressed confidence that the new home would materially strengthen the potentialities for good of the hospital. He then formally declared the building open. The new building, which is at the rear of the hospital proper, is L-shaped in plan, the entrance being from Livingstone street. It is very compact in design and of handsome appearance, being faced with grey brick and red Ruabon moulded brick. There are two floors, the ground-floor rooms including a large dining hall and nurses' day room which have been furnished by Mrs. William Laird in memory of her late husband to whom they are dedicated and his portrait and a brass tablet are placed in the dining hall. The two rooms can be thrown into one as a large assembly room. There are over 20 bedrooms for the nurses and domestic staff, a sitting room for nurses, store room, pantry, &c. Special provision is made for egress in case of fire, the ventilation is well provided for, and the building is fitted throughout with electric lights the cost of which has been defrayed by Mr. E. K. Laird.

Professor Sherrington and the University of Toronto.

At the invitation of the University of Toronto Professor C. S. Sherrington, F.R.S., of the University of Liverpool, opened, and delivered the inaugural address at, the newly built medical school of the University of Toronto which now possesses one of the finest medical schools in the world. On this occasion the University of Toronto conferred upon Professor Sherrington the honorary degree of LL.D.

Oct. 13th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Typhoid Fever at Bridgend.

THE prevalence of typhoid fever in Bridgend, which is one of the oldest towns in Glamorganshire and has a population of about 7000 persons, has been commented upon yearly in his reports to the urban district council by the medical officer of health (Mr. Wyndham Randall). In the year 1898 there were as many as 49 cases and five deaths and in 1901 there were 32 cases and two deaths. The disease has occurred in almost every month of the year and not only during the autumn and early winter. Mr. Randall has repeatedly told the sanitary authority that he considered the cause of the disease to be in the soil which had long been liable to pollution. Badly paved yards, too, in his opinion, added their quota to the liability to local infection. Until recently there was no general system of sewerage in the town and what sewers existed were defective, the houses being provided with pail closets and cesspits, but there has now been completed a new outfall sewer discharging into the sea about five miles from the town. During 1901 the water-supply of the district was placed under suspicion and the bacteriological examinations made at the Cardiff and county public health laboratory were not at all satisfactory. In the early part of this year, therefore, Dr. H. Timbrell Bulstrode made an inspection of the locality on behalf of the Local Government Board and in the report which has just been issued by the Board Dr. Bulstrode indorses to a great extent the opinion of the medical officer of health, though he considers that certain facts which he has ascertained in the course of his investigations may point to contamination of the water. He advises that the present source of supply should either be abandoned or subjected to adequate filtration. The latter course is being adopted by the water company.

Gloucestershire Health Report.

During the six years 1894–99 a statistical summary of the annual reports of the district medical officers of health in Gloucestershire was prepared by the chairman of the sanitary committee of the county council. A more extended summary was made in the two subsequent years by Mr. G. H. Fosbroke, the county medical officer of Worcestershire, and for the year 1902 a report has been made by Dr. J. Middleton Martin who has been appointed medical officer to the county while retaining his appointments as medical officer of health of the urban and rural districts of Stroud. The administrative county had a population at the middle of 1902 of 332 460, and there was a birth-rate during the year of 28 6 per 1000. The death-rate was 14 2 per 1000 but corrected for age and sex distribution this latter rate was only 12 8 per 1000. The position of the county as regards provision for the isolation of cases of infectious disease is far from satisfactory. In 12 of the 37 sanitary districts with an aggregate population of nearly 73,000 persons there is no isolation accommodation at all and in many of the remaining districts the accommodation is quite inadequate. Dr. Martin suggests that the county council should contribute towards the cost of erecting suitable hospitals in the county. In the section dealing with schools Dr. Martin urges the great importance of giving lessons in hygiene and advises that all teachers appointed in the future should be required to show a reasonable knowledge of hygiene and that lessons in elementary hygiene should be given in all schools, more particularly to the older girls.

Memorial to the late Mr. Charles Highett.

On Oct. 3rd the Lord Mayor of Bristol formally opened a boys' club in St. Werburgh's, Bristol, which has been erected as a memorial to the late Mr. Charles Highett, M.R C.P. Edin., who was mayor of Bristol in 1892. The Lord Mayor also unveiled an excellent portrait of the deceased, underneath which was the inscription on a stone tablet: "To the glory of God and in memory of Dr. Charles Highett who died April 20th, 1896."

Poor-law Conference at Exeter.

At the Poor-law Conference which has just been held at Exeter a considerable time was occupied in discussing the treatment of the feeble-minded. The general opinion seemed to be that the Commissioners in Lunacy should facilitate the establishment of separate institutions for the treatment of imbeciles, the view being expressed that these institutions would be less expensive than lunatic asylums, that the comfort of the inmates would be greater, and that their training would be more easily carried out.

Oct. 13th.

IRELAND

(FROM OUR OWN CORRESPONDENTS.)

Meath Hospital and County of Dublin Infirmary.

THE opening meeting for the winter session took place at the Meath Hospital on Oct. 12th, when an address was delivered by Sir Philip Smyly, one of the surgeons to the institution. On the motion of Sir J. W. Moore, seconded by Sir Lambert H. Ormsby, President of the Royal College of Surgeons, the chair was taken by Sir Francis R. Cruise. Sir Philip Smyly in his address alluded to the serious loss the hospital had sustained by the death of Sir William Stokes who sacrificed his life for his country but not before he had made a high name for himself as a surgeon and perpetuated the reputation of his father, William Stokes, who long ago, with Graves, had made the Meath Hospital famous. The hospital is, of course, one of the oldest in Ireland and this year completes its third jubilee.

Death of Mr. John Roche, M.D., M.Ch. R.U.I.

A cablegram announcing the death of Dr. John Roche has recently been received from Heidelberg, South Africa, where he was staying on a visit to his son. Dr. Roche was for many years a well-known resident in Kingstown. He was highly popular in the district and much respected. He was a distinguished graduate and prizeman of the Royal University of Ireland and in 1885 obtained the degree of D.Sc. R.U.I. Dr. Roche served in the Indian Medical Service for many years and was the author of numerous contributions to medical literature. He was a justice of the peace for the county of Dublin.

Infectious Diseases in Belfast.

The second attempt of the public health committee of the city of Belfast to get the guardians to convert the Belfast workhouse fever hospital into a district hospital and to utilise it for the period during which their own city fever hospital (three years) will be in process of building has ended, as might have been anticipated, in another failure, the following motion having been carried by 23 votes to three:—

> That this board fully recognises the urgent need of additional accommodation for the treatment of infectious diseases, but begs to

The leader of the minority stated that if the debate had the object of making the corporation do what it should he for one would be perfectly satisfied. The public health committee is now *in statu quo* and must either take the old Royal Hospital or build temporary infectious wards at Purdysburn where the new infectious diseases hospital is to be built.

Forster Green Hospital, Belfast.

At a meeting of the supporters of this hospital held on Oct. 10th it was reported that during the past nine months 150 cases had been treated, 71 men and 79 women. It has been decided to fit up an apparatus whereby the Roentgen rays can be used for diagnosis and treatment. Through the help of Mr. Forster Green and other friends a debit balance of £336 2*s.* 11*d.* has been wiped out. The beds have been all occupied and those in the open air are most liked by the patients.

Belfast Lunatic Asylum.

The authorities of the Belfast Asylum have been using the emergency buildings erected at Purdysburn by the city corporation for small-pox patients, but a letter was received by the asylums board on Oct. 12th to the effect that the inspector of lunacy objected to this because wood-lined buildings were dangerous, especially in the winter months, owing to the risk of fire from heating and lighting. The board is to convey and to remove the 50 patients from these buildings. Evidently the experience of Colney Hatch has frightened the asylum control authorities.

Armagh Asylum.

At the monthly meeting of this asylum board held on Oct. 12th the report of the inspector of asylums was read, showing that the average capital cost of maintenance during the year ended March 31st, 1903, was £21 4*s.* 6*d.*—a proof that no complaint could be made on the score of expenditure. The inspector suggests a plan to get rid of the overcrowding. It has been decided to provide looms for the patients to work, a plan that has been introduced with success into the Richmond Asylum as well as into five other county asylums in Ireland.

Irish University Education.

The air is again full of rumours in reference to coming legislation in the next session of Parliament with regard to Irish university education. Some think it will take the form of a Roman Catholic university, while others assert that a scheme is "cut and dried" for the turning of the University of Dublin into a national university with three affiliated colleges, Trinity College, Dublin, a new fully endowed Roman Catholic college in Dublin, and Queen's College, Belfast. Whatever shape the measure may ultimately take everyone believes that preliminary steps are being taken in the matter.

The Royal Victoria Hospital, Belfast.

The winter session 1903-04 is to be inaugurated so far as clinical teaching is concerned in Belfast by an opening address at the Royal Victoria Hospital on Oct 22nd, to be given by the chairman of the medical and surgical staff, Dr. J. Walton Browne. Since the end of the summer session the removal to the new hospital has taken place; the arrangements there are excellent for treating the patients and for clinical teaching.

Oct. 13th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

A New Treatment for Infantile Gastro-enteritis.

M. Henri de Rothschild, who founded a very well-appointed dispensary for infants, has there made a study of gastro-enteritis, a disease which is so fatal in infants that during some weeks of the year it brings about a mortality of 200 per week. On Oct. 13th M. de Rothschild stated at the Academy of Medicine that despite all the treatments which he had employed he had never been able to bring the mortality below 50 per cent. When, however, acting on the advice of M. Roux and M. Metchnikoff, he had treated his patients with skimmed milk to which 10 per cent. of lactic acid had been added the malady was nipped in the bud and between June 1st and Oct. 1st he had treated 14 cases at his dispensary, all of which had recovered.

The International Sanitary Conference at Paris.

Following on the recent International Conference in Venice, another conference, to round off the regulations to be taken against plague and cholera in Europe and the East, has just met at Paris, commencing on Oct. 10th. The conference was due to an invitation addressed to the Powers by Italy. M. Barrère, the French Ambassador to Italy, who presided over the Paris Conference in 1894 and who was the representative of France at the conference held at Venice and at Dresden, presided over the French delegates at this conference. No information of the proceedings of the conference has been communicated to the press up to the time at which I write, so I presume that nothing of importance has been accomplished.

The Inspection of Butcher's Meat.

Paris is greatly excited at the present moment over the sale of butcher's meat. Animals intended for food are killed in the municipal abattoirs where the carcasses are examined by special sanitary examiners who inspect all the viscera and have the right to prevent any meat being taken out of the abattoirs for delivery to the meat salesmen for sale to the public if the animal from which such meat comes shows on examination of its viscera that it has been affected with tuberculosis, glanders, or measles (*ladrerie*). On this side of the matter therefore the health of Paris is carefully looked after for no animal may be killed in any shop for the sale of meat within the town of Paris itself and all private slaughter-houses have for some time past been abolished. Unfortunately, however, there exists in the central markets a traffic in meat which comes from various quarters—that is to say, from the suburbs, from the provinces, and even from abroad. Such meat is brought into Paris already cut up and the sanitary inspectors exercise supervision over it in the central market and can seize and order to be destroyed any pieces which they suspect, but this inspection can only deal with the question as to whether the meat is fresh or not, for once the viscera have been removed it is not possible for a superficial examination to eliminate the existence of such diseases as tuberculosis. The animals from which such meat comes have been killed in the country, in private abattoirs, where the carcasses are subjected to no examination, for sanitary inspection is only organised in the big towns and it would be impossible to organise a corps of sanitary inspectors for each village where any butcher is at liberty to kill his own beasts. This fact is well known to cattle merchants and butchers who very often buy up sick beasts which would certainly be refused at the public abattoir, send them into the country, kill them there, and bring them back in separate pieces as meat for sale. As they buy up these sick beasts at a very low price they make handsome profits at the expense of the public health. The daily journals have begun to discuss this question and the authorities of the municipal abattoirs are much concerned to find that so many little private slaughter-houses, which have been suppressed in Paris, are undergoing resurrection in the country around.

Oct. 13th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Small-pox in Bosnia and Herzegovina.

AN interesting account of the occurrence of small-pox in Bosnia was recently given by Dr. Kobler of Serajevo in a paper read before a German society in that town. Before they were occupied by the Austrians in 1878 both Bosnia and Herzegovina were Turkish provinces and small-pox was everywhere endemic in them. Many elderly persons are still to be seen not only pitted with the disease but presenting cicatrices on the eyes and on the extremities. Statistical records of small-pox were commenced in the year 1880; in 1888 there were 14,177 cases and in 1889 there were 13,540 cases. Compulsory vaccination was introduced in 1883 and from that time till 1898 there were 772,691 vaccinations performed. The prevalence of the disease has fallen rapidly since the introduction of compulsory vaccination and in the year 1892 there was not one case in Bosnia and Herzegovina. Small centres of the disease still occur, the number of cases not exceeding 20 or 30 per annum. These places are only on the Turkish and Montenegrin frontier and the patients are immigrants from countries where vaccination is not compulsory. In Bosnia and Herzegovina there are some qualified females engaged in civilian medical practice who are of great use in the compulsory treatment of infectious diseases in the houses of Mahomedan women and in the harems, as male practitioners are never admitted in such circumstances, and the Mahomedan population have shown much opposition to the measures taken by the authorities for the prevention of small-pox and syphilis.

Syphilis in Bosnia and Herzegovina.

A paper on the distribution of syphilis was also read before the society by Dr. Glück of Serajevo. He said that the disease was brought into the country by the Osmans and that it became widely spread throughout the whole population. It was not uncommon for all the inhabitants of a village or small town to be infected. The Turkish surgeons treated it by fumigations with calomel, a method which is still in use as a domestic remedy in families Before the Austrian occupation in 1878 syphilis in Bosnia had the character of a malignant disease The ulcerative stage was early in its appearance, firstly in the skin and mucous membranes and then in the bones It was in most cases impossible to find the initial lesion and the frequency of extragenital syphilis was very remarkable The second stage of the disease presented itself as a syphilide under the form of lichen and similar symptoms attended a relapse of the second stage The frequent occurrence of this peculiar manifestation was due to malnutrition, anæmia, and predisposition to tuberculosis A question of very great interest was the extreme rarity of nervous sequelæ such as tabes dorsalis and general paralysis of the insane Notwithstanding the wide diffusion of syphilis in an endemic form only seven cases have been observed among the native population of Bosnia in the course of seven years The lunatic asylums are well filled, but in all of them only four cases have been found

The University of Vienna

During the last summer semester only 803 students (including 17 women) and 442 post graduate visitors attended the lectures and laboratories This diminution is due both to the depressed condition of the medical profession in Austria and also perhaps to the fact that the professors who used formerly to be [illegible] all passed away The [illegible] ceived the title of profes[illegible] Dr Edouard Spiegler (dermatology), Dr Max Sternberg (medicine), Dr Michael Grossmann (laryngology), and Dr Tandler (anatomy) Dr Karl Walko has been admitted as *privat docent* in the German University of Prague

The death of Dr Alexander Rollett, professor of physiology in the University of Graz is announced A pupil of Brücke he worked principally at the physiology and histology of the red blood corpuscle and the muscular and connective tissue He discovered the delomorphous and adelomorphous cells in the gastric glands at the same time as Professor Heidenhain of Breslau

Oct 12th

EGYPT.

(FROM OUR OWN CORRESPONDENT)

The Summer in Egypt

OLD Egyptians declare that the climate of Egypt has changed considerably in the last few years and their contention gains ground by the experience of the summer just drawing to a close The heat was never at any time excessive, though in July and August the humidity was much above the average The worst part of the summer is always in the early months, especially in June with its dry heat and dust, but as the year progresses a cool northerly breeze sets in every evening at sundown, almost with the regularity of a trade wind, thus insuring a cool night and a chance of refreshing sleep to enable one to stand the heat of the morrow With the improvement in the system and the increased area of land under irrigation the humidity has naturally increased, but at the present time, usually the dampest season of the year, the weather is splendid and so cool that it is no longer possible to dine in the open air unless well wrapped up For the benefit of your readers in England it may be recorded that there has hardly been a drop of rain in Cairo this year, and there has been nothing in the weather of this summer that might not have been quite well borne by the Englishman who has never crossed the Channel There has been the usual average of typhoid fever, which generally assumes the severe tropical form, but nothing like an epidemic although the mortality has been rather higher than usual The Nile flood has been a good average one this year and with skilful management of the barrages and careful regulation of the supply of water to the different canals there will be only a very small area of cultivable land unirrigated The cotton crop, however, is not good as the sun has not been hot enough or the air sufficiently dry to open the pods thoroughly To think that it is not hot enough in Egypt !

The Coming Season

The prospects for the coming season are exceptionally good There is no plague to speak of and there is no cholera (Unberufen !) and the weather promises to be delightful though rather colder than usual In an ordinary year visitors to Egypt should arrive in Cairo about the middle of November and should go straight up the river to Assouan Wady Halfa, or even Khartoum, if they wish it This is the best time for the river and on their return, from three to six weeks later, Cairo is at its best and remains until March a thing of beauty and a joy for those who love gaiety, excitement, and beautiful weather It must be remembered that December and January are quite cold enough for big fires and English winter clothing and that after the beginning of the New Year it is very cold on the river It is a great mistake to imagine that Egypt and Cairo particularly, is always hot Early in April at the latest the tourist should begin to wend his way homewards, *viâ* the south of Europe, if possible, although sometimes the weather in Cairo does not become very hot until May is well advanced This year from all appearances if the winter is to be at all in keeping with the summer, these dates should be put nearly a month earlier as regards the commencement of the season

Deaths in the Profession in Egypt

It is with sincere regret that I have to record the death of Dr George Atkins Rountree who has recently done such good work in Lower Egypt Dr Rountree qualified in Dublin in 1882 and first came to Egypt several years ago as medical officer to Cook's Nile steamers His next appointment was that of surgeon to the hospital of the firm at Luxor and less than two years ago he was appointed assistant inspector to the sanitary department of the Egyptian Government In this position his genial manners and tact and his capacity for hard work made him a most trustworthy officer and endeared him to all with whom he came in contact While on duty at Damietta he caught a severe cold and after lying very ill at Tantah for some days he was brought to Cairo with grave symptoms of lobar pneumonia He held his own for some time but finally died from heart failure on August 12th His death came as a great shock to his friends by whom he was universally liked and respected Mr A T White whose death took place less than a month later, was educated at Westminster Hospital and had done good work in Uganda before coming to Egypt to take charge of the hospital erected by Sir John Aird in connexion with the building of the Assouan barrage On the termination of this work Mr White was appointed an assistant inspector in the sanitary department and was stationed at Assiout After much hard work in this post, as a result of which his health, never very robust, suffered considerably, he went to Suez on holiday duty Here he contracted diphtheria in its most virulent septic form and in spite of antitoxin, tracheotomy, and the most careful treatment he died in less than a week from the tim[illegible]efinite symptoms He leaves a [illegible]ided for but it is hoped that w[illegible] gratuity and the efforts of friends she may be enabled to make both ends meet Mr White was a veritable slave to his work and his name must be added to the ever lengthening roll of those medical men who have met their death in the discharge of their duty He contracted the disease from a native patient whom he was treating

The Rarity of Appendicitis and other Surgical Abdominal Conditions in Egypt.

In these days, when the question of the increase in appendicitis is being so much discussed, it is interesting to observe that in a personal experience of over 2000 major operations among native Egyptians in the last five years only three cases of appendicitis have been met with It is a matter for conjecture whether this is due to the rigid [illegible]nned foods are eaten in [illegible] approaching a strenuous [illegible] the poorer classes and [illegible] to cold, in contrast [illegible]y the richer population, but to a surgeon in England it must be difficult to realise that in five years only three cases of appendicitis have occurred in a general hospital practice Abdominal conditions generally requiring surgical interference are also rare, for there are practically no gastric ulcer, no intussusception, and no malignant disease of the intestine By far the most usual form of intestinal obstruction is strangulated hernia, in fact, with the exception of three cases of volvulus of the descending colon and sigmoid flexure all other forms are quite curiosities Tuberculous peritonitis and tuberculous masses in the omentum or infection of the mesenteric glands are also very uncommon, but whether this is due to the small quantity of milk taken by the natives—for except for breast-feeding for the first year and sometimes two years a child rarely has milk of any kind—it is difficult to say. It is interesting to note, also, that bovine tuberculosis is not at all common in Egypt.

Cairo, Oct. 3rd.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Small-pox in Tasmania.

THE outbreak of small-pox at Launceston continues. The disease is in a virulent form, many of the cases being hæmorrhagic. Mr. J. S. C. Elkington of Melbourne has been engaged by the Government to advise generally regarding the outbreak. Every case is removed to the isolation hospital as soon as recognised. "Contacts" are placed in a special building, after a carbolic bath and a change of clothing. The old clothes are burnt and the houses are thoroughly disinfected. The outbreak has cost the Government about £10,000 already and is still causing an expenditure of about £270 a week.

Vaccination in New South Wales.

The President of the Board of Health has presented a memorandum to the Premier of New South Wales on vaccination. After pointing out the beneficial effect that vaccination had had in other countries the memorandum proceeds to show that New South Wales is the only State in the Commonwealth where there was no compulsory Vaccination Act. It might be inferred from that that the people were opposed to compulsory vaccination, but the only available evidence went to show that they held no strong opinion on the subject. They appeared not to oppose it but merely to neglect it. Whenever there was a small-pox scare the numbers who applied for vaccination for themselves or their children rose remarkably. During the epidemic in Sydney in 1879–80 the vaccinations voluntarily done amounted to nearly 60,000, although before and afterwards the number of people vaccinated in the years when there was no scare was so small in proportion to the total population as to be insignificant. There seemed to be no reason, therefore, for expecting that any great opposition would be offered to the passage of an Act rendering vaccination and revaccination compulsory, and as this State was not merely exposed to disaster itself from the want of such a law, but was consequently a perpetual menace to every other State, the Board of Health would once more urge that the introduction of a Vaccination Bill and the establishment of a calf lymph station should be taken into practical consideration without delay.

Leprosy in Victoria.

A Chinaman, carrying on business in one of the main streets of Melbourne, was found to be suffering from leprosy. He was promptly isolated and his shop and dwelling were placed under police surveillance. Arrangements have been made to convey him back to China in a cargo-boat.

Treatment of Consumptives.

Nothing has yet been done towards providing further hospital accommodation for cases of advanced consumption in indigent circumstances in Melbourne. Mr. Kronheimer has given a sum of £5000 towards the equipment of a building for the purpose but difference of opinion has arisen as to how and where it should be expended. The committee of the Austin Hospital for Incurables, where cases of tubercle are now received, proposed that the money should be spent in additions to the buildings there. To this the residents of Heidelberg, where the hospital is situated, object. The Minister of Health has recommended that Mr. Kronheimer's gift should be used to erect buildings at the Home for Indigent, Aged, and Infirm at the Royal Park. The inspector of charities reported to the Minister that the cost of maintaining consumptive patients at the Government institution—the Home—would be much less than at the Austin Hospital. The inspector has obviously based his estimates on a wrong conception. He has overlooked the fact that advanced cases of consumption require constant nursing and expensive nourishment and drugs.

The Age of Consent in New South Wales.

Dr. C. K. Mackellar has introduced into the Legislative Council of New South Wales a Girls' Protection Bill, the object of which is to give protection to girls under 17 years against all those offences under the Crimes Act which now applied to girls under 14 years of age. He pointed out that in England the age of protection was 16 years, in Tasmania 15 years, in New Zealand, Victoria, and West Australia 16 years, in South Australia 17 years, while in many American States it was 16 years and in others 17 years and 18 years. In New South Wales girls between 14 and 17 years were not sufficiently protected as regarded their personal purity by the law as it stood. The law presumed that a girl under 21 years was unable to make any legal or binding contract in regard to her property because she was presumed to be incapable of intelligently guarding her own interests in such transactions, but when she came to deal with her own personal purity, which should be as dear to her as life itself, she was afforded no protection whatever after attaining the age of 14 years. The unanimous opinion of the medical men whom he had consulted was that the sexual maturity of girls was practically the same in New South Wales as in European countries, and a very distinguished authority had said that there was little difference in this regard between India and England, the idea that warm latitudes had a great influence being erroneous. The statistics showed that in the ten years from 1893 to 1902 in New South Wales 4575 illegitimate children were born of girls 18 years of age and under, 2028 being 18 years old, and he thought that if any argument were wanting in favour of an alteration of the law they had it there. The Bill, with some minor amendments, was carried and reported for the third reading.

Declining Birth-rate.

The Government of New South Wales has appointed a Royal Commission to inquire into the decreasing birthrate of the State. It is issued to the following gentlemen: Dr. Mackellar, M L.C (president); Sir Henry Norman MacLaurin, M.D., LL.D., M.L.C.; Mr. Octavius C. Beale, president of the New South Wales Chamber of Manufactures; Mr. Timothy Augustine Coghlan, I.S.O, Government statistician; Mr. Joseph Foreman, M.R.C.P. Edin., &c.; Mr. Edmund Fosbery, C.M.G., Inspector General of Police; Mr William Arthur Holman, M L.A., barrister-at-law; the Right Hon. Thomas Hughes, Lord Mayor of Sydney; Mr. Edward William Knox, general manager, Colonial Sugar Refining Company, Limited; Mr. George Stanley Littlejohn, president of the Sydney Chamber of Commerce; Dr. John Brady Nash, M.L C.; and Dr. Robert Thomson Paton, Government Medical Officer.

Charges against Dr. Ramsay Smith, Coroner at Adelaide.

Dr. W. Ramsay Smith, who, it will be remembered, originally came to Adelaide to act as medical officer to the Adelaide Hospital when the honorary staff resigned and was subsequently appointed coroner and inspector of anatomy, has been suspended by the Government. He is charged with infringing the Anatomy Act which it is his duty to administer. A board, consisting of Commissioner Russell, Mr. Buchanan, Master of Supreme Court, and Dr. Torr, is inquiring into the charges. These are practically all of the same kind—viz., removing skulls, skeletons, and other anatomical structures from dead bodies and sending them to Edinburgh. As regards several of the cases the charge was that Dr. Smith improperly took advantage of his position as coroner to obtain skulls. Also that skeletons were taken from bodies contrary to law and not for purposes of anatomical study by medical students in the State. Voluminous correspondence was put in, including a long letter from Dr. Smith to the Chief Secretary, in which the following statement occurs:—"I further declare that the procuring, preparation, and export of these anthropological and other specimens was with the knowledge and concurrence of the Governments of the day. If I am to be charged and suspended, I think, as a matter of equal justice, the following gentlemen should be similarly treated:—Professor Watson, pathologist; Dr. Angas Johnson, assistant physician at the hospital; Professor Stirling, consulting surgeon; Dr. Rogers, honorary physician; Dr Verco, assistant gynæcologist; Dr. Smeaton, medical superintendent; Dr. Cleland of the asylum; and Dr. Stewart of Port Pirie. I do not suggest that these gentlemen have done anything wrong, but if they have not neither have I. I deny the illegality and assert that the charges are untrue. I have done nothing illegal, either at common law or under the Anatomy Act, or otherwise. In whatever has been done I have followed the practice recognised and adopted, not only in this State but throughout the civilised world I have not been guilty of any conduct rendering me unfit to remain in the civil service What I have done has always been for the advancement of science, for the alleviation of human suffering, and for the efficiency of my profession I cheerfully invite the fullest investigation of the whole subject "

The British Medical Association and the Australian Natives' Association in New South Wales

In May last a women s branch of the Australian Natives' Association was formed in Sydney and registered under the Friendly Societies Act Its main object was to be the attendance of its members by a medical woman The position of medical officer to the branch was advertised and a number of applications were received Dr Harriett Biffen was appointed The council of the New South Wales Branch of the British Medical Association then officially informed Dr Biffen, who is a member of the British Medical Association, that she could not accept the position as the Women's Native Association was one "inimical to the medical profession" As all the medical women in Sydney are members of the British Medical Association the Women s *Native Association is practically boycotted*

Hospital Affairs

Once more the scandalous quadrennial election of the whole of the honorary staff of the Melbourne Hospital has been held It had been hoped that this time the various positions would not be contested and that in this way the evils of the system of election by the subscribers would be avoided At the last moment, however, Dr H Maudsley, who holds the position of honorary physician at the Alfred Hospital, announced his intention of seeking election as physician to the Melbourne Hospital His friends, including ladies who are the leaders of society, made an energetic personal canvass of the subscribers with the result that Dr Maudsley was elected by a majority of about 60 votes out of some 2000 polled Dr J R MacInerney, who is thus displaced, has ably served the hospital for many years, first as physician to out patients and for 12 years as physician to in patients , he is an excellent clinical teacher and an expert bacteriologist, possessing a most completely equipped private laboratory It is to be hoped that the result of the election will cause a strenuous effort to be made once more to alter the system of election Proposals to this end have been recently made In February last representatives from the charitable hospitals of Victoria met in conference in Melbourne and appointed a committee to consider the Hospitals Act of 1890 with a view to suggest alterations and amendments in it. That committee has now finished its work and its report contains several important recommendations having for their object the better operation of hospital legislation In the first place it is suggested that the Hospital and Charities Act should be repealed and that a new statute should be enacted embracing all hospital, charitable, and philanthropic institutions in the State Recommendations are made for amendments which will more closely define the status of contributors, life members, and executors for voting purposes and include in the category representatives or nominees of persons or organisations, so that charitable hospitals may amend their by-laws and thus enable such representatives to take part in the allocation of contributions and in the management of hospitals to which the organisations subscribe Honorary office bearers should be elected by contributors personally present (not by proxy) who had paid their subscriptions In order to prevent imposition upon charitable hospitals by those able to pay for their treatment the committee thinks that the section dealing with this subject should indicate clearly

of the most important questions dealt with in the report has reference to the method of appointing honorary officers and the committee has formulated a scheme to apply only within a ten mile radius of Melbourne where the present system is felt to be objectionable alike to committees, subscribers, and the medical profession The scheme involves the appointment of an electoral college, consisting of four medical *practitioners, four representatives of metropolitan* hospital committees, and one member elected by Melbourne University The applications for honorary positions should be considered by such college together with two committee men from the particular hospital concerned The term of office for each member of the college should be ordinarily four years, subject to a graduated scale in the case of those first chosen Honorary medical officers elected by the college should hold office for seven years with the privilege of re election and should retire at the age of 60 years in the case of surgeons and 65 years in the case of physicians A resolution passed by an absolute majority of a hospital committee should be sufficient to remove a medical practitioner from the honorary staff —At the forty-sixth annual meeting of the Women's Hospital, Melbourne, the report presented stated that during the past year 442 patients received treatment in the infirmary department and 1489 in the midwifery department , 1105 infants were born in the hospital The out patient department showed a slight falling off, there being 1043 new patients, as against 1050 in the previous year The necessity for extra accommodation had been apparent for several years past, but the realisation of the hopes of the committee in that direction seemed to be as far off as ever Some patients had been awaiting admission for many months There was still the burden of an overdraft, notwithstanding that the annual expenditure had been reduced by about £580 The total income for maintenance was £7920, including the sum of £1000 transferred from the reserve fund very early in the year It scarcely reflected credit on the public that the institution should be in the unique position of not having any endowment fund The debt on the building fund had increased to £521 Funds were being collected for the enlargement of the cottage for the maintenance of cases of septicæmia the consent of the Board of Health having been obtained to extensions to cost £497 —At the annual meeting of the subscribers to St Vincent's Hospital, Melbourne, the Lord Mayor (Sir Samuel Gillott) presided and in opening the meeting called attention to the unfinished state of the new hospital, for which £15 000 had been subscribed *The foundations of the building had been* laid at a cost of £4000 which left £11,000 available for its completion Tenders had recently been called for this but the lowest tender for the work had been £28 000 It was therefore necessary to formulate some scheme for the augmentation of the fund in order that the erection of the buildings might be proceeded with The annual report showed that during the year 7879 patients had been treated, of whom 439 were in patients The total receipts for the year were £3080 of which £733 came from regular annual subscribers, £458 from the contributions of patients, and £310 from the St Vincent s Ball The expenditure was £2921, so that the year's operations reduced the bank overdraft to £533. Subsequently it was decided to form a league to collect the funds necessary for the building of the new hospital

Sept 8th

Medical News.

SOCIETY OF APOTHECARIES OF LONDON —At the Primary Examination the following candidates passed in the subjects indicated —

PART I

Biology —R Rowlands Glasgow
Chemistry —L W Bradshaw, Leeds and H T Roberts, St Mary s Hospital
Materia Medica and Pharmacy —R J W McKane Leeds and R Rowlands Glasgow

PART II

Anatomy —S F H Everill and G W Hassall Birmingham R D Neagle St Mary s Hospital and A Shepperd Guy s Hospital
Physiology —S F H Everill Birmingham C E Pring Royal Free Hospital A Shepperd Guy s Hospital , and G W Simpson, Bristol

UNIVERSITY OF DURHAM —At the Convocations held on Sept 26th and Oct 3rd the following degrees and diploma were conferred —

Dc

B S Durh
Doctor in Medici
Wills Blomfiel
Burton M R C
Eng L S A ,
Lond George
L S A Francis
F R C S Edin ,
L R C P Lond
L R C P Lond
Edin Charles
Oswald Samuel

Addenda from the Thirteenth Session and an Index. Vols. I.—XIV., inclusive. Edited by Walter Lester Carr, M.D. Price not stated.

Wright, John, and Co., Bristol.

The Swedish System of Physical Education: its Medical and General Aspects. Expanded from a Paper read before Members of the British Medical Association. By Theodora Johnson, Principal of the Swedish Institute, Clifton, Bristol. Second edition. Reprint. Price not stated.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

Bacque, William Jules, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 2 District by the Bath Board of Guardians.

Bowlby, Anthony A., C.M.G., has been elected Surgeon to St. Bartholomew's Hospital

Boycott, A. E., M.B., M.Ch. Oxon., has been appointed Gordon Lecturer in Experimental Pathology to Guy's Hospital Medical School.

Edwards, Robert Thos., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Aberystwyth Infirmary and the Cardiganshire General Hospital.

Flynn, Ignatius Joseph, M.D. Irel., has been appointed Officer of Health at Bunbury, West Australia.

Harris, John, M.D. Aberd., J.P., has been appointed a Member of the Licensing Court for the District of Newcastle, New South Wales, Australia.

Henry, Claud Dawson, M.B., B.S. Camb., has been appointed Police Surgeon at Wellington, New Zealand.

Knight, Wilfred, M.B., L.R.C.P.E., has been appointed a Resident Medical Officer to the Durban Hospital, Natal.

Llewellyn, Rees Frank, M.B., M.Ch. Syd., has been appointed Government Medical Officer and Vaccinator at Braidwood, New South Wales, Australia.

Mould, G. W., M.R.C.S., L.S.A., has been appointed Consulting Medical Officer and Superintendent of the Welsh houses connected with the Royal Asylum, Cheadle.

Mould, Philip G., M.R.C.S., L.R.C.P. Lond., has been appointed *Second Assistant Medical Officer, Royal Asylum, Cheadle.*

Nash, Hon. J. B., M.D. Edin., M.L.C., has been appointed a Director of the Sydney Hospital, New South Wales, Australia.

Parkhurst, Arthur Usk, L.S.A. Lond., has been appointed Junior House Surgeon at the Carnarvon Hospital, Kimberley.

Rennie, G. E., M.D. Lond., has been appointed Director of the Carrington Hospital, Camden, New South Wales, Australia.

Sankey, R. H., M.A. Oxon., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the Radcliffe Infirmary, Oxford.

Scowcroft, Walter, M.R.C.S., L.R.C.P. Irel., has been appointed Resident Superintendent of the Royal Asylum, Cheadle.

Scurfield, Harold, M.D. Edin., has been appointed Medical Officer of Health for the City of Sheffield.

Smyth, S. R., L.R.C.S.I., L.K.Q.C.P.I., has been appointed District Medical Officer and Public Vaccinator at Moora, West Australia.

Stiff, H. H., M.B., B.C. Cantab., has been appointed Certifying Surgeon under the Factory and Workshops Act for the Bury St. Edmunds District of the County of Suffolk.

Sutcliffe, John, M.R.C.S., L.R.C.P. Edin., has been appointed Senior Assistant Medical Officer, Royal Asylum, Cheadle.

Waterhouse, A. T., M.B., B.Ch. Oxon., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Radcliffe Infirmary, Oxford.

West, Samuel, M.D. Oxon., has been elected Physician to St. Bartholomew's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Birkenhead Union Infirmary, Workhouse, and Sanatorium.—Resident Assistant Medical Officer. Salary £120 per annum, with board, washing, and apartments.

Bridgnorth and South Shropshire Infirmary.—House Surgeon. Salary £100, with board and lodgings.

British Home and Hospital for Incurables, Streatham, S.W.—Medical Officer. Salary £120 per annum.

Cardiff Infirmary.—Assistant House Surgeon. Also Assistant House Physician. Each for six months. Salaries at rate of £75 per annum, with board, washing, and apartments.

Chelsea Hospital, Cale-street, S.W.—First Assistant Medical Officer. Salary £120 a year, rising to £150, with board, apartments, coal, gas, and washing.

Chelsea Hospital for Women, Fulham-road, S.W.—*Physician.*

Cheshire, Royal Asylum, Cheadle.—Third Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, attendance, &c.

Chesterfield Union.—Medical Officer and Public Vaccinator. Salary [illegible] oduce £250 per annum.

D[illegible] **Dispensary.**—House Surgeon, unmarried. [illegible] and lodging.

Evelina Hospital for Sick Children, Southwark.—House Physician and House Surgeon. Salary £80 respectively, with board, residence, and washing. Also Assistant House Surgeon. Salary £70, with board, residence, and washing.

Glasgow District Asylum, Woodilee, Lenzie.—Junior Assistant Medical Officer. Salary £125, with board, lodging, washing, &c.

Gosforth City Asylum, Newcastle-upon-Tyne. Assistant Medical Officer, unmarried. Salary £140 a year, rising to £160, with apartments, board, and laundry.

Hospital for Consumption and Diseases of the Chest, Brompton.—Resident House Physician, for six months. Honorarium of £25.

Hospital for Sick Children, Great Ormond-street, W.C.—House Surgeon, unmarried, for six months. Salary £20, with board and residence.

Hospital for Women, Soho-square, London, W.—House Physician for six months. Salary £30.

Lister Institute of Preventive Medicine, Chelsea-gardens, S.W.—Studentship for Research in the Department of Bacteriology. Value £150.

London County Council.—Medical Officer to employés in the Metropolitan Boroughs of St. Marylebone and Paddington.

Manchester Northern Hospital for Women and Children, Park-place, Cheetham-hill-road.—Honorary Surgeon for Children.

Middlesex Hospital, W.—Second Assistant in the Clinical and Bacteriological Laboratories. Salary £100 per annum.

New Hospital for Women, Euston-road.—Clinical Assistant (female).

North-Eastern Hospital for Children, Hackney-road, N.E.—*House Physician for six months. Salary at rate of £80 per annum,* with board, residence, and laundry. Also Assistant Physician

Nottingham Children's Hospital.—House Surgeon, unmarried, for six months. Salary at rate of £100 per annum, with board and residence.

Nottingham General Hospital.—Assistant House Surgeon. Salary £100, with board, lodging, and washing.

Public Dispensary, 59, Stanhope-street, Clare-market. Resident Medical Officer, unmarried. Salary £105 per annum, with apartments, coal, and gas.

Rousay and Egilshay, Parish of.—Resident Medical Officer. Salary £51 per annum.

Royal South Hants and Southampton Hospital.—House Surgeon. Salary £100 per annum, *with rooms, board, and washing.*

Samaritan Free Hospital for Women, Marylebone-road, N.W.—Clinical Assistants.

Smyrna Mission and Hospital (Church of Scotland Jewish Mission).—Medical Missionary. Salary £250, with dwelling-house.

St. Olave's Union, Shirley Schools, Wickham-road, near Croydon, Surrey.—Medical Officer. Salary £150 per annum. Dentist. Salary £50 per annum.

South Uist Parish (Northern Division).—Medical Officer. Salary £70.

Sussex County Hospital, Brighton.—House Surgeon, unmarried. Salary £140 per annum, with board and residence.

Taunton and Somerset Hospital, Taunton.—Resident Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and laundry.

Throat Hospital, Golden-square, W.—Resident House Surgeon. Salary £50 per annum, with board, residence, and laundry.

Westminster Hospital.—Assistant Pathologist and Curator of the Museum. Salary 100 guineas a year.

Wolverhampton and Staffordshire General Hospital.—House Physician. Salary £100 per annum, with board, lodging, and washing.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies for Certifying Surgeons under the Factory Act at Bray, in the county of Wicklow, and at Greenodd, in the county of Lancaster.

Births, Marriages, and Deaths.

BIRTHS.

Byers.—On Oct. 7th, at Dreenagh House, Belfast, the wife of Professor Byers, M.D., of a son.

Vinter.—On Oct. 12th, at Udal Garth, Torpoint, R.S.O., Cornwall, the wife of Sydney G. Vinter, M.R.C.S., of a daughter.

Windsor.—On Oct. 9th, the wife of Charles William Windsor, M.A., M.D. Cantab., Royston, Herts, of a son.

MARRIAGES.

Lock—Graves.—On Oct. 13th, at St. Giles' Church, Cambridge, by the Rev. Canon Cunningham, D.D., Fellow of Trinity College, assisted by the Rev. A. J. Hunter, M.A., rector of Swanton Morley and Rural Dean, and the Rev. J. F. Buxton, M.A., vicar of the parish, John Lewis Lock, M.A., M.B., B.C. Cantab., of Uxbridge, eldest son of the Rev. J. B. Lock, Fellow and Bursar of Caius College, to Beatrice Marion, youngest daughter of the Rev. C. E. Graves, Fellow and Tutor of St. John's College, Cambridge

Mounsey—Russell.—On Oct. 7th, at Sandyford parish church, Glasgow, by the Rev. D. H. Paterson, Airdrie, assisted by the Rev. James A. Campbell, Troqueer, Dumfries, George Harold Mounsey, M.B., C.M. Edin., 49, Calthorpe-road, Edgbaston, Birmingham, to Helen Greenlees, eldest daughter of James Russell, Banker, Airdrie, N.B.

DEATHS.

Symes.—On Oct. 13th, William Sandham Symes, L.R.C.P., L.R.C.S. Irel., of The Terrace, Chesterfield, in his 54th year.

Tuke.—On Oct. 12th, at *St. Thomas's Home, St. Thomas's Hospital*, George J. A. Tuke, Major, R.A.M.C., in his 46th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

CORDITE-EATING.

THE October number of the *Journal of the Royal Army Medical Corps* contains an interesting article by Major J. W. Jennings, R A.M.C., on what he believes to be a hitherto unrecorded form of intoxication—namely, cordite eating by soldiers. His attention was first called to the subject during the recent operations in South Africa and as an experiment he tried one fourth of a strand from a Lee-Metford cartridge which he kept in his mouth and sucked for two minutes. On being then taken out its diminution in size was scarcely appreciable and yet he experienced the most racking splitting headache that he ever felt in his life, together with hammering and ringing noises in his ears; the headache lasted quite 36 hours.

Cordite has a sweet, pleasant, pungent taste and is only slightly soluble in the mouth. Its physiological action is similar to, but slower than, amyl nitrite—namely, throbbing headache, flushing of the face, visible carotid pulsation, giddiness, disordered action of the heart, &c. Roughly, its percentage composition may be said to be nitro-glycerine 58 parts, gun cotton 37 parts, and mineral jelly five parts. Acetone is used as the solvent but does not enter largely into its composition. The thick pasty mass is then forced through a die under heavy pressure. Each Lee-Metford cartridge contains 60 cylindrical strands of cordite and each strand measures one and a quarter inches in length and one-twenty-fifth of an inch in thickness. The following train of symptoms are commonly presented by a man who has eaten cordite. The conjunctivæ become of a yellowish tinge and the eyes assume a glazed appearance, giving to the face a wild expression. The features are drawn The skin of the body presents a dirty yellowish or brownish or sallow tint. Constipation and occasional slight fever prevail, periodical or almost constant headaches, loss of appetite, marked thirst, dulling of mental faculties, and great desire to sleep. When taken in stick form (from four to ten or more strands) cordite rapidly produces a violent splitting headache in the temporal and occipital regions, the headache continuing all day.

Taken in solution, as with tea, cordite appears to produce an almost immediate exhilarating effect. If many have partaken of the beverage all begin talking at once, seemingly anxious to inform each other of everything that happened to them since their birth. This condition lasts perhaps two or three hours, when sleep overcomes them. If beer is in addition consumed during the excited state it produces quarrelsomeness and leads to acts of violence. If the cordite is mixed with beer and consumed as an ordinary drink a glassful will produce intoxication in a man who could normally consume perhaps as much as from four to six pints without exhibiting a trace of having done so. From five to ten strands taken with beer or tea produce heavy sleep followed by a stupor lasting approximately from five to 12 hours. While in this state the man is with difficulty awakened or persuaded to rise. The awakening is accompanied by a severe, dull, boring headache, slight facial muscular twitchings, and protrusion of the eyes. When fully awake the man often seems not to realise his surroundings and a question may have to be repeated two or three times before he understands it. Major Jennings gives the two following examples of the extraordinary effects produced by cordite. In consequence of some trouble with the native assistants the caterer of the non-commissioned officers' mess of an irregular cavalry corps had no food ready when supper-time arrived but he nevertheless rang the supper-bell. The men came and took their seats before an empty table, whereupon the caterer told them with the utmost gravity that there was a nice large roast on the table and everything else which constituted a good supper, adding, "I know you can't see, but I can, so dig in." The non-commissioned officers made their supper off some tinned food which the canteen sergeant provided and the caterer slept the sleep of cordite. In another case a dozen or more men having taken their usual dose of beer and cordite were all talking and shouting at once, when one of them proposed a war dance. It was a still though bitterly cold night and the men were in their underclothing. In spite of this they took their candles outside their tents, placed them upon the ground, and proceeded to execute a series of antics which clearly indicated them to be under the influence of some drug. No amount of persuasion on the part of the non-commissioned officers or anyone else had any effect on them. They kept it up for 20 minutes or half an hour until they sank exhausted on the ground. In his article Major Jennings quotes at considerable length a series of statements made both to him and to Lieutenant Morton, R.A.M C, by soldiers who had been eating cordite.

WANTED—A PLACE FOR AN UNQUALIFIED ASSISTANT.

"X. Y. Z." writes:—

> "Can you give me any advice as to getting employment for an excellent assistant who has been with me 17 years and now is refused situations because he is 60 years of age? He is a married man and leaves me because I have now a partner."

The General Medical Council has clearly defined the uses to which it is permissible to put unqualified assistants and by so doing has made the demand for their aid very limited. We have always felt very sympathetic towards the men who were thus thrown out of employ, even while we recognised that the action of the General Medical Council was good and taken in the interests of the medical profession and public alike. If, however, a medical man is looking for an unqualified assistant we think that 17 years of excellent character held by "X. Y. Z.'s" late employé might well counterbalance his weight of years. After all, a man of 60 has many years of good work left in him, and it is quite likely that anyone who accepted this veteran's services might find that in doing a kind action he had benefited himself.

THE WILLIAM CADGE MEMORIAL.

IN THE LANCET of Sept. 26th, p. 893, we published an appeal for subscriptions towards the erection of a memorial to be placed in the cathedral at Norwich to the memory of the late Mr. William Cadge. The following is a list of those who have already responded to the appeal:—

LONDON.—
Lord Lister.
Sir William H. Broadbent, Bart., K C.V.O.
Sir Thomas Smith, Bart., K.C.V.O.
Sir Anderson Critchett.
Sir Henry G. Howse.
Sir Hugh R. Beevor.
Mr. Jonathan Hutchinson
Mr. Reginald Harrison.
Mr. Christopher Heath.
Mrs. E. Garrett Anderson
Mr. Rickman J. Godlee.
Mr. A. Pearce Gould.
Dr. Robert Barnes.
Professor Howard Marsh.
Mr John Langton.
Mr. H. T. Butlin.
Mr. A. W. Mayo Robson.
Brigade-Surgeon Lieutenant-Colonel D. T. Keegan, I.M.S. (retired).
Dr. H. Charlton Bastian.
Dr Constantine Holman.
Dr. John H. Galton.
Dr. Ernest W. White.
Dr. E. A. White.
Dr. T. Duka
Mr. G. S. Bates.
Dr. Charles Firth, Gravesend.
Dr. Dudley W. Buxton.
Mr. A. E. J. Barker.
Mr. H. Work Dodd.

NORWICH:—
Sir Peter Eade.
Sir Frederic Bateman.
Dr M. Beverley.
Dr. S. J. Barton
Mr. H. S. Robinson.
Mr. S. H. Burton.
Dr. S. H. Long.
Dr. F. W. Burton-Fanning.
Mr. Donald D. Day.
Mr. H. A. Ballance.
Mr. W. H. Day.
Mr. Charles E. Muriel.
Mr. Joseph Allen.
Mr. F. Long.
Mr. G R. Master.
Mr. H. C. Nance.
Mr. T H. Morse.
Dr. J. Fielding.
Dr. H. Watson.
Mr. F. Preston.
Dr. H. Cooper Pattin.
Mr H. F. White.
Mr. E. W Everett.
Mr. H. Watson Turner.

NORFOLK:—
Mr. Mayo Yarmouth.
Mr. W E. Wyllys, "
Mr. W. J. Wyllys, "
[illegible]
ham.
Mr. W. E. Soffe, Scarning.
Dr. T. B. Dyer, Brundall.
Dr. Pembroke R. J. B. Minns, Thetford.
[illegible]
Dr. C. A. O. Owens, Long Stratton.
Mr. F. Clowes, Stalham.
Dr. S. Hamill, Burnham Market.

SUFFOLK—
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Mr. J. C. Worthington, "
Mr. H. B. Walker, "
[illegible]
Dr. [illegible], Ipswich.
Dr. J. C. Thresh, Chelmsford, Essex.
Professor John Chiene, C.B., Edinburgh.
Mr. T. W. Drinkwater, Edinburgh.
Professor T. Clifford Allbutt, Cambridge.
[illegible]
Dr. [illegible], Weymouth.
Dr. H Briggs, Southport.
Dr Walker, Peterborough.
Dr. Bridgwater, Uckfield.

The list will be closed at the end of this month. Subscriptions may be sent to Dr. M. Beverley, Norwich.

THE MOTHER'S FRIEND.

MR. S. BRIGHOUSE concluded an inquest at Earlestown on Sept. 29th upon the body of the seven weeks old son of a joiner and his wife who met with his death in the following circumstances. The baby was ailing and the grandmother having diagnosed the cause of his trouble as "wind" sent a sister of the child's mother to buy "two pennyworth of Mother's Friend." Evidence was given by a druggist from whom the family in question usually purchased it that "Mother's Friend" was sold by every druggist in the town and that they all made it up differently. It was also known as "Infant's Preservative," "Children's Mixture" and "Infant's Cordial." He for his part when asked for "Mother's Friend" sold a mixture containing one grain of bicarbonate of potassium, one grain of bromide of sodium, and water, flavoured with aniseed. On the occasion in question, however, the aunt of the deceased not being directed to go to any particular shop went to the nearest at hand, kept by a Mrs. Mee. Mrs. Mee was out but Mr. Mee took the bottle which had

Communications, Letters, &c., have been received from—

A.—M. J. Astier, Asnières, France; Messrs. Allen and Hanburys, Lond.; Achates; A. P. B. E., Dr. B. Anningson, Cambridge; Mr. Walter Asten, Horbury; Association of Physicians and Surgeons of the Society of Apothecaries, Oxford, Treasurer and *Acting Secretary of.*

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The Harveian Oration

ON

THE STUDY OF STRUCTURE IN RELATION TO FUNCTION.

Delivered before the Royal College of Physicians of London on Oct. 19th, 1903,

By W. H. ALLCHIN, M.D. Lond.,

FELLOW AND CENSOR OF THE COLLEGE; SENIOR PHYSICIAN TO THE WESTMINSTER HOSPITAL.

Mr. President, Fellows of the College, and Gentlemen,—In proceeding to discharge the duty which you, Sir, have laid upon me, and for which honour I desire to express my grateful appreciation, my course is in great measure laid down for me by the injunctions of the illustrious Fellow of this College whom we meet to-day especially to commemorate. In the deed by which he conveyed to the College in 1656, a year before his death, his estate at Burmarsh in Kent, Harvey provided that: "There shall be once every year a general Feast for all the Fellows; and on the day when such Feast shall be kept some one person of the said College shall be from time to time appointed, ... who shall make an Oration in Latin publicly in the said College, wherein shall be a commemoration of all the benefactors of the said College by name, and what in particular they have done for the benefit of the said College with an exhortation to others to imitate those benefactors and to contribute their endeavours for the advancement of the Society according to the example of those benefactors; and with an exhortation to the Fellows and Members of the said College to search and study out the secrets of Nature by way of experiment, and also for the honour of the profession to continue in mutual love and affection amongst themselves without which neither the dignity of the College can be preserved nor yet particular men receive that benefit by their admission into this College which they might expect; ever remembering that concordiâ res parvae crescunt, discordiâ magnae dilabuntur." Herein may be read the whole duty of the Harveian orator and I might occupy my hour and your attention on this, the 247th anniversary, by a recapitulation of those who have materially benefited the College by their gifts and endowments, as well as of those who by precept and example have added to the lustre of our College and have benefited mankind by their pursuance of Harvey's exhortation "to search out the secrets of nature." Not a few of my predecessors in this honourable office have with much learning and in graceful diction fulfilled their task thus; as others have preferred to consider some aspect of Harvey's work in the light of more modern knowledge; or to show how fruitful have been the methods inculcated by Bacon, which Harvey was one of the first to apply, in extending the domain of science in those branches more closely associated with our own. Others, again, have pictured for us in eloquent phrase the times in which Harvey lived and have called up to our appreciation his companions and contemporaries and the influence they exerted on the thought and progress of his age. And in this brief survey of how the theme has been treated it would ill become me to omit a reference to the masterly oration of our learned Harveian librarian who sought to show in true light the relation of Harvey to his great predecessor Galen and how mistaken some of the notions concerning that relation have been. Further, too, he has pointed out that notwithstanding a large amount of very faulty anatomical knowledge that was considerably corrected by the seventeenth century, "Galen's sources of evidence respecting the motion of the heart were the same as Harvey's—viz, comparison of structure in a variety of animals, argument from the use of these structures, observation of the living heart, and numerous experiments on animals."[1]

I am not concerned, even were it needful, again to tell the oft-told tale of Harvey's great discovery and how he demonstrated the truth thereof, for that it was that rendered his epoch-making work the glory that it is; nor yet to defend his claims to the full merits of all he did against the pretensions of those who sought to belittle it or even boldly aimed to usurp what to him alone belonged. This has been done more than once and done completely. Nothing I could say could add one iota to the justification; to attempt it were almost to cast a doubt upon its truth. Briefly would I commemorate the good deeds and the munificence of our founders.

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who also laid the foundations of our library. To him succeeded 30 years later in the office of President John Caius, whose name is perpetuated in that of a Cambridge College and who stands in especial honour in this our Fellowship as its munificent and enlightened

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of which was Harvey himself, who in his very first course (1615) set forth his views on the circulation of the blood. Also Dr. Theodore Gulston celebrated for his theological no less than for his medical learning, who bequeathed by will in 1632 £200 to the College
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College." Also Sir Theodore Mayerne ([illegible]) who left us his library including many manuscripts. Also Sir W. Paddy, first time President in 1609 and again in 1618, who bequeathed £30 to the College in 1634. Also Dr. Baldwin Hamey, senior, who also left to the College a like sum after his death in 1640. Also Dr. Baldwin Hamey, junior, "the most mu our
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imitation of Harvey he settled on the College the estate and manor of Ashlins in Essex, the proceeds from which were for the purpose, among other things, of doubling the premium to the Harveian orator and furnishing certain gratuities to the President, the remainder to be applied to the general purposes and advancement of the College. It is to Dr. Hamey's bequest that every Fellow
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[1] Harvey and Galen. The Harveian Oration for 1896, by J. F. Payne, M.D.

the College in perpetuity his patrimonial estate at Burmarsh in Kent, then valued at £56 per annum." In his will also he thus further testified his affection for the College. "Touching my books and household stuffs, pictures and apparell of which I have not already disposed I give to the College of Physicians all my books and papers, and my best Persian long carpet, and my blue imbroyedyed cushion, one pair of brass irons, with fire shovell and tongues of brasse, for the ornament of the meting room I have erected for that purpose." He further directed Dr. Scarborough and Dr. Ent to select from his library and collections such as "they shall think fit to present to the College and the rest to be sold and with the money buy better."

Passing to the benefactors of more recent date it is my pleasing duty to mention Mrs. Bradshaw, who in 1875 bequeathed £1000 in Consols to found a Lecture to be delivered annually in memory of her husband, Dr. William Wood Bradshaw a Member of this College A similar bequest was made to the Royal College of Surgeons. Dr. Gavin Milroy, a Fellow of this College, who in 1886 bequeathed a sum of £2000 to establish a yearly Lectureship in "State Medicine and Public Hygiene." Mrs. FitzPatrick, who in 1901 gave to the College under the advice of Dr. Norman Moore a sum of £200 to found a Lectureship in "The History of Medicine" in memory of her husband, Dr Thomas FitzPatrick, a learned Member of the College. Also the following donors of sums for the purpose of providing commemorative prizes or medals to be awarded by the President and Council of the College. Dr. Swiney (1844), jointly with the Society of Arts, a triennial prize of a silver cup, value £100, for the best work on Jurisprudence. Dr. Baly (1866) £400 to [illegible] rnate year for distinction in physiology. [illegible] M.D.," and not restricted to British subjects. A sum of over £400 subscribed in memory of Dr. Walter Moxon in 1886 the interest of which provides every third year a gold medal, value £30, for excellence in observation and research in clinical medicine and is not confined to Fellows or Members of the College. In 1895 Sir Hermann Weber generously presented to the College £3000 to found a prize, to be called the "Weber-Parkes prize," in memory of the late Dr. Edmund Parkes, to be awarded for the best essay on the pathology, prevention and treatment of Tuberculosis. And in 1896, due to the suggestion of our Fellow, Dr. Theodore Williams, a sum of £1000 was presented to the College by Captain Edward Wilmot Williams with the [illegible] memory of the late Dr. Francis Bisset Hawki[illegible] Fellow of the College. A gold medal is [illegible] medical practitioner who has advanced sanit[illegible]

Turning now to those whose achievements have enriched not only our College by their reflected lustre, but mankind at large by the benefit conferred and who by their intellectual labours and scientific results have gained for themselves imperishable fame, it would be wearisome and profitless to mention them merely by name. Time does not allow me to record their doings. Yet it were not decent that in the press and rush of the present day the labours of Gilbert and of Glisson, of Willis, of Young who enunciated the undulatory theory of Light, of Sydenham, of Heberden, of William Hunter, of Prout, Bright, Watson, Parkes, Jenner, Gull, Clark, and Reynolds, former Fellows of this College, should be forgotten on this occasion of the commemoration of our benefactors. Excepting such immortal discoveries as Harvey's, discoveries that mark an era and are starting points in knowledge, it is easy from our present standpoint to overlook the help that the advances made by these workers contributed to the general progress nor are those suggestions which proved to be erroneous altogether to be disregarded since in their refutation the right way often became manifest.

These are but some of those whose good deeds, whether in furthering the material prosperity of the College or adding to its reputation, deserve to be remembered as our benefactors. To commemorate, however, all such "by name, and what in particular they have done for the benefit of the College," as I am enjoined to do by Harvey, would be beyond my powers as I fear it would exceed your inclination to listen. But I should ill perform my duty in this connexion did I not "exhort others to imitate these benefactors and to contribute their endeavours for the advancement of the Society."

In attempting to comprehend the full significance of Harvey's great work on the circulation of the blood it must be recollected that he was first and foremost an anatomist, and that although his discovery and its proof were the result of observation of the actual movements of the heart and vessels and of experiments on the living animal it was by his previous knowledge of anatomy that he was enabled clearly to understand what he observed, and the perfection and, indeed, in great measure the feasibility of his experiments depended on his acquaintance with the structure of the organism he was investigating. And although the name of Harvey is for ever linked with a great and far-reaching physiological truth, one not only great in itself but if possible greater in being the starting point of physiology, and as such of a scientific pathology, it was from the anatomist's point of view that he came to enter upon the inquiry which was so fruitful in result. That a sound physiology is essentially dependent upon an accurate [illegible]edge of anatomy was as well understood by Harvey as it is at the present day. "No one," said he, "indeed, has ever rightly ascertained the use or function of a part who has not examined its structure, situation, connexion by means of vessels, and other accidents in various animals and carefully weighed and considered all he has seen." It is further to be remembered that in the early part of the seventeenth century anatomy was a science that, at least so far as the human body was concerned, had reached a very considerable degree of advancement. The teaching of Galen, who first properly appreciated the importance of physiology, full of error as it was, that had held sway for 1400 years was giving way to the more accurate work of Vesalius. His book, "Fabrica Humani Corporis," published in 1543, and his teaching at Padua marked the beginning of a new era in biological science furnishing the account of the structure of the body as a basis upon which a precise physiology was alone possible and from which a rational pathology and medicine could alone develop. The true course being thus entered upon the work was continued by the contemporaries, pupils, and successors of Vesalius, chief amongst whom were Servetus, Realdus Columbus, Fallopius, Cæsalpinus, and Fabricius, the last named being professor at Padua, whose instruction Harvey himself followed for nearly four years after quitting Cambridge in 1598. There, whilst perfecting himself in anatomy, he became more fully acquainted with such views as were held upon the circulation, modifications for the most part of the Galenic doctrine, with such objections thereto and glimpses of the truth as had been foreshadowed by Vesalius and still more even by Servetus who seems at least to have had some idea of the real nature of the pulmonary circulation.

For the first few years after his return to London Harvey appeared to have pursued his anatomical work and especially the dissection of animals. Becoming a Fellow of this College in 1607 and in the next year a physician to St. Bartholomew's Hospital he was in 1615 appointed Lumleian lecturer, the fourth holder of the office. The subject of the lectures was surgery supplemented by public dissections so arranged as to form series of courses extending over six years. But it was as an anatomist that Harvey evidently regarded himself, for in the dedication of his work "De Motu Cordis et Sanguinis" in 1628 "to his very dear friend, Dr. Argent, the excellent and accomplished President of the Royal College of Physicians, and to other learned physicians, his most esteemed colleagues" he concludes thus, "Farewell, most worthy doctors, and think kindly of your anatomist, William Harvey." In the course of the introduction to the same work the author appeals to the similarity of structure of the two ventricles as being in favour of their pursuing a similar function which was contrary to prevailing ideas. And lastly, the final chapter of his "anatomical disquisition" shows how "the motion and circulation of the blood are confirmed from the particulars apparent in the structure of the heart and from those things which dissection unfolds." "Harvey's method of inquiry was that which may be called the purely and strictly physiological method. Observing carefully the phenomena of the living body he sought in the first place, in the arrangements of the structures concerned in the facts of anatomy, for suggestions as to how the phenomena might be explained. It is this aspect of his method which brings into striking light the value of the work of Vesalius and of the school of Vesalius as the necessary preparation for Harvey's labours. Vesalius opened up the way for physiological inquiry by his exact anatomical labours ...... and his successors did little more than widen the way which he had opened up. Harvey was the first who followed up the anatomical path till it led to a great physiological truth. ...... He made no appeal to any knowledge or to any conceptions outside the facts of anatomy and the results of experiments. ...... The patient examination of anatomical features, if possible a comparison of those features in the same organ or part in more animals than one, the laying hold of some explanation of the purpose of those features suggested by the features themselves, and the devising of experiments by vivisection or otherwise which should test the validity of that explanation, that was Harvey's threefold method."[4]

I propose to consider how far the ascertainment of the facts of structure as a necessary preliminary or adjunct to experimental methods has influenced the progress of biological knowledge and what may be the limitations and extensions of the subject in that direction But I would guard myself at the same time from being supposed to assume that anatomy, however complete and precise, is of itself sufficient to furnish a physiology or knowledge of function, since in the earlier days to which I have referred when the facts of gross anatomy were well and widely known most erroneous and grotesque views were held as to the action and uses of the various organs—as indeed, the history of the explanations offered for the circulation of the blood before Harvey's time sufficiently testifies Nor do I fail to admit that much physiology more especially in recent times, has become known even with considerable approach to exactness without a corresponding knowledge of its structural basis The discovery and proof of the circulation, not only by the actual positive knowledge which it furnished, but also by the methods by which it was arrived at, did much to dispel the fanciful and absurd views held as to the other *functions of the body and thus became the starting point of* modern physiology But, as I propose to show by a few examples the full benefit of Harvey's work and indeed its applicability in explaining those other functions, was proportional to the extent of the accurate information possessed in respect to the structure of the organs by which these processes are carried out, and as fresh anatomical know*ledge was forthcoming so did truer conceptions of the living* activities develop from their observation and experimental investigation

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[4] Lectures on the History of Physiology during the Sixteenth, Seventeenth, and Eighteenth Centuries, by Sir M. Foster, K.C.B., M.D., D.C.L., secretary to the Royal Society. 1901.

The rational study of the respiratory function for example, followed much the same course as did that of the circulation of the blood The Galenic doctrine on this subject was that which Fabricius propounded in the lectures to which Harvey listened The air which was introduced into the lung by the "rough artery"—or, as we call it, trachea—was for the purpose of modifying and regulating the innate heat of the heart, of getting rid of the fuliginous vapours which resulted from this innate heat and further with the object of being conveyed by the "vein like artery" (pulmonary vein) *to the left side of the heart*, there to generate those vital spirits which the arteries carried throughout the body Although Harvey's discovery set aside at once and for ever such unintelligible nonsense as it had upset the corresponding views of the heart's action, the time was not yet quite ripe for laying the foundation of sounder principles as to the function of respiration The *state of knowledge of the anatomy of the lungs* was scarcely as far developed in Harvey's time as was that of the structure of the heart, as may be seen in the "Mannuall of the *Anatomy or Dissection of the Body of Man*" (enlarged 1642) by Alexander Read, who was a Fellow of this College as well as "Brother of the Worshipfull Company of the Barber Chirurgions"

Moreover, the significance of the movements of the chest in breathing and of their relation to the entrance and exit of the air from the lungs was but imperfectly realised If to Borelli may be attributed the first settlement of these questions on right lines, applying as he did to the problem the growing mechanical and chemical knowledge of his day, and showing as he did that the air entered the lungs as a result of atmospheric pressure as the chest enlarged by muscular contraction and further that the air inspired was actually taken up by the blood and that this was essential to the life of an animal, all of which are the facts which are at the basis of our present knowledge of the subject—if, as I say, Borelli showed this the way for his so doing was made clear for him by what had been done in explaining the true structure of muscular tissues and still more by the labours of his fellow professor at Pisa Malpighi More than 50 years after the invention of the compound microscope this observer applied it to the investigation of the tissues and had himself informed Borelli of the minute structure of the lungs how the terminal branches of the air tubes ended in closed vesicles on the walls of which the smallest blood vessels ramified forming the communication between the arteries and veins and thus supplying the completing link to Harvey's work within a few years after our great countryman's death On such a foundation of exact knowledge the further pursuance of the subject was one for the physicist and chemist and by them it has been brought to a high pitch when once the nature of the machine they had to deal with was clearly defined. Observation and experiment were profitably occupied when anatomy had cleared the ground

It was not only with the functions of respiration that Malpighi's great work on the investigation of tissue structure was concerned His labours, added to and developed by the famous Dutchmen van Leeuenhock and Swammerdam as well as by the Englishman Robert Hooke, rendered possible the satisfactory examination of the other functions, though the difficulties of the necessary observation and experiment were greater than they were in respect to the circulation and respiration. Connected with the latter, questions of a mechanical and chemical character arose more capable of being answered as the sciences of physics and chemistry were at the time being better understood While it was comparatively easy to see the movements of the heart and of the lungs in a living animal when these organs were exposed, vivisection did not render so clear the secretory activities of the glands, the changes brought about by digestion, the intricacies of tissue nutrition, and the workings of the nervous system These physiological problems were more intimately connected with the living material and were not so open to such observation or experi*mental inquiry* as was then *possible* *And it may be said* that less even was known of the structure of the organs concerned in these functions than there was of the circulatory and respiratory systems But Malpighi and his fellows showed the way to what was wanted, and as will appear the uses and workings of the structures became open to scientific inquiry with important consequences

Mention must be made, however, in further illustration of my theme of what had been done to provide truer conceptions of the nature of *muscular action* Up to the time of Vesalius and even *for some time afterwards*, the contractile power of the muscles was regarded as resident in the connective tissue sheath of the fibres, the true muscle substances being looked upon as packing Vesalius first indicated the proper rôle of this material, but it was not until more than a century later, in 1664, that Nicolas Stensen, a Dane, described (1664-67) the structure of muscular tissue as he had studied it with the microscope, and thus furnished Borelli with the anatomical grounds upon which he formulated the principles of the action of this substance, also showing that *the contractions were induced through* the nerves Although much that he taught was erroneous, being entirely dominated by mechanical conceptions of the nature of muscular contractility, the refutation of his errors showed the right lines, which was possible only on the structural basis which the microscope had supplied The most important step towards an understanding of the nature of muscular action was *taken shortly afterwards by a Fellow* of this College, Francis Glisson, whose name is more generally associated with his work on the liver and on rickets. In a treatise however, published by him in 1673, "De Natura Substantiæ Energetica" he first explained the property of muscle substance which he called irritability, the character and phenomena of which were further developed by Haller nearly a century later

Important as was the work that Malpighi did in respect to the discovery of the capillary blood-vessels and the structure of the lungs, almost if not quite as great was that which he accomplished in connexion with the *secreting glands* In earlier times the word "gland" had a wider range of meaning and included *such organs as the brain and tongue* That some of them were concerned in straining off certain serosities or humours from the blood was also generally held, but the active agents in the process were quite unknown as would naturally be the case when the intimate structure of the organs was hidden from view To the nerves this function was often attributed, but the physiology of secretion was on a par with that of the heart or the lungs, with which, of course, it was interwoven Within a few years previous to the time that Malpighi was investigating the structure of *the skin, the liver, and the kidneys, the* ducts of the pancreas and of the submaxillary and parotid glands were discovered and the position of these organs as secreting glands recognised Malpighi, in addition, showed the lobular structure of the liver and the relation of the acini to the blood vessels, and showed the general course and arrangements of the renal tubules and of the glomeruli and capsules which were named after him The instruments at his disposal did not permit him to realise the cellular constituents of these several organs, but all these researches gave the *death blow to the older conceptions as to the part* played by the nerves in the secretory processes and it was realised that the secretions were derived from the blood in its passage through the glands and were passed into the commencements of the ducts Stensen, indeed, who had discovered the submaxillary duct, seems to have had a foreshadowing of the vaso motor influence on secretion

The subject of *digestion* need not detain me; the problems with which it is concerned are so essentially chemical in nature that although in the latter part of Harvey's period and within a few years after the existence of the digestive juices as secretions of the various glands was known, their composition and mode of action on the foodstuffs were not a matter of anatomical inquiry and depended for their satisfactory investigation upon a knowledge of chemistry that was developed altogether outside the study of the living body.

Of all the functions of the body none, it would be at once admitted, is more difficult of study or more obscure in the investigation than that of the *nervous system*. None also has been the subject of cruder description or wilder explanations. That this is so would seem natural, clearly associated as nervous phenomena are with the more recondite phenomena of life and subject as their study has ever been to the influences of metaphysical speculation. At the same time, however, one, and as I conceive the most important, circumstance that has retarded the rational development of neurology has been the extreme difficulty that has existed in obtaining a precise knowledge of the actual structure of the organs which subserve the function. Even at the present day, great as are the advances that have been made, I think I should be correct in saying that less is known of the minute anatomy of the nervous centres than of any other organs in the body. Whilst it may be said that with the present means at our command a knowledge of the histology of many of the tissues has reached or almost reached its limits, the precise disposition of the multiplicity of nerves and cells that constitute the brain and spinal cord as well as the ultimate termination of the nerve fibrils in the tissues and in the centres are yet to seek. Hence it is that whilst during the period of Harvey and immediately subsequently the study of the several functions to which I have referred began to emerge from the erroneous and fanciful notions by which they were surrounded and their investigation to be started upon lines that have been followed to the present day, the phenomena of the nervous system for some time remained enveloped in the mystic obscurity that had enshrouded them with growing intensity from the earliest times, an obscurity that was if possible made greater by the lengthy and unintelligible phrases in which they were described.

The main divisions of the brain were recognised—cerebrum and cerebellum, medulla, corpus callosum, corpora striata, ventricles, and even such smaller parts as the corpora geniculata, pituitary body, pineal gland, infundibulum, and septum lucidum. The distinction into white and grey matter was also appreciated, and that the former was made up of fibres was supposed. But the structural relation of the several parts to one another was very indistinctly realised, and anything further as to minute structure was, of course, unknown. The following extract from Read's Mannuall of Anatomy, already mentioned, will serve to show what was taught in a standard text-book, as we should now call it, concerning the functions of the brain.

> Of the action of the brain. The action of the brain is this: After that the spirits and blood are discharged into the Sinus of the dura mater by the veines and arteries to temper the heat of them the brain is *ordained* (seeing it is colder than the heart) that the animall functions, which are feeling and moving may be the more readily executed. Wherefore the animall spirits seem not to differ from the vitall spirits in substance, but in qualities; viz. the temperament and attenuation; for they must be more temperate because heat doth both taint the reasons (as we may see in drunkennesse and raving) and hindereth or preventeth the motion. The spirits ought also to be more subtile because they are to passe like a thunder through the bodies of the nerves. So, as the vitall spirits are carried to the parts of the bodies by the arteries, so the animall are carried by the nerves. The animall spirits for this cause also ought to be subtill because the *reasonable soul is resident in the brain, which doth contemplate things* immateriall, as angels and it selfe.

Although this may be taken as illustrating the teaching of the day, and the work of Willis "De Cerebri Anatome" (1659) was no advance thereon, there appeared ten years later (1669) a treatise on the anatomy of the brain by Nicolas Stensen, whose investigations on secretions have already been referred to, which foreshadowed in several respects many of the discoveries made and views held a century and more later. But the special feature of this treatise as bearing on my present subject is that after pointing out the extremely slight information possessed as to the essential structures of the nervous system Stensen refused to admit, in face of the lack of all sound anatomical knowledge, any physiological deductions whatever. After pointing out a number of cases in which he shows that adequate anatomical knowledge is wanting he says, "Whence you may guess how little trust is to be put in explanations based on such a futile foundation." "I have said nothing of the use of parts, nothing of the actions which we call animal, since it is impossible to explain the movements carried out by a machine so long as we remain ignorant of the structure of its parts."[5] It was only very gradually that this ignorance was cleared up, and pending that the progress of neurology was hindered by the mystical speculations of successive metaphysical doctrines. Until the discovery of the nerve cells and their connexion with the fibres was made in the fourth decade of the last century no very sound notions on nervous function were possible.

Slowly and with many throw-backs as physiology emerged from obscurity and became established on a scientific basis the correlative subject of pathology long lagged behind in taking up a similar position. The reluctance, as it were, to regard morbid processes in the same manner as those manifested by a healthy organism was no doubt in part responsible for the delay in establishing any clear conceptions as to the nature of disease, but what was of far greater influence was the lack of any systematic observations on the appearances presented after death, anything that, in short, might be looked upon as a knowledge of morbid anatomy. Hence it was that the notions respecting disease and its working were, if possible, more fanciful than those held in connexion with the healthy body and were retained for long after the latter had been diverted on to right lines. Although isolated records of post-mortem examinations were made from time to time[6] it was not until the latter half of the eighteenth century that Morgagni laid the foundations of a scientific pathology by his work "De Sedibus et Causis Morborum" (1780) upon which a goodly superstructure was soon erected. "It stands most clearly revealed," says Virchow,[7] "in the history of pathology that the division of the body first into the larger regions (head, breast, abdomen, &c.), then into organs, then into tissues, and finally into cells and cell territories, was the first step which opened up to us the comprehension of disease." There is good ground for thinking that this comprehension would have been sooner grasped if the collection of records of post-mortem inspections which Harvey had made over many years had escaped the destruction which befell many of his papers when his house in London was ransacked during his absence at Oxford with King Charles.

From this necessarily brief sketch of the development of physiology in relation to gross anatomy it is apparent that any approach to an accurate understanding of the working of the several functions was only possible when the facts of structure were ascertained and appreciated and that when these facts were scanty fanciful and erroneous views were entertained as to the mode in which the corresponding functions were performed. With the prosecution of anatomical investigation beyond the range of the unaided vision the knowledge of the living organism and its working was by so much extended. The impetus given to the study of microscopic structure by the labours of Malpighi and his followers resulted in establishing histology—a term first used by Carl Mayer in 1820—as a specific branch of anatomical inquiry which has been pursued with ever-growing success to the present day, coincidently as the realm of gross anatomy became more and more restricted, so far as the human organism is concerned, by the very completeness of the knowledge of it. Did time permit it would not be difficult to show, as indeed has in part already been done, that as the intimate structure of the tissues became revealed, so was the way cleared for a sounder physiology whether by a more rational understanding of what observation and experiment had disclosed or by indicating the direction in which observation and experiment might be fruitfully continued.[8]

The progress of histological research has been marked by one great feature—far-reaching in its effects and of fundamental importance—the recognition of the cell as the tissue unit. And whilst this has served to give completeness to the views of tissue structure and especially of the genetic relations of the several components of the organs, it served as a fresh starting point for the investigation of biological problems, since it was recognised that the life of the organism was but the life of the cell, differing only in degree of completeness; and the full realisation of what is meant by specialisation of function being dependent on differentiation of structure became apparent. With entire appreciation of the complexity of the phenomena presented by the living cell, *Brücke 40 years ago affirmed that this must imply the* existence of some structural arrangement in the cell substance, some degree of organisation, some further stage than had hitherto been detected in the disposition of the material which subserves function. Setting aside the obvious distinction into cell contents nucleus and attraction sphere, and the separation of the first into cell protoplasm and the metabolic products thereof (such as starch, fat, [illegible] on has been [illegible] homogeneous [illegible] rous observers [illegible] this material, a view that later gave place to the assertion that it is rather to be regarded as of a reticular nature, the protoplasm form- [illegible] "the nodal points of which appear [illegible] The imperfect loculi formed by this [illegible] described as being occupied by a more fluid material. Objections were raised to this explanation and the more recent description with which the name of Bütschli is associated attributes to the protoplasm a "foam-structure, which depends upon the presence within a uniform ground mass of a large number of extremely fine vacuoles lying almost at the limit of microscopic visibility, and so close together that their walls consist of relatively thin lamellæ" (Verworn). But these and several other views as to the intimate structure of the living cell protoplasm which describe it "as being composed of two substances, one of which is disposed as a contractile net according to some, as a relatively rigid framework according to others, or as free filaments; or whether it be built up of a more solid material and of a more fluid material which occupies the minute spaces or vacuoles which are hollowed out in the former,"[10] have not met with universal acceptance and there are still those who regard these relatively coarse indications of structure in cells as the results of post- [illegible] To such the living pro [illegible] and its "peculiar and [illegible] ated with molecular rather than with molar structure." What is said as to the cell contents applies also to the nucleus in which a reticular or meshwork appearance is described by some, as others would regard the actual living condition as one of [illegible] question of the intimate struc- [illegible] lasm must at present be left, so [illegible] investigation by the microscope and its accessories. But whilst fully recognising that with further improvments in method and in means this problem will be solved, it none the less seems certain, consistently [illegible] as to the nature of the cosmos, [illegible] be able to penetrate there will [illegible] d a molecular or atomic structure for the understanding of which other branches of scientific inquiry must be employed. "The organism," says Virchow, "is not an individual but a social mechanism. An exact anatomical analysis of this mechanism always brings us at last to cells; they are the ultimate constituents of all tissues as they were their origins. Hence we call them the living elements and hence we regard them as the anatomical basis of all biological analysis, whether it has a physiological or a pathological object in view. The cells are composed of organic chemical substances which are not themselves alive but the mechanical arrangement of which determines the direction and power of their activity."[11]

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[5] Foster: loc. cit., p. 280.

[6] Bonetus in 1675 had collected from previous writers many such in his "Sepulchretum."

[7] Huxley Lecture, delivered at Charing Cross Hospital on Oct. 3rd, 1898.

[8] In the record of histological advance mention must be made of Haller's "Elementa Physiologiæ" (1757), which first presented in a collected form the most correct information on the structure of the tissues, and of Bichat's "Anatomie Genérale" (1801), a still more comprehensive work on the same lines in which also the foreshadowing of the cellular nature of the tissues, established by Schwann in 1838, was faintly indicated, although the word "cell" was not used. To the labours of John Goodsir, and still more to the epoch-making work of Virchow on Cellular Pathology (1858), must be ascribed the demonstration of the fact that our conceptions of morbid processes must be founded on a histological basis—a doctrine that the great pathologist's "Archiv fur Pathologische Anatomie und Physiologie und fur Klinische Medizin" has for nearly half a century constantly expounded.

Before proceeding to consider the next and chemical stage of structure it would be well shortly to indicate some of the living phenomena which have either already received or still await their explanation in the intimate histology of the cell. Most important of these is contractility, whether this [illegible] more diffluent portions into and out of the reticulum of the spongio-plasm—the "streaming," as it has been termed—is a step towards explaining—apart altogether from the attempt to express protoplasmic movement in terms of inorganic phenomena, such as has been done—those alternate contractions and expansions of the bioplasm due to reciprocal rearrangements of its particles which constitute one of the *most striking characteristics of the living organism.* The complicated changes connected with nuclear division known as "mitosis," which underlie all cell multiplication and hence are [illegible] only realis [illegible] which ha [illegible] organisati [illegible] problems of heredity connected therewith can only be discussed in terms of cell structure with any probability of satisfactory results. Possibly also the varied morphological characters presented by the fully developed living constituents of the tissues, developed as they have been through successive stages from cells of almost identical appearance in the blastoderm, may be more fully understood when the structure of their protoplasm is more accurately known. The so-called specificity of cells and its limitations—metaplastic interchanges—so important in the study of tumour formation is an aspect of this same question.

From the earliest recorded times there has prevailed an idea which ascribed to matter an ultimate composition of indivisible indestructible particles or atoms and by no one was the atomic theory more firmly maintained than by the contemporary of the later years of Harvey—Isaac Newton. "To me," said he, "it seems probable that God in the beginning formed matter in the solid, massy, hard, impenetrable particles of such sizes and figures and with such other properties and in such proportion as most conduced to the end for which He formed them." By Robert Boyle also, to whom natural philosophy in the seventeenth century owed much, the theory was held, though he found the explanation of chemical changes in the differences of atomic structure and arrangement of one single form of matter rather than of different elements—a crude foreshadowing of the present-day conception by Sir William Crookes of the fundamental matter or "protyle." As is well known, however, it was not until the early years of the last century that the atomic theory received its practical development by John Dalton, since when it has remained at the foundation of physical and chemical science. "Despite attacks and criticisms," says Professor Clarke in his recent Wilde Lecture,[12] "Dalton's generalisation still holds the field and from it, as from a parent stem, spring nearly all the other accepted theories of chemistry." The conception of an atom as the smallest conceivable portion into which an element can be divided or that can enter into combination, and attaching to the idea of the atom a definite relative weight constant for atoms of the same element but differing with different elements, gave a satisfactory explanation for the laws of definite proportions and of multiple proportions which previously had been but incompletely recognised.

Since, with the exception of a few elementary gases, an atom is always combined with one or more atoms of the same or of other elements, some term is required to denote the smallest portion of the substance capable of a separate existence and for this the word "molecule" is employed. Built up on these fundamental ideas there has developed among other great generalisations the chemistry of the carbon compounds and the hypothetical recognition of the relative arrangements of the atoms within the molecule—in short, chemical constitution or chemical structure. Now "the greater the valency of an element the more complicated are its combining ratios and the greater the possibility of its atoms forming numerous compounds with similar and dissimilar atoms." The atoms of carbon, which is the chief element in so-called organic bodies, "possess, in a much greater degree than those of any other element, the property of combining with similar atoms whereby a part of their valencies are satisfied."[13] Thus may be formed groups

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[9] General Physiology, by Professor Max Verworn. Translated by F. S. Lee, Ph.D. 1899.

[10] The Structure of Cell Protoplasm, by W. B. Hardy. Journal of Physiology, 1899, vol. xxiv., p. 159

[11] Huxley Lecture.

[12] Delivered on May 19th, 1903, to the Manchester Literary and Philosophical Society on the occasion of the Dalton centenary celebrations.

[13] Principles of General Organic Chemistry, Professor Hjelt, 1890.

of carbon atoms so linked together that their valencies are in part satisfied among themselves, constituting what are known as carbon nuclei, and the free valencies being satisfied by atoms of other elements molecules are formed in which much energy is accumulated with more or less instability. Such conceptions as to the fundamental nature of matter, of its molecular structure and arrangement of atoms therein, permitted the laying down of rational or structural formulæ for chemical compounds, and when the further suggestion was made of linking the atoms in tridimensional space rather than in a single plane a still further extension of the idea of the atomic disposition within the molecule became possible and "stereo-chemistry was born" (Clarke). With theories of this kind ready at hand—theories which had done and are still doing so much to explain the phenomena met with in the domains of physics and chemistry—what more natural than that the biologist, recognising that but little progress was being made in the further investigation of the intimate cell structure and that the histologist in point of fact was apparently at the limit of his range of observation, should turn to the physico-chemical sciences for the satisfaction of his quest?

The attempts, however, from the chemical side to explain the constitution of living matter, due no doubt to the extreme complexity of the subject, cannot be said as yet to have led to any very definite result, although several very suggestive hypotheses have been put forward. Inasmuch as no empirical formula has up to the present been constructed for any one of the typical proteids, a rational or structural formula for the constitution of the undoubtedly large molecules of which these substances are composed is scarcely to be expected, and this, although necessary, is but only the first stage in the inquiry. Analysis of proteid bodies gives rise to numerous products; the end substances, such as carbonic acid, water, and urea, we are familiar with, but the intermediate ones "fall into two principal groups, the fatty compounds (generally containing an amidogen radicle) and the aromatic compounds or derivatives of benzene."[14] Accurate as further work in this direction may become, however, it still of necessity will not be a satisfactory explanation of the composition of living protoplasm which is ever in a state of flux, the continuous decompositions and reconstructions of which underlie its activities—are indeed phases of its living. Hitherto all attempts to ascertain the composition of the bioplasm have resulted in killing the material and hence the solution of the question is evaded. And although proteids are obtained from living protoplasm there is no proof that they exist as such in the living matter but rather are they the dead derivatives of what is killed in the process of examination.

Theories of the constitution of proteids arrived at by the attempted synthesis of these substances have been provisionally set out, and though no one of them is free from objection it may reasonably be supposed that, consistent with prevailing chemical theories, they are on the right lines. Among these should be mentioned that propounded by our distinguished Fellow, Dr. P. W. Latham, according to which, what he terms "living proteid" is composed of a chain of cyan-alcohols and a thio-alcohol united to a benzene nucleus These cyan-alcohols are exceedingly unstable and prone to undergo intramolecular changes, properties also possessed in a marked degree by bioplasm, and similar bodies are obtained from the disintegration of both cyan-alcohols and proteids. A more recent attempt in the same direction has been made by Verworn,[15] who describes the "biogens," as he terms them, as real chemical and physical entities, each consisting of a benzene nucleus round which are arranged various groups of atoms, the idea being arrived at by a study of the metabolic products of the organism. The extreme lability of the biogen Verworn attributes to the incorporation of oxygen in the molecule, the absence of which, rather than the accumulation of waste products, he regards as responsible for the cessation of the irritability of the bioplasm. It may be further observed that it is in the cell protoplasm and not in the nucleus that this observer locates the biogens.

Whilst fully realising the purely speculative character of these conceptions the provisional use that they may be in comprehending the activities of the living organism is apparent. For many of these complex processes the knowledge of the chemical anatomy of bioplasm is as essential as the gross anatomy of the organs concerned is for an understanding of the circulation of the blood. As the chemist and the physicist find in the atomic theory and its developments an explanation of the properties or functions of the non-living bodies with which they deal, so may the physiologist find in the same assumptions a clue to those even more abstruse functions displayed by living materials and furnish to the pathologist and to the clinical physician those data upon which a fuller realisation of morbid processes may be obtained and sounder principles for their prevention or their treatment be laid down.

Where in the whole range of physiological inquiry is to be found a region into which the observer has less penetrated and where for want of some guidance he is more adrift in the comprehension of what he does recognise than in the complicated region of "nutrition"? And yet how essential for the mere framing of a proper dietary or for an understanding of the protean symptoms collectively denominated "gout" is it that we should be able to form some idea of what becomes of the absorbed foodstuffs, when having undergone some elaboration in the epithelial cells, the hepatic tissues, and the blood through which they have passed they come "within the sphere of influence" of the living cell. What, too, is more important than to be able to attach to the comprehensive term "metabolism" some rational meaning, based upon a knowledge of what actually occurs and what structural arrangements and rearrangements take place within the bioplasm of the tissues? The practical importance of this must be obvious and should prevent the relegation of such questions as I have been discussing as transcendental and of no useful purpose.

One of the greatest and most far-reaching advances in pathology within recent years is undoubtedly the recognition of the part played by micro-organisms in the causation of disease. But the full value of the knowledge gained is not comprised in the detection and cultivation of the specific bacillus, nor yet even in the discovery of the particular toxin which the microbe produces, important as such information is. We require to know how and why these poisons affect the tissues as they do and in order to arrive at that the rational formulæ of these poisons must be known and, what is more, the molecular structure of the living cells upon which the noxious material acts ere we can realise how by some untoward substitution in the atomic arrangement of the living molecule its activities are prejudicially affected. Our treatment of disease by drugs has been forcibly if irreverently described as "pouring substances of which we know little into bodies of which we know less." Pharmacology has done a little towards removing this reproach and that department of it which deals with the relation between the chemical composition and constitution of a substance and its physiological action no doubt lies at the root of all rational drug therapeutics. But no one can assert that so far very much is known in this direction or that there has been much practical outcome of the investigations. This would be quite otherwise, however, if we had a knowledge of the molecular structure of living matter which would show the perversions taking place in disease and indicate the way in which they could be corrected.

The subject of immunity may reasonably be expected to find its interpretation in the ultimate constitution of the tissue elements, as also those at present vague conditions which we are dimly conscious of, represented by such terms as "bodily constitution" and "temperament." So, too, the differences in response on the part of different individuals to the same morbific influence, the variations in the manifestation of what we speak of as the same disease in various persons that lead the sagacious physician to treat the patient and not the malady, and, in brief, those intangible characters, which determine the responsibility of the organism for morbid symptoms as distinct from the injurious agent that we speak of as cause—each and all await their explanation. The factors of the environment which condition the vitality of the tissues are not to be found solely in such external conditions as are commonly comprised in that expression.[16]

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[14] Professor Halliburton, M.D., F.R.S., in Professor Schafer's Text-book of Physiology, vol. i., p. 35.

[15] Die Biogen-hypothese. 1903. See also Nature, Feb. 26th, 1903.

[16] As illustrating these environmental relationships may be mentioned the various forms of taxis or tropism whereby the direction of the movements exhibited by living protoplasm may be influenced. The best known of these is "chemiotaxis" as met with in connexion with some states of leucocytosis, but it is probable that other forms of taxis caused by pressure, gravity, heat, and light also prevail. "The spermatozoon seeks the ovum, and almost everywhere in the living world is led in the right path by the chemiotactic action which the metabolic products of the egg cell exert upon the freely moving sperm cell. ...... Every species of spermatozoon is chemiotactic to the specific substances that characterise the ovum of the corresponding species"

The behaviour of cell to cell, their mutual interactions—cytotaxis—and their physiological resistances the one to another will have to be taken into account in forming any thorough conception of the totality of life, whether healthy or diseased, that an organism presents, and the understanding of such problems cannot be attained until the finite structure of the material concerned be rendered plain or be assumed with such justification as those concepts underlying physico-chemical action at present furnish.[17] May it not also be in this same molecular structure of living matter that will be found the explanation of those phenomena of development and of organic evolution by which the fertilised ovum of two different kinds placed under identical conditions will each attain "to such form and structure as best fit it for its place in nature—processes which cannot be measured or observed by the same methods as are used in the investigation of the phenomena of non-living nature—i.e., by measurements of their time and place relations under varying conditions—in other words, by the method of experiment"[18] which are applicable to other processes of living organisms? "T

account of growth and

by supposing that the

[i e, the union of a number of molecules to form a single molecule] and then of falling into simpler substances once more."[19] Surely I need not plead for the importance of these questions I have set out, an importance that is not merely the concern of the biologist but is that of the practical physician. In the solution of these problems lies widespread benefit to mankind.

Yet, one step further. The atomic theory of the constitution of matter and its developments, although they have *hitherto sufficed for the needs of the chemist who concerns* himself with the decompositions and reconstructions of substances, is not the last word for some, at least, of the most progressive physicists. Is the atom indivisible and finite? has ever been a question that even the most pronounced atomists have asked themselves from time to time, and if the explanation of the recent discoveries that have been made in connexion with radio-activity be correct the answer must be in the negative. Briefly to summarise from this year's Romanes lecture by Sir Oliver Lodge, the most advanced views that physicists are inclined to hold, it may be said that the atom is conceived as consisting of an aggregate of what have been termed corpuscles and further that each atom may have associated with it a definite charge of electricity, atoms of different kinds having multiples of this charge, such an electrically charged atom being termed an "ion." Now the smallest unit of electric charge which itself "possesses the most fundamental and characteristic property of matter—viz, mass or inertia"—is known as an "electron" and the charge with which the atom is possessed consists of a number of these electrons. Within the atom the "electrons are in a state of vigorous motion among themselves." But it has been found that the electrons can be detached from the atom at an electrode and such isolated particles form the cathode rays which when stopped suddenly by a massive obstacle give rise to the so-called Roentgen rays. Hence the electron "is the most definite and fundamental and simple unit which we know of in nature." Whether, however, the electron is to be considered as solely consisting of electrical charge or whether this be associated with a material particle is a moot point. Some hold that the latter is non-existent and that in place of there being two kinds of inertia, which we speak of as material and electrical, the latter alone exists, the atom therefore being "composed solely of electricity." Such a concept of the electrical nature of matter is obviously a more precise expression of the monistic theory, in accord with which matter and energy are but convertible terms. Such a hypothesis suggests also that the various elements as we know them are but "different groupings of one fundamental constituent," the atom of each one consisting of its own special number of electrons, the unity of matter being thus arrived at. Highly speculative as such considerations are they nevertheless find support in electrical phenomena and still further in radio activity of which we have heard so much in connexion with radium and allied substances. This radio-activity "consists in the flinging away with great violence of actual atoms" which exceed in their rate of movement the fastest cannon-ball ever projected. The substance left is also radio-active and successive residues, differing as they do from each other, yet continue to exhibit radio-activity, "and one of the residues so left seems *ultimately to pitch away electrons simply instead of atoms* of matter"—a veritable transmutation of matter. Thus it is supposed that "the massive and extremely complex atoms

able to get into an unstable

isintegrating fall into other

of matter." Yet it appears that as the radio-active substance thus breaks up fresh radio-active matter is as constantly regenerated, possibly, as Lord Kelvin has suggested, from the ethereal waves surrounding the atoms. Even as the atomic and molecular theory was laid hold of to furnish an explanation of the flux of chemical activity which we denominate bioplasm, so have these further speculations on ionic action been pressed into the same service and with some promise, wholly hypothetical as they may be. It is to Professor Loeb of Chicago that we in the

of the ionic theory to physio-

bulk of protoplasm," he writes,[20]

rial, and the physical manifestations of life, such as muscular contraction, protoplasmic motions, and the innervations, are due to changes of the condition of these colloidal solutions. And the reason why the electrical current is the universal form of stimulation is that the particles in colloidal solutions are electrically charged and that *every alteration of the charge of the particles will result in a process of innervation or a contraction or a protoplasmic motion*" Thus nerve action is simply electrical action, negative ions being released where nerve blends with muscle, or where systems of concatenated neurons come into connexion. Ion after ion is precipitated and thus neural conduction takes place.[21] This play of ions is excited or inhibited by the character of the fluids with which the protoplasm is bathed—by the nature, that is, of the ions which these *fluids contain*. Most effective in stimulating protoplasmic action are such substances as sodium salts, as those of lime restrain it, and since such inorganic bodies are among the products of tissue waste it may be that in the ions of metabolism are to be found the causes of that rhythmic tendency to activity which nerve cell and muscle fibre alike exhibit. If normal neuro-muscular action may be thus induced the theory offers a clue to the comprehension of some of the most obscure morbid manifestations of these tissues, for, says Professor Loeb, "that certain ions are capable of bringing about forms of irritability in nerves and muscles which do not exist normally may perhaps furnish the explanation of a certain number of morbid phenomena (neurosis and hysteria) in which the motor and sensory reactions of the patient are modified."

In thus labouring as it may seem the successive phases of structure from the grossly obvious to such as the microscope

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(Verworn: General Physiology). The effect also of these external agencies as well as others like moisture and the density of the

[17] As bearing upon these and like questions a very large body of there are great varieties in of a uniform character in all even amongst the simplest in behaviour exhibited by different species in response to various reagents clearly demonstrate this. For whilst some are so profoundly affected in their molecular constitution as to succumb on being subjected to certain poisons, others, in no wise differing so far as can be determined by the means at present at our disposal, are quite uninjured. Some kinds of bioplasm appear to have a general high resistance to all chemical agents while others have a high or low resistance to particular agents only; thus nervous tissue, for instance, is readily and injuriously affected by substances—e.g, cocaine or nicotine—to which many protophyta are indifferent Since also many toxic bodies which produce no effect upon dead albumin are yet violently poisonous to that the latter contains in of molecules which undergo ents All this goes to show consists of numerous kinds of compounds many of which are very unstable. Also that not all protoplasm contains the same compounds but that these are dissimilar in different organisms. And further, that not all of the compounds in any protoplasmic body are essential to life, and that we and gradually by a strong ation, or as perimental

May 11th, 1903.

[19] Nature, loc. cit.

[20] American Journal of Physiology, 1901-02.

[21] Philadelphia Medical Journal, March 22nd, 1902.

discloses, and thence to the hypothetical, chemical, and electrical constitution of the material involved, it is not for a moment claimed that the investigation and the observation of functional manifestation have waited for anatomical discovery. In many departments of physiology, notably in that concerned with nerve and muscle and with secretion, a large mass of information has been acquired as the result of carefully devised experiments, whilst but little has been done towards ascertaining the ultimate structure of the tissues concerned—little, that is, beyond what was known a score of years ago or more. But in respect to such tissues as these microscopic examination would seem almost to have reached its limits, and for the complete comprehension of the physico-chemical phenomena more recently ascertained the problem of the chemical and electrical constitution of the muscle or nerve fibre and of the gland cell awaits solution. Though it may be true that "it is quite impossible to attain to a complete knowledge of function without a thorough anatomical analysis" (Huxley), and this it may be added although the observation of function may have led to the study of structure, yet it is clear that "structure" must include a wider range of meaning than hitherto it has been commonly thought to bear and to reach into those regions where observation is conditioned by speculation and where theory has to take the place of demonstrable fact. However true it may be that for a general conception of the physics of the circulation Harvey was beholden to his anatomical knowledge, it is also true that for our later acquired information of the share taken in the movement of the blood by the arteries an acquaintance with the structure of these vessels is necessary, whereby their elasticity and their tone are referred each to its own tissue. The problem that Harvey solved was one that in its broad features was a mechanical one, but it does not end with such information as the gross anatomy of the organs and the histology of the tissues supply. Behind it lie the contraction of the muscular substance of the heart and arteries and the nervous governance of that material, which involve considerations of another character. For the complete understanding of the electrical and chemical changes which are associated with the passage of the nervous stimulus and the muscular response we should require to know what are the underlying molecular rearrangements and alterations in chemical constitution crudely represented by the formation of certain waste products. At this point, I say, precise knowledge fails us and we turn for assistance to theories which have been so helpful in the explanation of the properties of non-living matter, consistent therein with the principle laid down by Mayer half a century ago "to refer both vital and physical phenomena to a common measure."

Whilst I have endeavoured to illustrate with such completeness as my brief time permits the relationship of physiology to anatomy, whether normal or morbid, the general tenour of my remarks will have indicated that when the limits of visibility, even with our most perfect instruments, have been reached the separate investigation of structure and of function no longer becomes possible. The molecular constitution, chemical or electrical, of living matter becomes conceivable only in terms of action, and function and structure are but aspects of each other. No deeper secrets of nature exist to be searched out by observation and experiment than these and none will more benefit mankind in their discovery. To their investigation therefore, in obedience to the precept of Harvey, do I exhort you to turn.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of this society was held on Oct. 14th, Mr. Christopher Heath, the President, being in the chair. Three new members were elected, the death of a member was reported, and the resignation of a member was accepted. The death of a widow, aged 87 years, who had been receiving £50 per annum since May, 1890, was announced. Applications for assistance were read from three orphans of a member who died in 1899 and grants at the rate of £12 per annum were made to them. Applications for renewal of grants were made by 53 widows, 16 orphans, and four recipients from the Copeland Fund and £1321 were voted to be distributed among them at the next court subject to the report of the visitors. It was resolved to make the usual present at Christmas to the widows and orphans on the fund—viz., £10 to each widow, £3 to each orphan, and £5 each to the four orphans on the Copeland Fund. The expenses of the quarter were £64 14*s.* 6*d.*

ON THE EFFECT OF PERFORATION OF THE COLON BY SMALL FOREIGN BODIES, ESPECIALLY IN RELATION TO ABSCESS OF AN EPIPLOIC APPENDAGE.[1]

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FEW of us probably realise the variety and amount of material coming under the denomination "foreign bodies" daily ingested with our food. The methods employed in grinding wheat furnish minute angular particles of millstone; small fragments and chips of straw are not uncommon in flour and in bread. Spicules of bone from beef and mutton, birds and rabbits; needle-like bones from fishes; shot from game; loose stoppings from teeth, and even the teeth, true and false, are occasionally swallowed. Chips from metal instruments employed in preparing food, or from the pans and pots used in cooking are sometimes detected in the course of a meal. Small bodies of this kind occupy the alimentary canal more frequently than do pins, needles, tacks, nails, and bristles accidentally swallowed by individuals who, in the course of their work, foolishly use the lips for purposes mainly fulfilled by the fingers. Even these form a distinct class from such gross things as corks, coins, knives, spoons, forks, razors, glass stoppers, &c., swallowed by lunatics and children, or by men and women for sensational gain, or by thieves to avoid detection.

Those who doubt the large number and variety of metal bodies which find their way into grain will receive instruction by visiting a large brewery, for the grain, previously to grinding, passes over a magnetised bar which extracts and retains the pieces of metal. This metallic rubbish is collected and preserved to excite by its amount and variety the astonishment of visitors. (Samples of the pieces of metal retained by the magnet were exhibited to the audience. They consisted of almost all kinds of nails, brads, tacks and screws, wire tags of laces, metal eyelets, dress-hooks, needles, pins, pens, wire, buttons and metal skeletons of buttons, and chips of metal in great variety selected from a peck of metallic rubbish.) With the grosser kinds of foreign bodies this lecture has no concern; my object is to draw attention to a particular effect which arises when a small foreign body perforates the colon, especially in the vicinity of an epiploic appendage. No doubt hundreds of foreign bodies are ingested and egested without causing the least concern to the host, but the frequency with which an anal abscess comes under the surgeon's notice serves to show that many fail to pass harmlessly through the sphincter.

Before endeavouring to explain the manner by which small foreign bodies probably escape safely from the bowel, as well as indicating the very serious mischief which they are liable to cause when retained, it will be necessary to draw attention to some points in the disposition of fat around the colon and especially its relation to the epiploic appendages. In a transverse section of the descending colon from a healthy adult the fat would have such an arrangement as is represented in Fig. 1. The appendix epiploica is, anatomically, a fold of peritoneum filled with fat and its size depends entirely on the amount it contains; the fat of the appendix can be shown by simple dissection to be directly continuous with the subserous fat which normally fills the interspace of the mesocolon and, with care, it is easy to show that the serous investment of the colon reposes on a subserous tissue containing varying proportions of fat throughout that part of the circumference of the gut which receives a peritoneal investment. In the diagrams used to illustrate this lecture no attempt is made to represent the longitudinal bands of the muscular coat.

When a transverse section of the descending colon from a very fat individual is examined the relation of the subserous fat to that of the epiploic appendix and the mesocolon is easily seen. The part of the colon which is most avoided by fat is the middle tænia or longitudinal band; even in very obese individuals this band is rarely obscured.

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[1] An address delivered to the Nottingham Medico-Chirurgical Society on Oct. 17th, 1903

After mid-life a variant appears occasionally in these transverse sections in the form of a pouch-like diverticulum; it is possible that some of these sacculations, which must not be confounded with normal haustra of the colon, may serve as retreats for some of the mischievous small foreign bodies which are carried into the colon.

FIG. 1.

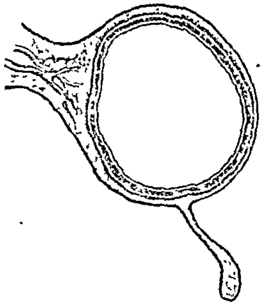


Diagram of a transverse section of the colon from a thin individual, to show the relationship of an epiploic appendix to the subserous fat.

In the specimen from which the diagram, Fig. 2, was prepared one of these sacculi actually appeared in section. It is clear from a consideration of the normal anatomy of the colon that there are portions of its circumference where a sharp foreign body could penetrate and escape into the general peritoneal cavity and the thinner or more emaciated the person the greater is the arc of the gut which would allow this form of penetration. In a fat person, on the other hand, although there is a short arc where it could be easily perforated into the general peritoneal cavity there is a far greater extent of its circumference so protected by fat into which the escaping body would be more probable to find its way and in a certain proportion of cases the penetrating body would lodge in an adjacent epiploic appendix. The fatter the patient the less likely is the foreign body to penetrate into the general peritoneal cavity and the greater is its chance of entering an epiploic appendix.

FIG. 2.

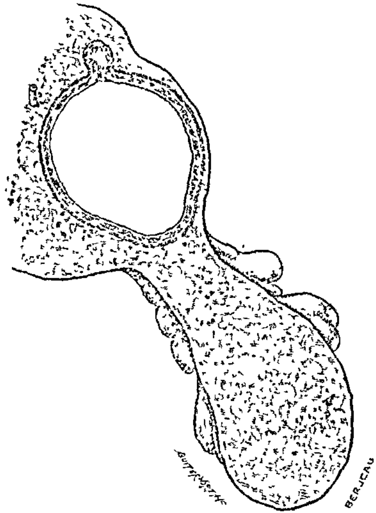


Diagram of a transverse section of the colon from a very fat [illegible]

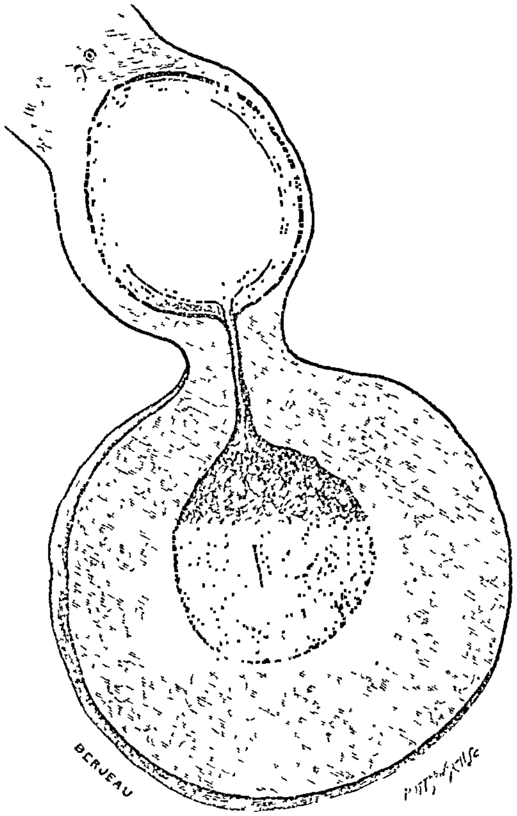
I will now endeavour to prove that foreign bodies from the colon do lodge in the epiploic appendages and to show some of the consequences which arise therefrom.

CASE 1.—On Easter Sunday, 1903, Dr. Edwin Hollings asked me to see a man, aged about 40 years, who had acute pain in the left iliac region accompanied with some local swelling, tenderness, and fever. The signs were such that if they had occurred in connexion with the right instead of the left iliac region a diagnosis of subacute appendicitis would have been irresistible; indeed, the signs were so characteristic of this affection that I made a careful examination to satisfy myself that the patient's viscera were not transposed. We came to the conclusion that he was suffering from an abscess in connexion with the descending colon, probably depending on perforation. We were then informed that he had been accidentally shot in the abdomen many years previously and as the bullet had never been extracted there arose a suspicion in the minds of the patient, his relatives, and medical man that it might be the cause of the present trouble. This view I did not seriously entertain. On the next day Dr. W. Hale White joined us in consultation; he shared our opinion as to the inflammatory nature of the swelling, the almost certain presence of pus, and the advisability of operation. On the following morning I carefully cut through the abdominal wall over the prominent part of the swelling; the line of the incision corresponded as nearly as possible with the lower part of the left linea semilunaris and I tried to find the pus by burrowing behind the peritoneum but without success. I then incised the peritoneum and found an ovoid body as large as a bantam's egg and quite as smooth, sessile on the descending colon. I soon recognised that we had to deal with an enlarged and inflamed epiploic appendix containing a foreign body. I explained this to Dr. Hale White and Dr. Hollings and then split the lump longitudinally with the scalpel. In the centre of the lump there was a distinctly circumscribed cavity communicating with the lumen of the colon by a narrow passage; inspissated fæcal matter filled the cavity and in the midst of it I detected a sharp foreign body. The anterior and posterior halves of the epiploic appendage were secured with silk sutures to the peritoneal edges of the wound, and after inserting a drainage-tube into the fæces-containing cavity the incision was brought together with interrupted sutures of silkworm-gut and dressed with cyanide gauze. About the fourth day fæcal matter escaped freely from the wound; this continued till the tenth day and then the sinus slowly granulated; the patient left London for the seaside at the end of the fifth week.

The relationship of the cavity in the epiploic appendix is [illegible] in Fig. 3. When in the course [illegible] s detected those present at once became alarmed for fear that we had to deal with a tumour of the colon, but I had had an opportunity of operating on a somewhat similar case which led me to study the condition carefully.

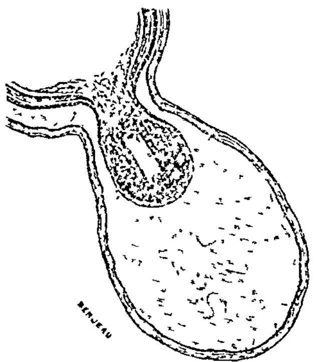
CASE 2.—A spinster lady, about 60 years of age, was placed under my care with symptoms of chronic intestinal obstruction associated with a definite lump of the size of a bantam's egg in the left iliac fossa. The age of the patient, the situation and mobility of the lump, in conjunction with the frequent passage of liquid fæces from the anus, led to the diagnosis of cancer of the descending colon. The lump, however, caused more pain than is usual with cancer of the colon and it was particularly tender—indeed, the pain and tenderness rather than interference with the function of the bowel induced the patient to seek and to submit to surgical help. The parts were exposed by means of an incision in the left linea semilunaris and an oval body was exposed on the sigmoid flexure of the colon; its hardness led me to regard it as a malignant tumour. The adjacent walls of the gut were very thick and seemed so infiltrated with what I regarded as cancer that a wide colectomy was decided upon and the cut ends of the colon were secured separately in the abdominal incision. The resected portion after the usual preparation was bisected and in the middle of the suspected cancerous lump I found a smooth, round, pill-like body lodged in a smooth-walled cavity communicating with the mucous surface of the bowel by a narrow tubular channel. The globular body in the cavity had a fragment of straw for a nucleus (Fig. 4). The course of events in this case may be explained as follows. The piece of straw ingested with food perforated the wall of the colon in the immediate vicinity of an epiploic appendage and caused a small leakage of bowel contents. The extravasation of fæcal matter into the epiploic appendage infected it and set up inflammatory changes which transformed this fatty fringe into a large oval lump. The continued presence of the fæcal concretion which had formed around the piece of straw acted as an irritant and prevented the sinus from closing, and the inflammatory changes extended into the walls of the colon immediately adjacent. Some months later I resected the exposed ends of the colon and successfully restored the continuity of the bowel.

FIG. 3.



Diagrammatic [illegible] of a fæcal abscess in an epiploic [illegible] sigmoid flexure of the colon, [illegible] body escaping from the gut. (Case 1.)

FIG. 4.

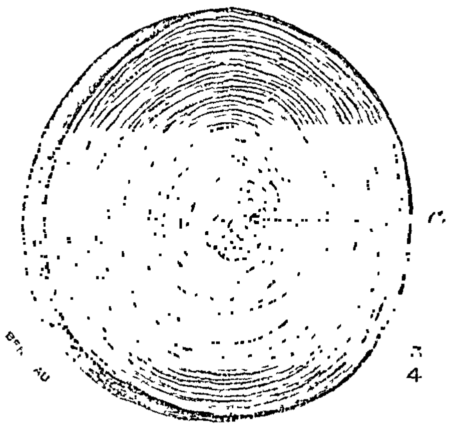


Diagrammatic view of a fæcal abscess in an epiploic appendage of the descending colon; it contained a pill-like body formed of inspissated fæces with a fragment of straw for a nucleus. (Case 2.)

In reflecting on these two cases it at once became obvious that other surgeons had probably encountered similar lesions and a suspicion arose in my mind that possibly some of the cases reported as successful instances of the excision (or resection) of supposed cancer of the colon without recurrence may have been examples of abscess of an epiploic appendix caused by a minute foreign body. A careful examination of the publications of those surgeons who have devoted much time and careful attention to the operative surgery of the intestine and of the colon in particular shows that they make no mention of foreign bodies in the appendices epiploicæ, and my inquiries in regard to this matter among physicians of great experience in maladies of the bowel being equally fruitless I ventured to think that the publication of the two clinical records which constitute the basis of this lecture may possibly focus attention on the subject and lead to the acquisition of some further knowledge. It may, perhaps, be useful to draw attention to some of the effects which follow perforation of the colon by small foreign bodies.

It is, I believe, true that a small piece of metal may traverse the wall of the gut and escape into the general peritoneal cavity and undergo encystment. Shattock[2] once found a rounded body with a diameter of 6·25 centimetres in the pelvis of a man between the rectum and the bladder. On section a piece of iron was detected in its centre (Fig. 5) surrounded by regular laminæ of structureless material. He regarded this as an instance in which a piece of metal taken into the alimentary canal had pierced the bowel and found its way into the peritoneal cavity and become encysted by exudation from the peritoneum. This explanation is satisfactory and the specimen is by no means unique. The peritoneum is frequently engaged in forming material such as is seen around this piece of metal. The conditions favourable for its production are sterile foreign bodies, coagulated fluids free from pathogenic micro-organisms, and especially cysts which are mobile, the spurious cysts which occasionally form around ovarian dermoids, the curious capsules around blood slowly effused from the Fallopian tube in the condition known as "tubal abortion" (Fig. 6), as well as those which surround sterile exudations from the tubes (Fig. 7), and the very complete fibrous capsules which invest echinococcus cysts projecting into the abdomen from the liver and more particularly those which grow in the omentum. This also explains how echinococcus colonies in the abdomen are provided with thick false capsules, whilst those which grow in the cerebrum have none. These observations prove also that the very large size of an epiploic appendage which contains a foreign body is in a large measure due to the deposit of lymph on its periphery and its subsequent organisation providing for it a stout and firm capsule. Speaking from my own observations, I think it quite exceptional for a piece of metal or other small body to penetrate harmlessly the wall of the intestine It is a matter of common knowledge that when an ingested foreign body, especially a sharp fish-bone which resists the action of the digestive juices, a needle, or some similar thing, has its easy ejection hindered by the sphincter, the wall of the bowel immediately adjacent is apt to be perforated and this leads to

FIG. 5.



The sectioned surface of a rounded body found between the bladder and the rectum of a man. The centre consists of a piece of iron (a) surrounded by laminæ of structureless material. The piece of metal probably perforated the bowel and escaped into the general peritoneal cavity and became encysted by peritoneal exudate. (Shattock's specimen, Museum, St. Thomas's Hospital.)

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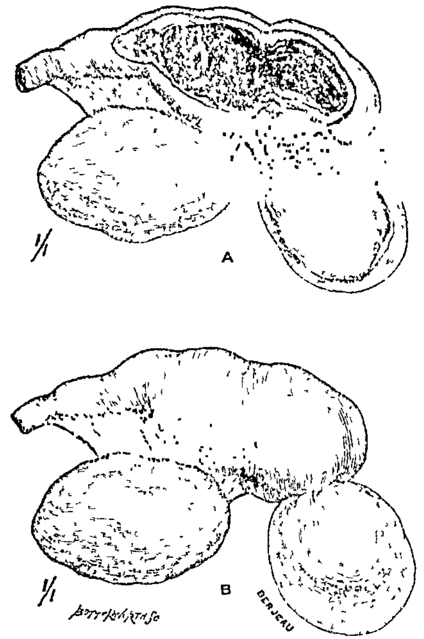
[2] Transactions of the Pathological Society, vol. xliv., p. 151.

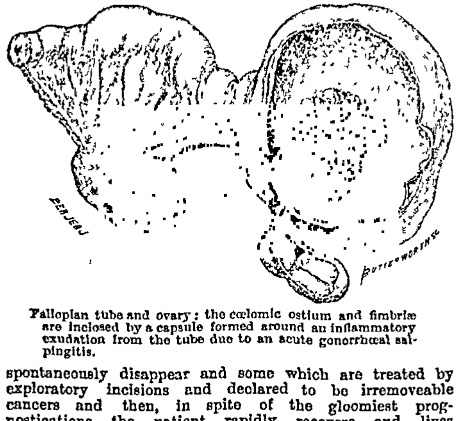
the formation of an anal abscess. This painful and very common condition is fortunately easily and, as a rule, successfully treated by means free from risk to life. As a matter of fact the abscess in the epiploic appendage which we have been considering is pathologically of the same character as an anal abscess which has burst internally and left a sinus communicating with the bowel. I have satisfied myself from a careful study of a number of patients under my own observation and care that some puzzling cases of suspected abdominal tumours which spontaneously disappear and some which are treated by exploratory incisions and declared to be irremoveable cancers and then, in spite of the gloomiest prognostications the patient rapidly recovers and lives to mock at his advisers. In 1894 Greig Smith read a paper before the Royal Medical and Chirurgical Society on the (So-called) Spontaneous Disappearance of Solid Abdominal Tumours based on the observation of three cases;[3] the leading features of these cases were the presence of a solid tumour in the abdomen, the absence of pyrexia, clinical evidence of malignancy on abdominal section, and ultimate disappearance of the tumour with complete restoration to health. Having had some experience of these "disappearing tumours" I took part in the discussion which followed the reading of the paper and propose to reproduce briefly here the details of the most striking case (the remarks are fairly fully reported in the Proceedings of the Royal Medical and Chirurgical Society, Third Series, vol. vi., p. 46). A married woman, 56 years of age, had had for some weeks trouble with her bowels which culminated in signs indicating obstruction in the descending colon. Scybala could be easily felt in the colon and on vaginal examination a tumour could be made out feeling like an impacted fibroid. The patient after her ad[illegible] l by several c[illegible] eventually c[illegible] lump was exposed by an abdominal incision the uterus and the sigmoid flexure were found firmly adherent to each other and the thickening of the wall of the bowel and enlargement of the body of the uterus led me and those of my colleagues who attended the operation to regard the case as one of primary [illegible] adherent to, and [illegible] efore unsuited for [illegible] was sutured, the patient returned to bed, and [illegible] the relatives. Fortunately, [illegible] subsequent course of events [illegible] and left the hospital. Many weeks later, wishing to know what had happened, I called upon the patient and found her occupied with domestic duties and in excellent health. For many years she continued well.

FIG. 6.



A gravid Fallopian tube with a pseudo cyst or capsule formed around blood effused through its cœlomic ostium. A, shows the capsule in section and B entire. * Tubal fimbriæ.

FIG. 7.



Fallopian tube and ovary; the cœlomic ostium and fimbriæ are inclosed by a capsule formed around an inflammatory exudation from the tube due to an acute gonorrhœal salpingitis.

I have subsequently had experience of similar cases and have learned to recognise them. In the light shed by the study of an abscess in an epiploic appendage I believe there can be little reasonable doubt that in some instances at least the cause of the tumours of the abdomen which disappear spontaneously after operation is a minute foreign body which has perforated the cæcum, the colon, the sigmoid flexure, or the rectum. It may perhaps be worth while to draw attention to the perfect way in which the piece of straw, which was the cause of trouble in Case 2, is completely surrounded and isolated by hardened fæcal matter, for it indicates very satisfactorily to my mind the way in which angular and dangerously pointed bodies may traverse the colon and be safely ejected without harm to the host—that is, they probably serve as a nucleus for the conglomeration of fæcal matter and, carefully isolated in this way, they escape through the anus without injuring the bowel wall in the neighbourhood of the sphincter, for common as anal abscess is I feel sure that it stands numerically in very small proportion to the great number of small foreign bodies which are daily ingested and egested. Be this as it may, it certainly supports the traditional and vulgar manner of treating patients known to have swallowed foreign bodies, especially pins, by making them eat very freely of suet dumplings.

Brook-street, W.

THE CORRECTION OF HEREDITARY TENDENCIES.

By SIR SAMUEL WILKS, BART., M.D. LOND., LL.D. EDIN., F.R.S.

I HAVE read with much interest the controversial letters on the laws of heredity which have appeared in THE LANCET and on these I will only make one comment—that I fear, on the one hand, that some of the writers seem to be influenced in their statements by their conviction of the absolute truth of the Darwinian doctrine of the non-transmission of acquired habits, whilst, on the other hand, there are some who make opposed statements as they hold the doctrine to be only partially true. There should be no suspicion of a bias in the scientific mind, for such an expression as "it must be" looks as if there was an endeavour to make the facts fit the creed.

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[3] THE LANCET, Jan. 27th, 1894, p. 207.

I am not about to write on the question lately discussed, although certain phrases used by some of the writers have prompted the present communication.

My subject is the question of how far hereditary tendencies may be modified or arrested in the *individual*, as it is one the importance of which cannot be overrated. It is intimately connected with the education and the training of children, besides its being regarded as one of the functions of the medical man when his opinion is sought by parents as to the future of their sons and daughters. I myself believe firmly that very much may be done to arrest the development of many inherent traits and therefore I have never failed to contradict when possible any writer or preacher who asserts that the medical profession is teaching the immoral doctrine of irresponsibility and that criminals are only repeating the inherited vicious acts which their fathers had perpetrated before them. Although assenting to the dictum that we are all the victims of our organisation and knowing that the proofs of hereditary influences are too strong to be gainsaid, yet I equally maintain that these propensities may be arrested or so modified in childhood as almost to change the character. In judging therefore of a person's acts it is as important to ascertain his early surroundings as it is to discover his hereditary tendencies. I have therefore always denied that the medical profession holds unreasonably to the doctrines of irresponsibility and fatalism.

The facts of hereditary tendencies are too frequent and striking to be overlooked, as in the case where we see a whole family go wrong. For some criminal offenders we have often felt more pity than anger and especially when we have seen that they possessed no power of control over their inheritance. In a long experience I have seen too many cases of inherited vicious propensities to doubt the fact, but I am equally impressed with another fact—that these evil tendencies may be greatly corrected by appropriate counteracting surroundings. If these are not forthcoming and a child with evil propensities is forced to dwell in an atmosphere where such propensities are developed he soon goes to ruin; on the other hand, if he is removed to other surroundings a very different life may be expected. The value of education is this respect has probably been more accepted in England than in any other country; it does not mean cramming a boy with learning but treating him in a manner whereby the qualities of self-respect, integrity, independence, and a just dealing with others are brought out. Taine and some other French writers have explained that when they recommended the discipline of our public schools they had in view the importance of training the character. The Duke of Wellington properly appraised this when he declared that the battle of Waterloo was fought out at Eton, at Harrow, and at Rugby. The very common belief that a certain tone belongs to a school could have no meaning unless it were equally true that individual propensities were suppressed or modified. It might be said that when a Rugby boy was at one time always recognisable it was due to a mere mannerism or to the possessing a local "slang," but if this was true in part there remained the greater truth that he was the recipient of something much deeper which was perceptible throughout the whole of his life. It may be remembered that when Arnold had unwittingly received into his school an especially vicious boy he considered it a waste of time to bestow his energies upon him and wisely got rid of him. But lately the Rev. John Watson ("Ian Maclaren"), who thoroughly understands boys and school life, gave an address on the Education Act and in this he was reported to have said that the real educator and guardian of the youth was the schoolmaster. It was not the parent or the parson but the schoolmaster who made the boy; he might be tinctured by the Archbishop of Canterbury on the one hand or by the Kirk on the other but this did not much matter. The example and discipline of the school prevailed over all precepts. Such an opinion as to the capability of a boy's character being affected by education is of immense importance when coming from a man of such great perception and experience.

I have heard exactly the same sentiment expressed by intelligent schoolmistresses when they have declared that the influence of the school over froward children has been of greater value than any teaching at home. A little girl, for example, has bad habits of various kinds, but when placed with other children there is no opportunity for their display; they naturally disappear and she at the same time almost necessarily adopts some newer and better ones and consequently she exhibits no more peculiarities for fear of being pointed at by her comrades. A few weeks' discipline of this kind without any actual correction has sufficed to change the whole outward character of the child. It is often said that the weak side of the board school is that it tends to bring all the pupils to a dead level of uniformity and so suppresses individual genius. Whatever amount of truth there may be in this it is equally true that the school tends to suppress as well evil habits and propensities.

I have seen some very remarkable examples of the influence of new surroundings in children. I have frequently before my mind the case where the children in a family took more or less after their ill-tempered and wrong-headed mother, but on their being sent to a boarding-school, with the exception of one, and receiving a good education they were able to get on in life although with many vicissitudes. The remaining boy brought up at home had the very worst of educations possible and although of considerable ability he grew up utterly worthless. His own natural propensities were actually fostered. I am also well acquainted with another case of an opposite kind. Both parents were vicious in various ways and all the children except one, as might have been expected, went to the bad. The boy spoken of was adopted when young by some childless relatives who were highly cultured, refined, and in every way most worthy people, so that all his surroundings were as good as those of his brothers and sisters were bad. He filled the situation in which he was placed admirably and entered into all the good works in which his foster-parents were engaged. Everyone spoke of him as a most excellent lad. Whenever I talked to him I judged from his conversation and manner and allusions to newspaper stories that his mind wandered into other regions, and I felt a conviction that he was kept straight by the force of circumstances and that if by chance he had gone from his adopted home into a different atmosphere he would have lost his balance and wandered from the right path. In some cases, therefore, I have every reason to believe that the hereditary tendencies were changed by the new environments but in others they were only suppressed; still this does not diminish the value of new surroundings.

Medical men are constantly asked about the education of children, especially when these are froward and unruly; and when they see that fresh influences are required and the question of a boarding school is raised, the mother often protests, with the fear that her child may be contaminated in morals and that a mother's care must necessarily be the best. There is a show of reason in this, for a very vicious girl is capable of contaminating all her school-fellows, but, on the other hand, the mother seldom perceives the amount of harm done by her own way of bringing up, so that I feel confident that in a large majority of cases the boarding school is a much better place for the education and the formation of character than the home. It is unpleasant to tell the parent that she is the worst person to have charge of her child and yet this fact may be most apparent to others. I remember the case where a well-meaning but severely tyrannical woman felt it her duty to bring up her child in the habit of obedience and so compelled him to do certain things and to desist from others in which he might be innocently engaged. This brought about deceit and story-telling. When he grew up and was found to be both deceitful and an inveterate liar I attributed it to the mother's continued thwarting him on principle. If a mother possesses some fault or weakness it is probable that the child may also inherit it. In this case the mother often in the most natural manner encourages and develops it in her child. Sometimes this is most flagrant. In one case I have seen a very frivolous woman whose mind was wholly engaged on herself and her outward appearance dress up her little girl in the most fashionable finery, put a fan in her hand, and make her walk up and down before the admiring visitors whilst she went through all the manœuvres of a coquette. Or, again, a woman will dress up her little boy in the most extravagant costume and parade with him through fashionable streets as she would with her pet dog. All these and similar things are done for the mother's vanity, but woe to the child. Such cases might almost warrant the interference of the society for the protection of children. There are, unfortunately, a large number of cases less odious than these but equally mischievous where the parents bring the child into prominence on account of some remarkable gift which he or she is thought to possess and this, which is not unusually a very undesirable one, is developed by the devoted parents. A sharp, clever child who readily picks up anything he hears and will talk on any subject is trotted out before an admiring audience to recite or to make a speech, the parents being scarcely alive to the fact that a retiring, bashful, thoughtful child is generally the one of the greater mental power and of the greater promise. I have known several of these clever children who have at the same time no power of attention which is one of the very highest qualities that anyone can possess. This class of children should be sent to a boarding-school where all these clever tricks are suppressed. I mention these cases because, believing that hereditary tendencies may be suppressed or modified by education, it is the duty of the medical attendant of a family to make a serious study of the child on whose future he is asked to give an opinion, or even a final decision, as to the training and occupation.

In speaking of the influence of new environments on subjects which have inherited certain tendencies I might refer to the whole animal and vegetable kingdoms in proof of the contention. Wild animals are subdued not only by fear, as we see in the lion and tiger exhibitions, but by slowly taming as when a dog or a parrot is taught not to bite. In the vegetable kingdom this operation of new surroundings is most marked. A botanist was lately telling me of a plant which had been under his observation for many years and which in a neighbouring district had so altered in character that a modern book had described it under a different name either as a variety or a distinct species. I have been told also that the hereditary tendencies of many exotic plants are observed to alter when brought to this country and that material changes occur as they become acclimatised. The wondrous varieties which can be made in flowers by cultivation are known to everybody. When we speak of the times of the year in which trees and plants bud and flower, as well as the times for the pairing of birds and their migration, we are strikingly impressed by the fact of how much these may be altered by circumstances. Let there be, for example, exceptional weather in the early months of the year making them resemble those of spring the effect on all living things is marvellous—the whole aspect of nature has undergone a change and is bursting into life, the trees begin to bud and the smaller plants to flower and the thickets become green. In the animal kingdom it is the same—the birds come forth and pair, they begin to build their nests, and their songs are heard all around.

I may mention one particular instance of the influence of sun and air by an example always before me. When I came to my present residence two years ago there grew a handsome plane tree close to the back of my house; as it shut off the light and warmth from the rooms I determined to sacrifice it. When it was cut down I had a slice taken from the trunk a few feet from the ground. On examination of the section the usual centre or pith was quite away from the true centre, being placed towards one side, and then on counting the annual rings I found in a corresponding manner that they were much narrower on the smaller side than on the other. This narrow side represented the part of the tree next the house, the broader, expanded part was that which looked out into the garden and received the warmth of the sun and more air. This specimen, which is before me on my desk, is always preaching to me the lesson which I have been inculcating—the importance of surrounding influences; that all living things are dependent for their character on two things—their hereditary tendencies and their actual surroundings. In the human being the latter may be called education. My particular object in writing this paper is to enforce the power of environment on the hereditary tendency. I will go no further than to say that I speak only of the individual, whether the alteration may be continued in the progeny I will leave to others to decide.

Hampstead.

The Semi-Teetotal Pledge Association.—The committee of this association, of which Lord Roberts is President, is daily receiving fresh signatures to a definite pledge to abstain from all intoxicating drinks except at the midday and evening meals and 35,000 forms of pledge have been applied for. A branch has been formed in Cape Town and funds for extending the work are urgently needed. The honorary secretary is Mr. G. H. F. Nye, 76, Regent-street, London, W.

ON THE USE OF PURE CARBOLIC ACID IN THE TREATMENT OF SMALL-POX.

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AND

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In The Lancet of Feb. 21st, 1903, p. 518, there appeared an article by Dr. J. T. Neech, medical officer of health of Halifax, suggesting the use of pure carbolic acid as a local application in small-pox. He described two cases in which he had used this treatment with very beneficial results. As we have had a large number of cases of small-pox in the borough of Bury during the past nine months there has been ample opportunity for testing the value of this method and we think it advisable to record briefly the results of our experience of this remedy. In order the better to form an opinion as to the efficacy of carbolic acid when used in its undiluted form to modify the course and termination of small-pox, we selected for treatment for the most part severe cases occurring in unvaccinated subjects. As the anti-vaccination element is very prominent in Bury and also in some of the neighbouring districts we have had, perhaps, an unusually large proportion of unprotected cases to deal with, hence the results of this particular line of treatment are not so liable to be complicated by the modifying effects of vaccination.

The treatment is carried out in the following manner. The pure acid in a liquefied state is applied to the vesicles over a limited area with a small camel's-hair brush, the application being made on successive days. On the first day the face and neck are selected for treatment, on the following day the hands and the arms, then the lower extremities, and, finally, the trunk. The effect of the acid is seen in the rapid shrivelling up and scabbing of the vesicles. A second or third application may be made if necessary over certain parts of the body. An important detail of the treatment is to secure the early removal of the scabs, either by an oil poultice or otherwise, as this tends to prevent subsequent abscess formation.

This method of treatment is, of course, one which takes some time to carry out, as it must be done carefully and thoroughly if the best results are to be obtained. There is no reason why it should not be intrusted to an intelligent nurse with instructions to use the acid cautiously in the neighbourhood of the eyes and not to allow it to run on the healthy skin. The treatment is found to cause little or no pain or discomfort; in fact, it relieves the intense irritation which is so prominent a feature in small-pox. We have not observed any signs of carboluria or other evidence of toxic action from absorption of the drug. The effect would appear to be purely a local one, the acid penetrating the walls of the vesicles and pustules, disinfecting their contents, and hence preventing the absorption of septic matter into the system. The accompanying table gives particulars of some of our cases.

As will be seen from a reference to the table, one of the most striking results of the treatment is the comparative mildness of the secondary symptoms or those coincident with the maturation of the pustules. In many of our cases the patients expressed themselves as feeling well and hungry by the eighth or ninth day after the appearance of the rash or even earlier. By this time the pustules on the face will have disappeared and the great majority of those on the limbs and trunk will have dried up or aborted. After the temperature has fallen on the appearance of the eruption it usually remains at a low level during the rest of the illness, even in severe confluent cases averaging not more than 100° or 101° F. In several of our patients the temperature was practically normal throughout. A corresponding improvement is noticed in the state of the pulse and the general symptoms.

With regard to the subsequent pitting we are of opinion that the carbolic treatment is decidedly beneficial in lessening disfigurement, although it is not to be relied on as a certain preventive. We think it reasonable to conclude that, by shortening or modifying the severity of the pustular stage of the disease, the liability to the formation of deep and permanent scars is diminished. Another point is that this use of the germicide tends to diminish the risk of infection from aerial convection and to remove the disagreeable odour which accompanies many cases of the disease.

The total number of cases treated by us up to the present has been 35, of which 22 were of a severe kind, mostly confluent, more than half of these being in unvaccinated subjects. Five of the cases proved fatal, two of which were children suffering from scarlet fever, while the third was one of malignant small pox with minute subcutaneous hæmorrhages and death during the papular stage. We may say that in the earlier part of the epidemic we confined ourselves to using the acid on the face and hands with the idea of diminishing the scarring, but in order to obtain the best results it is necessary to apply it carefully over the whole body as described.

Table giving Particulars of the Use of Carbolic Acid in Small pox.

No. of case.	Sex.	Age (years).	Vaccination.	Type of disease.
1	M.	14	Unvaccinated.	Severe confluent.
2	M.	56	,,	,,
3	M.	8	,,	,,
4	F.	42	In infancy.	,,
5	M.	32	,,	Confluent.
6	M.	10	Unvaccinated.	,,
7	F.	35	In infancy.	,,
8	M.	8	Unvaccinated.	Severe confluent.
9	M.	31	In infancy.	,,
10	M.	14	Unvaccinated.	,,
11	M.	39	,,	Confluent.
12	F.	40	,,	Severe confluent.
13	M.	35	,,	,,
14	F.	6	,,	Hæmorrhagic.
15	F.	46	In infancy.	Severe confluent.
16	M.	28	,,	Discrete, rather severe.
17	M.	30	,,	Discrete, fairly severe.
18	F.	10	Unvaccinated.	Confluent.
19	M.	34	In infancy.	Discrete, fairly severe.
20	F.	12	Unvaccinated.	Discrete, severe.
21	M.	46	In infancy.	Malignant confluent.
22	M.	6½	Unvaccinated.	Severe confluent.

REMARKS.

CASE 1.—Some secondary fever was present; recovery. There was no pitting. The acid was applied to the face and the arms only.

CASE 2.—The patient was an alcoholic and in a low state of health. Severe pulmonary symptoms developed. The temperature remained high throughout. Death occurred on the tenth day of the eruption.

CASE 3.—The patient was suffering from scarlet fever when attacked by small-pox; there were severe initial symptoms. Death occurred on the fourteenth day of the eruption.

CASE 4.—The temperature fell to the normal on the fifth day after the eruption; recovery ensued.

CASE 5.—No [illegible] fever was present; recovery ensued. The [illegible]

[illegible] ittle or no secondary symptoms. The convalescence was slow owing to an abscess on the face.

CASE 7.—The febrile symptoms were slight. Recovery ensued.

CASE 8.—Secondary symptoms were almost absent. The patient was quite convalescent by the ninth or tenth day.

CASE 9.—The face only was treated with the acid. The case was prolonged. Slight scarring resulted.

CASE 10.—The acid was applied to the face and *arms only.* The case was somewhat prolonged, being complicated with boils. There was very slight scarring on recovery.

CASE 11.—The recovery was rapid, with practically no pitting.

CASE 12.—There was no secondary fever. A rapid convalescence was followed by very little disfigurement.

CASE 13.—The patient had a bad alcoholic history. Severe delirium and insomnia were present for three days, requiring large doses of morphia. The temperature during the secondary stage only once reached 101° F. The recovery was rapid.

CASE 14.—This case was a very malignant one. There were numerous minute subcutaneous hæmorrhages and marked pulmonary symptoms. Death occurred on the third day of the eruption.

CASE 15.—There was a rapid convalescence after the eighth day of the eruption.

CASE 16.—The temperature became normal on the fifth day of the eruption. The convalescence was rapid.

CASE 17.—There was no fever after the initial stage. The patient made a good recovery with very slight scarring.

CASE 18.—There was slight fever; recovery ensued.

CASE 19.—No fever was present; recovery ensued.

CASE 20.—There was no secondary fever; recovery ensued.

CASE 21.—The carbolic treatment was only used on the face and the wrists. The patient died.

CASE 22.—The patient was suffering from scarlet fever with an abscess of the neck. Death ensued. The acid was applied to the face and the wrists only.

Bury.

THREE CASES OF ERYTHEMA EXSUDATIVUM MULTIFORME.

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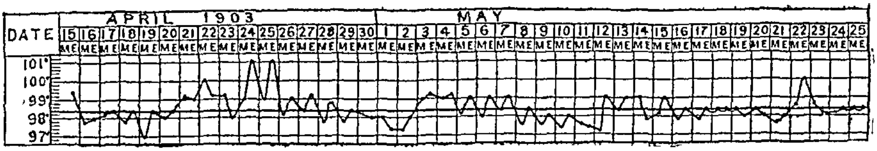
IT has seemed to me worth while to record these three cases and in some detail, not so much because of the comparative infrequency of the disorder as that they throw some light on a condition that has been rendered obscure largely on account of a faulty nomenclature. The three cases in virtue of the gastro-intestinal crises that were marked in all would be commonly termed Henoch's purpura but seeing that the particular syndrome of symptoms depicted by Henoch is merely one manifestation of a morbid state that exhibits protean changes of form the attempt to establish them as a distinct clinical entity can only serve to make more difficult the search for the underlying cause. The name that I have preferred to use is adopted from Osler as the best to hand, in that it enables us to group all the variations of type under a single head. In these cases of mine purpura and erythema were alone seen but Osler has also described urticaria and other conditions. In the most constant symptoms of the disease—that is to say, in the skin lesions, in the articular and peri-articular effusions, and in the abdominal crises—we are apparently dealing with a number of extravasations either of blood or of serum, but in the presence of nephritis and endocarditis, each of which was present in one or other of my cases, we are driven a step further back. In the light of other diseases we can hardly doubt that we have to do with a toxæmia which, like that of scarlet fever, spends itself with varying force on the skin, the kidneys, the heart, and the joints, and which in its cutaneous features presents a marked symmetry. In all of these three cases I have had careful cultures made of the blood but in each instance with negative results. I have not hesitated to refer the crises of abdominal pain to extravasation because of the close association of this symptom with extravasations that are visible to the eye on the surface of the skin. Moreover, one has in mind the visceral hæmorrhages—suprarenal for example—that are so commonly found in cases of purpura fulminans. The abdominal symptoms are such as may well be due to effusion into the wall of the gut and in one case that I have seen, but which is not here recorded, the diagnosis of acute intestinal obstruction was actually made until the appearance of the familiar symptoms cleared the picture. As to how far the nephritis affects the immediate and remote prognosis it is, of course, impossible to infer from three cases; but in these and other cases that I have seen I have noted three different endings: in one case the patient died in some three days from the most intensely acute nephritis imaginable, in two others, of which Case 1 is an example, all signs of kidney disease subsided, and in another, to wit in Case 3, it seemed that the originally acute nephritis had settled down into a chronic condition.

CASE 1.—The patient was a lad, aged 16 years. He was admitted into King's College Hospital on August 15th, 1902, complaining of a rash and pain in the stomach on and off since the previous Christmas. The following notes were sent to me by Dr. R. P. Williams of Slough: "In January treated for purpura, followed by abdominal pain and vomiting; next the ankles and knees swelled and the temperature rose to 101°F. Hæmorrhage from the gums and kidneys followed, after which he recovered, having been ill six weeks. After this he was kept under observation and treated with perchloride of iron and sulphate of magnesia. In March, 1902, a further eruption of purpura. In July, 1902, the present attack commenced with diffuse swelling of the left wrist (involving both tendon sheaths and joint), abdominal pain appeared as before, the vomiting was less than on the previous occasion, and blood casts were found in the urine." The family history and personal antecedents of the patient were quite unexceptionable. He had a comfortable home and was well fed. The temperature on admission was 100°. The pulse was quick and markedly bigeminal. There was a faint blowing systolic murmur at the apex. The lungs were normal; there was no hæmoptysis. The urine was acid and of specific gravity 1037; it contained much albumin, was muddy, and urates were present in abundance; there were no casts and no blood. The skin as a whole was moist. On both arms and legs, front and back, there were numerous colonies of red "freckles" which did not disappear on pressure. On August 17th a fresh crop of spots had appeared in the last 24 hours on the outer side of the right upper arm. These ranged in size from that of a pin's head to that of a lentil; they were painless, reddish purple, and did not fade on pressure. He had vomited in the morning. His temperature had fallen to 99°. He was kept on a milk and soup diet. On the 18th the spots were fading but he had vomited again during the night. The temperature was normal. On the 22nd there was a general subsidence of all the symptoms. On the 24th during the night a fresh crop of purpuric spots, closely massed together, had appeared symmetrically around each ankle and on the dorsum of the feet, a few also on the extensor aspect of each upper arm. There was also some nagging pain in the umbilical region. There were no joint pains. The temperature was normal. He had a general sense of fatigue and this was always the case when a fresh crop of spots appeared. On the 25th the blood examination was as follows: red cells, 5,825,000 per cubic millimetre; white cells, 13,743 per cubic millimetre; hæmoglobin, 77 per cent.; polymorphonuclears, 66·6 per cent.; lymphocytes, 25 per cent.; eosinophiles, 5·8 per cent.; uninuclears, 2·2 per cent.; and basophiles, 0·4 per cent. The blood was sterile. On the 29th the pulse tension was very low. Adrenalin hydrochloride was given thrice daily by the mouth. On Sept. 1st the blood examination gave the following results: red cells, 5,000,000 per cubic millimetre; white cells, 6500 per cubic millimetre; hæmoglobin, 80 per cent.; polymorphonuclears, 59·7 per cent.; lymphocytes, 29·3 per cent.; uninuclears, 4 per cent.; and eosinophiles, 7 per cent. On the 2nd there had been no revival of symptoms since August 24th. The rash had disappeared. The amount of albumin in the urine was very small. The adrenalin showed no measured effect on the blood pressure. The patient had light diet with fish and was allowed to get out of bed into a chair. On the 3rd a fresh crop of purpuric spots appeared on the back of both feet as far as the heads of the metatarsals; there were no other symptoms. On the 5th the eyes were examined. The retinal veins were engorged; pulsation was to be seen in the left inferior vein at its entrance to the disc. There were a few scattered pin-point hæmorrhages over the fundus most marked in the periphery of the left eye. They resembled those on the feet but were smaller. By the 9th there had been steady improvement. The systolic murmur at the apex was constant. On the 10th the blood was sterile. On the 17th the patient left the hospital, having lost all his symptoms but still with the apical bruit. There was no albumin in the urine.

To summarise this case there were—(1) symmetrical outbreaks of purpura; (2) articular and peri-articular effusions—sometimes symmetrical and sometimes not; (3) attacks of abdominal pain usually associated with the other symptoms; (4) hæmorrhage from the gums and the kidneys; and (5) casual disturbance of temperature; but the notable feature of the case is that in successive attacks not all the symptoms were present. In fact, if we were to adopt the current nomenclature we should have to say that this patient had simple purpura, Henoch's purpura, and arthritic purpura successively, though it is obvious that he had but one disease variously manifested. A tendency to recurrence is seen in this patient's illness.

CASE 2.—The patient was a boy, aged 14 years. He was admitted into the Royal Free Hospital on April 15th, 1903, complaining of a rash and pains in his elbows and knees. For nearly three weeks he had been ailing and for four days he had been conscious of stiffness and discomfort in these joints; he took to his bed three days before admission to hospital and almost immediately a red rash appeared on his legs and thighs. The knees and elbows became so painful that he was obliged to go to the hospital. While waiting in the casualty department he vomited and complained of pain in his back. In his previous history there was nothing noteworthy beyond the fact that he had lately been short of food. There was no history of epistaxis or other hæmorrhagic tendency. The family history was unexceptionable but for the fact that the father was very subject to epistaxis and once had an attack lasting for three days and a younger brother had a tendency to bleed at the nose on the slightest provocation. On admission the temperature was 99·4° F., the pulse was 72, and the respirations were 28. On the feet, the legs, the thighs, and the buttocks there was a bright red petechial rash of markedly symmetrical distribution. The spots varied from scattered specks to irregular clumps; they were not raised and did not disappear on pressure; those that had faded left brown stains. The most affected areas were the buttocks and the outer side of the legs and the thighs. Over the lumbar region and in several places on the legs there was a bruised appearance and the skin quickly reddened over any point of pressure. The skin as a whole was rather moist. The right elbow was swollen and discoloured and was kept flexed to a right angle; it was painful and more so on movement; it was tender to pressure and so was the adjacent portion of the humerus. The swelling of the left elbow had gone and also the pain on movement, but a bruised area remained which was slightly tender on pressure. The right shoulder was tender to touch and painful on movement but was not swollen. The left wrist was swollen and hot and very painful and tender. Both knees were hot, flushed, swollen, and painful, particularly the left; these were held slightly flexed; the swelling was irregular and had not the outline of the synovial membrane. There was a hot and tender swelling over the anterior part of the crest of the right ilium extending down into the iliac fossa, also over the right great trochanter and the posterior part of the left iliac crest. On the front of the chest on the right side corresponding to the second, third, and fourth ribs was an extremely painful swelling, seemingly in connexion with the periosteum. The lungs were normal and there had been no hæmoptysis. The heart was normal but for a reduplicated second sound in the pulmonary area; the pulse was regular but of low tension. The tongue was clean, the gums were normal, and the teeth were good. There was loss of appetite and the bowels were constipated. The urine was of specific gravity 1025 and it contained no albumin, blood, or sugar. The spleen was not apparently enlarged but the splenic region was tender on pressure. The abdomen was rigid. On April 18th an examination of the blood showed: hæmoglobin, 68 per cent.; red cells, 3,250,000 per cubic millimetre; white cells, 60,000 per cubic millimetre; polymorphonuclears, 81 per cent.; large lymphocytes, 6 per cent.; small lymphocytes, 11 per cent.; and eosinophiles, 2 per cent. The blood was sterile. The right elbow was in the same state as on admission. The swelling and pain of the left wrist had extended to the back of the hand. The condition of the knees was unchanged. The swelling on the front of the chest had almost subsided but that over the right iliac crest and in the right iliac fossa was larger and very tender. The rash as a whole was disappearing but there were several fresh ecchymoses about the ankles. The pain had prevented him from sleeping. On the 20th, on a simple milk and soup



Showing range of temperature in Case 2.

diet, the patient had improved greatly. His elbows and knees had quite recovered. The left shoulder was swollen, particularly behind, and was very painful. There was a further petechial eruption on the left arm and about the left ankle. Salicylate of sodium was ordered in ten grain doses thrice daily. On the 21st both shoulders were swollen and very painful and there was a bluish effusion in each axilla—obviously blood. The other affected joints were all better. There was a good deal of lumbar pain but no swelling. On the 22nd the morning temperature was 100°. The rash on the left arm was more abundant and it had also appeared on the right elbow. There was a very painful swelling over the right costal margin and the knees were discoloured. In spite of this the patient felt better and took food fairly. On the 23rd the temperature had fallen but there were a fresh crop of the eruption on both knees and a painful swelling just below, the insertion of the right deltoid and a similar one on the right thigh. Iron and arsenic were substituted for the salicylate and the diet was increased by cocoa and lightly boiled eggs and custard. On the 24th a painful swelling had appeared in the right temporal region and that of the costal margin was larger and more painful. On the 25th the temperature had risen to 101° during the night. The right upper eyelid was swollen and blue; the penis was much swollen and so was the prepuce. There was also effusion into, the scrotum. Micturition was painless and the urine was normal. There was a painful swelling in the right side of the abdomen, apparently in the abdominal wall. Calcium chloride in five grain doses was given thrice daily instead of the iron and arsenic. On the 27th the patient had very severe pain in the abdomen; he lay with his knees drawn up and could not bear his abdomen to be touched; seven grains of phenacetin were given at once. The bowels had been opened freely on the previous day. The left eyelid was swollen and bluish. Milk and soup diet was again given. On the 28th both knees were again swollen and painful and kept semi-flexed; the abdominal pain was much better; the swelling of the eyelids and penis had disappeared. The dose of calcium chloride was increased to seven grains. On the 29th the right wrist and lower end of the ulna were swollen and painful; there was a copious eruption on both forearms and feet and on the outer side of both legs. On the 30th there was again great abdominal pain. On May 2nd there was a general improvement; there was freedom from pain and the rash and swellings were all disappearing Blood examination showed: red corpuscles, 4,250,000 per cubic millimetre; white corpuscles, 37,000 per cubic millimetre; and hæmoglobin, 68 per cent. On the 4th he had an attack of acute abdominal pain. Three minims of morphia were injected. On the 10th there was a symmetrical eruption on the extensor surfaces of both forearms and arms, also on both buttocks and over the lumbar spine, where there was also pain. On the 14th, after the temporary relapse, there was again general improvement. On the 19th calcium chloride was replaced by nux vomica, sal volatile, bicarbonate of sodium, and chloroform water thrice daily before meals. A differential count showed: polymorphonuclears, 67 per cent.; lymphocytes, 31 per cent.; and eosinophiles, 1 per cent From the 20th to June 5th the patient mended rapidly and was sent to Broadstairs on the latter date.

To summarise this case there were: 1. Eruptions of purpura, symmetrically placed. 2. Hæmorrhagic effusions: (*a*) about the joints, (*b*) in connexion with bones and seemingly subperiosteal, and (*c*) in the lax subcutaneous tissues. These effusions showed a tendency to be symmetrical. 3 Attacks of abdominal pain, usually contemporaneous either with the hæmorrhagic effusions or with the outcrops of purpura and therefore probably referable to like causes—i.e., extravasation. 4. Slight disturbance of temperature. This did not appear to be an integral part of the disease but rather a casual complication, depending on such causes as pain, sleeplessness, and so on. The changes in the blood were neither constant nor characteristic, but the red cells and hæmoglobin were relatively low and the white cells relatively high. No drug that was employed had any obvious effect on the course of the disease.

CASE 3 —The patient was a Jewish boy, aged 10 years. He was admitted to King's College Hospital on August 30th, 1902, complaining of red urine and abdominal pain. He had been in Guy's Hospital under the care of Sir Cooper Perry from Dec. 4th, 1901, to Feb. 1st, 1902, and the following notes were kindly supplied by the medical registrar. "He gave no previous history of purpura. He had lived most of his life in Russia. His symptoms appeared three weeks after his being vaccinated and he was admitted for hæmoptysis, abdominal pain, and a purpuric rash all over his body and limbs but particularly over the buttocks, arms, and legs. There were purpuric spots even on the soles of his feet. The chest and abdomen, head and neck were almost free. He had also hæmatemesis and hæmaturia and passed bright red blood per rectum. He was very ill for a time but improved. He had pains in his elbow-joints at one time and these joints got stiff, apparently from hæmorrhage into them, but they entirely recovered. The hæmorrhage from the rectum was the most troublesome to cure; but ultimately all purpura and hæmorrhage cleared up entirely. The diagnosis was Henoch's purpura. The blood examination in December, 1901, showed red corpuscles, 3,866,660 per cubic millimetre; white corpuscles, 11,500 per cubic millimetre; and hæmoglobin, 80 per cent. He was treated at first with calcium chloride, ten grains every six hours; later by sodium salicylate and compound powder of kino, ten grains; and ultimately with compound syrup of phosphate of iron in one drachm doses." Since his discharge from Guy's Hospital in February he, had passed blood in the motions about four times and his urine was red-coloured about once a fortnight. He last noticed this on August 20th; it was followed by abdominal pain lasting about 12 hours, and he passed blood in his motions; occasionally he had pain during micturition. On admission the boy was very thin and bloodless. His temperature was 100° F. His heart, lungs, liver, and spleen were normal. The urine was of specific gravity 1012 with some blood, a large amount of albumin, some granular tube casts, and some red corpuscles. There were no eruption on the skin and no abdominal or joint pains. On Sept. 1st, after admission, he was given a dose of Epsom salts and passed one ascaris lumbricoides. On the 2nd no more worms were passed after santonin. A differential blood count showed: polymorphonuclears, 53·2 per cent.; lymphocytes, 43·2 per cent.; large uninuclears, 1·2 per cent.; and eosinophiles, 2·4 per cent. The blood was sterile. Adrenalin chloride was given in small doses thrice daily. On the 5th the patient was much improved and said that he felt quite well. With regard to the eyes, the veins were full and there was œdema of the retina along their course; there were no hæmorrhages. On the 8th there were purpuric spots on both buttocks and on the right knee and foot. On the 9th there was hæmorrhage of about half an ounce at a time in three motions. On the 10th calcium chloride was given in ten-grain doses every six hours. In the evening one ounce of blood passed from the bowel. On the 13th there was only a trace of albumin in the urine. On the 14th a group of spots appeared on the extensor aspects of the forearms. On the 15th the temperature was showing an irregular upward tendency. On the 16th there were petechiæ on the calf of the right leg; otherwise the patient was quite well. There was a trace of blood in the urine as well as the albumin; these were still present when the patient ultimately left the hospital on Oct. 7th.

To summarise this case there were: (1) symmetrical outbreaks of purpura; (2) symmetrical effusions into joints; (3) attacks of abdominal pain associated with the other symptoms; (4) hæmorrhage from the lungs, kidneys, stomach, and bowels; and (5) an irregular febrile temperature not waxing and waning with the other symptoms. A tendency to relapse rather than to recurrence is shown in the course of this case.

Harley-street, W.

A SIMPLE METHOD OF PERFORMING INTESTINAL UNION.

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IN 1899 I suggested two methods for uniting divided intestine. The paper appeared in THE LANCET of Feb 25th of that year (p. 501)[1] and was a record of experimental work carried out in Berlin. Since then I have performed experiments upon dogs with the object of ascertaining whether formalin-hardened gelatin bobbins could be used as efficient substitutes for those made with decalcified bone. (It may be stated in passing that they proved most efficient.) During these experiments the method to be described was devised as an improvement upon the first method and I venture to hope that this modification will supersede the older and make the principle of wider application.

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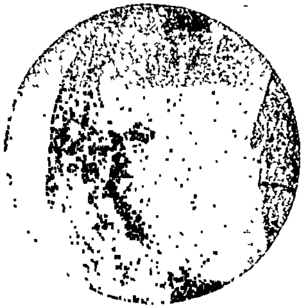
[1] The methods were described in (1) Illustrirte Rundschau der Medicinisch-Chirurgischen Technik, Jahrgang II., 2 Quartalheft; and (2) American Yearbook of Medicine and Surgery, Gould, 1900, p. 76.

The reproductions of two photomicrographs are shown to illustrate the effect on the intestine of this method as compared with the Czerny-Lembert method (see Figs. 1 and 2).

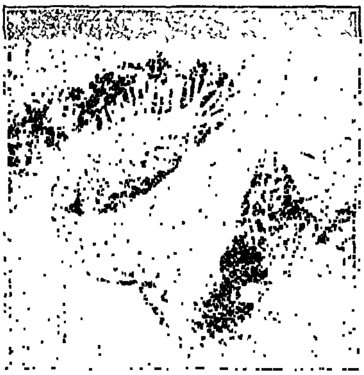
FIG. 1.



Condition of the bowel (in a dog) after the "bone-bobbin" operation.

The latter (Fig. 2) shows in a marked degree the annular shelving stricture so commonly found after this operation. The other shows how little interference with the finer anatomy has been produced by the "bobbin-and-ring" method about to be described.

FIG. 2.



Condition of the bowel after the Czerny-Lembert operation (also in a dog).

1. The bone bobbins (see Fig. 3) are made in four sizes so that when placed in a series, as it were to form a tube, the one end has a diameter of an inch and the other one of eleven-sixteenths of an inch. The bobbins are therefore slightly conical. The sizes are not hard [illegible] can [illegible] bbin [illegible] de a little more heavily (to permit of a deeper groove) so that the lumen of the little tube is even more conical than the outside conformation. Two objects are thus gained, firstly, the rubber ring slips more easily along the bobbin from the wider to the thinner end, and, secondly, when intestinal contents have once entered the narrower opening (the upper) there is less chance of the lumen becoming blocked, for the passage becomes progressively wider. There are three grooves in the bobbin: two at the distal end which are shallow and one at the proximal end which is deep. Beginning at the wide end the grooves may be, for convenience in description, designated *a*, *b*, and *c*. I have explained this bobbin somewhat in detail so that from the description the bobbin may be made by the bone-turner, as I have found that there was great difficulty in getting the bobbins all made alike. Some had the grooves too narrow, some too shallow, while in other cases the heaviness of the bobbin was greater at the wider end than at the narrow. These little points are of importance, for the smooth working of the method depends upon the nicety of the mechanism. The edges are rounded. The bone is decalcified completely or partially according to opinion.

FIG 3.

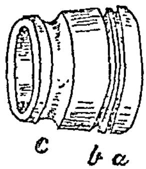
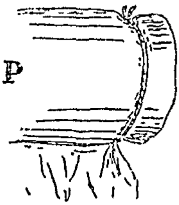
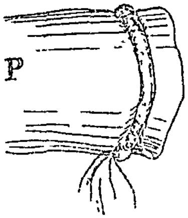


FIG. 4.



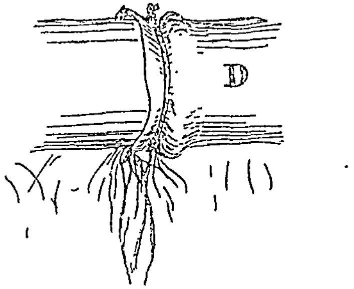
2. The bobbin is then to be inserted into the proximal end of the divided gut. (It is to be noted here that this is an important point, for should the bobbin be mistakenly placed in the distal end the whole mechanism is upset and the bobbin will become displaced laterally and so come to act as an obstructing foreign body.) The bobbin is fixed in the intestine by a ligature which binds the intestine into groove *a* (see Fig. 4).

FIG. 5.



3. Over this ligature is placed a rubber ring similar to an umbrella ring. For the larger sizes of bobbins a light umbrella ring will be suitable; for the smaller sizes lighter rings are necessary. The ring should be tight but not so tight as to prevent it being easily placed in position (see Fig. 5).

FIG. 6.

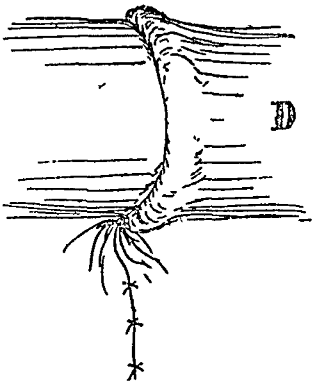


4. The proximal end of the intestine, so armed, is then

inserted into the distal end of the gut far enough for the gut to cover the groove *b*. The distal intestine is ligatured into this groove over the proximal end in a manner similar to that by which the proximal end is fixed to the bobbin. The ligature must be tight (see Fig. 6).

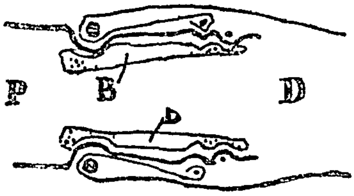
5. The rubber ring under the distal gut has then to be gently manipulated from its resting place over the first ligature in groove *a* into, and past, groove *b*. The conical shape of the bobbin favours this manœuvre and the ring glides very readily into groove *c*. Care must then be taken that the ring is not pushed beyond this groove (see Fig. 7).

FIG. 7.



The union is now completed by stitching the cut borders of the mesentery. From Fig. 8 it will be seen how the structures finally rest. Eventually all distal to the rubber ring comes away. The operation is an exceptionally easy one to perform and takes much less time to carry out than to describe. Sutures may be put in at the junction of the peritoneal surfaces but are not to be recommended as they lead to adhesions.

FIG. 8.



Note.—In the above figures P = the proximal end of the gut and D = the distal end. In Fig. 8 B is the bobbin shown in section.

Glasgow.

ON THE VALUE OF SALINE INFUSION IN THE TREATMENT OF ENTERIC FEVER.

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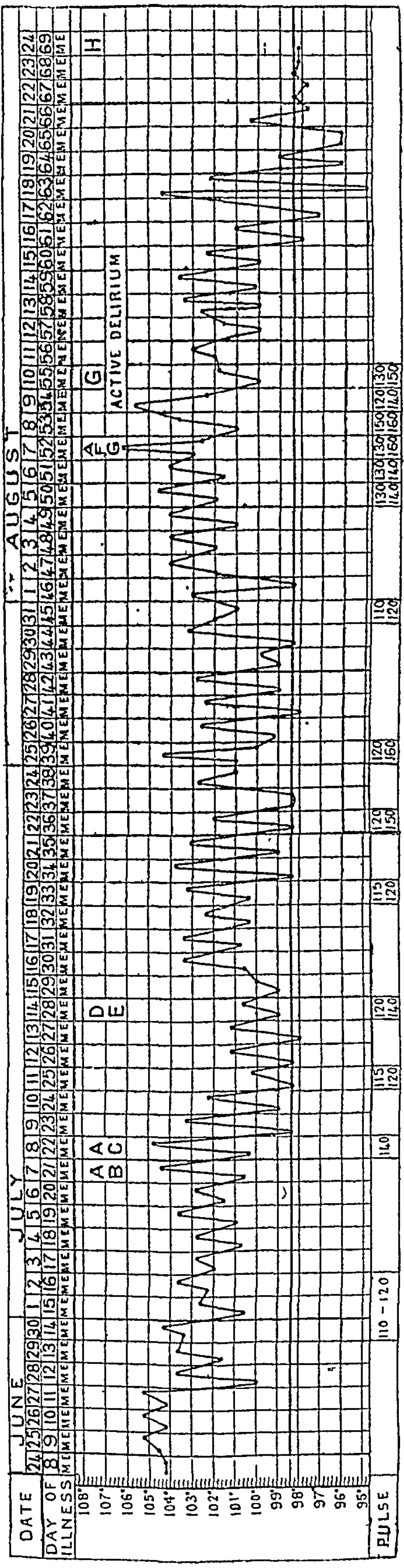
THE case here recorded shows the benefit to be derived from saline infusion, not only after hæmorrhage but in severe cases of enteric fever when during the third week of the disease the patient is in danger of dying from heart failure.

The patient, a married woman, aged 25 years, who eight weeks before had been delivered of her first child, complained of malaise from June 18th. On June 24th, when first seen, the temperature was found to be 104° F., the skin was dry, severe frontal headache was present, and the bowels were constipated. Careful examination of the blood for the malarial plasmodium gave a negative result. The patient's condition grew rapidly worse during the following days and the symptoms were so typical of enteric fever that an examination of the blood for Widal's reaction was considered unnecessary. The accompanying chart shows the progress of the case. The temperature in the early stage was kept in check by cold packing and later by sponging and the use of an ice-cradle. The early constipation was succeeded by diarrhœa which was not, however, very excessive.



A, Rigor. B, Injection of 20 ounces of saline fluid. C, Injection of 25 ounces of saline fluid. D, Severe hæmorrhage. F, Injection of 25 ounces of saline fluid at noon and also at 11 P.M. F, Injection of 30 ounces of saline fluid. G, Bloody stools. H, After this date the temperature remained normal till Sept. 1st when it began to rise and on Sept. 4th was 105° F.; it then declined gradually and became normal about Sept. 12th, after which the patient's recovery was uninterrupted.

On July 7th the patient's condition was serious, there was a severe rigor, the temperature was 105°, the heart sounds were very weak, and the pulse was almost imperceptible at the wrist. After a consultation it was decided that as the patient was evidently sinking from heart failure and there was no response to any of the ordinary cardiac stimulants the injection of saline fluid might be tried. 20 ounces were injected into the areolar tissue round the right breast at 11 P.M.; this was followed by some improvement in the pulse and the patient passed a fairly restful night. On the 8th she had a rigor, the temperature was 105°, and the pulse was very feeble. 25 ounces of fluid were injected. From the 9th to the 14th the condition improved, but on the latter date there was profuse hæmorrhage from the bowel, followed by profound collapse, with a pulse of 140. 25 ounces of fluid were injected at noon and at 11 P.M. There was some improvement up to July 29th, the temperature daily approaching the normal. On the 30th a relapse set in and on August 9th I was hurriedly summoned and found the patient suffering from a severe rigor. The temperature was 106·2° and the pulse was 160, intermittent, and could be counted with difficulty at the wrist; 30 ounces of fluid were injected. During the 9th and 10th the stools were tinged with blood. For a week after this the condition was critical. The patient was delirious, with a soft dicrotic pulse ranging from 130 to 160. On the 17th, at 2 A.M., the temperature was 104 2°, and falling gradually during the day was 95° at 6 P.M. It was feared that this might mean a recurrence of the hæmorrhage, but the character of the pulse (from 110 to 120, fairly full and regular) justified a favourable prognosis. On the 22nd the temperature for the first time was normal all day and continued so till Sept. 1st, when another relapse set in which lasted for 12 days. After this the patient made an uninterrupted though slow recovery. The general treatment throughout was fresh chlorine water and other intestinal antiseptics, sulphuric acid and opium to restrain the diarrhœa, and when [illegible] chloride of calcium in 20 grain doses. [illegible] by the [illegible] method [illegible] of the [illegible] without [illegible] india-rubber tubing about three feet long a Southey's trocar and cannula were attached, the other end being tied to the nozzle of an ordinary two-ounce glass male syringe from which the piston had been removed The whole was rendered aseptic by immersion in a solution of biniodide and subsequent flushing with hot sterilised water. The fluid was prepared by adding salt to water boiled in a tin kettle, brought to boiling point, and cooled to 100° F. It was introduced into the areolar tissue round the breast, the time occupied for 25 ounces being about ten minutes, only one insertion of the cannula being necessary on each occasion. An assistant holding the syringe uncovered in his left hand kept it about two-thirds full from the kettle held in his right hand. There are several advantages in this method, the most important being (1) the amount of fluid in the syringe can easily be seen; (2) by raising or lowering it the pressure can be increased or diminished; and (3) by firmly holding the syringe the temperature of the fluid is kept at, or about, blood heat. Any diminution in the temperature is at once noted and can be rectified by passing the kettle a few times over the flame of a spirit or paraffin lamp.

As a proof that, with ordinary precautions, there is little risk of local trouble in the above procedure it may be noted that in this case, although it was carried out five times (almost a gallon of fluid being injected), there was never at any time the least sign of irritation at the seat of injection.

THE POOR CHILDREN'S DINNER FUND.—His Majesty the King has sent a donation of £10 10s. to Sir William Treloar's Fund for entertaining poor children at the Guildhall (kindly lent by the Corporation of the City of London) and for sending 6000 Christmas hampers to poor crippled children This is the tenth year of the fund and the King has subscribed annually to it.

LONDON SCHOOL OF TROPICAL MEDICINE.—The entry of students at the London School of Tropical Medicine is the largest on record. About 30 post-graduate students have already joined for the autumn session, nearly half being sent from the Colonial Office, Foreign Office, and Indian Medical Service.

THE VALUE OF BLOOD EXAMINATIONS IN ABDOMINAL DISEASES.

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THE results of hæmatological examination have been so satisfactory in the hands of those who practise it that an endeavour to extend the use of the method seems justified. The instruments required are (1) a suitable microscope, the best kind being that with a mechanical stage; (2) a Thoma-Zeiss hæmocytometer; (3) clean cover slips and slides; (4) a surgical needle; and (5) Toison's fluid and Jenner's stain. Even spreading of a blood film depends even more on the cleanliness of the cover slips than upon the dexterity of the maker. I clean them by boiling for 15 minutes in a solution of bichromate of potassium and sulphuric acid, washing in distilled water and alcohol, and keeping them in absolute alcohol. Toison's fluid is made up as follows: chloride of sodium, one part; sulphate of sodium, eight parts; glycerine, 30 parts; methyl violet, 0·025 part; and distilled water, 160 parts. This fluid should be frequently filtered Jenner's stain is a solution of a salt of methylene blue and eosin in methylic alcohol. It has the advantage of fixing as well as double staining the film.

The lobule of the ear is perhaps the most accessible and convenient situation from which to obtain the few drops of blood required. After cleansing the skin with ether the lobule is punctured with a surgical needle. The first drop of blood which appears is wiped away. The ear must on no account be squeezed in order to force out the blood. A second drop of small size is then allowed to adhere to the centre of a cover slip. On this a second slip is rapidly placed so that the drop of blood spreads out into a thin film between their two opposed surfaces. The two slips are then rapidly drawn asunder and the film is set apart to dry. A third drop is then allowed to run up the capillary red-counting pipette to the mark 0·5. Having obtained the exact quantity the conical end of the pipette is wiped free from blood and plunged below the surface of the Toison's fluid which is sucked up into the bulb to the mark 101. While doing this it is advisable to rotate the pipette on its long axis between the finger and the thumb to insure more thorough mixing of the blood with the fluid. This manœuvre results in obtaining a dilution of 1 in 200 of the patient's blood. In cases where the leucocytosis is probably slight the blood may with advantage be drawn up to the mark 1 0 in order to obtain a dilution of 1 in 100. The patient's ear may then be wiped clean and a wisp of cotton-wool may be applied to stop the bleeding. The rest of the examination may be performed away from the patient. The blood and fluid in the pipette are thoroughly mixed by shaking and an indiarubber band stretched over its ends affords an efficient protection against leakage or evaporation if the count cannot be at once performed. A drop of suitable size is then transferred to the counting chamber and a glass cover slip is applied. The corpuscles must then be allowed a few minutes to settle on the floor of the chamber. The interval may well be employed in cleaning the pipette. Some distilled water is drawn into the bulb and well shaken. This is replaced by some sulphuric acid and the pipette is again thoroughly washed with distilled water. After rinsing out with ether a final wash with absolute alcohol is given and the pipette is dried by sucking through it some hot air. It is most essential to prevent any trace of mucus or saliva reaching the pipette This can be efficiently done by blowing down a [illegible] tube containing a pledget of cotton-wool and a small [illegible] During the five minutes [illegible] the corpuscles will have settled in the chamber The red cells are then seen to be of a faint yellowish colour and the leucocytes to be stained a deep purple colour and somewhat highly refractile. I have been in the habit of counting three sets of 16 squares each in obtaining the number of red cells. To insure greater accuracy more squares should be counted and more than one drop of the mixture. For the purposes of this investigation, however, the number of red cells is of secondary importance, and I found that 48 squares counted gave a sufficiently accurate result for my purpose The number of cells in the

TABLE I.—SHOWING BLOOD COUNTS IN CASES OF APPENDICITIS.

No. of case.	Date.	Sex.	Age (years).	Red corpuscles.	White corpuscles.	Differential count percentages.				Remarks.
						Polymorphonuclears.	Lymphocytes.	Hyaline cells.	Eosinophiles.	
1	March 17th.	M.	38	5,050,000	62,500	85·4	5·6	8·4	0·6	Appendix was gangrenous.
	April 16th.			3,916,000	15,150	—	—	—	—	—
	,, 25th.			4,662,000	12,500	62·0	29 6	6·0	2·4	—
2	March 31st.	F.	31	3,165,000	16,750	57·0	31·3	10·7	1·0	Chronic inflammation with a small ulcer.
3	April 4th.	[illegible]	34	3,500,000	11,000	69·0	23·6	5·2	2·2	Chronic catarrhal appendicitis.
4	,, 4th.		31	3,110,000	26,000	83·0	9·8	6·0	0·2	Stercolith with foul abscess.
	,, 20th.			4,083,000	23,750	—	—	—	—	Fæcal fistula.
	May 3rd.			4,064,000	10,900	—	—	—	—	Healed.
5	April 5th.	F.	21	4,050,000	9,375	60·8	25·2	11·2	2·8	Pain subsided; no operation.
6	,, 18th.	M.	23	3,928,000	6,250	54·8	34·0	8·0	3·2	—
	May 1st.			—	13,990	—	—	—	—	The temperature rose to 100° F.
	,, 10th.			4,960,000	10,170	—	—	—	—	Operation; much matting; no pus.
	,, 18th.			4,496,000	7,310	—	—	—	—	—
7	March 15th.	M.	30 (?)	5,060,000	6,200	—	—	—	—	No operation; colic (?).
8	April 20th.	M.	51	5,344,000	11,250	77·0	17·4	4·8	0·8	—
	,, 22nd.			—	11,480	—	—	—	—	Appendix extensively ulcerated; no pus.
	,, 24th.			—	11,060	—	—	—	—	—
9	,, 21st.	M.	13	4,883,000	14,500	69·0	17·0	12·0	2·0	—
	,, 28th.			4,550,000	17,100	—	—	—	—	Tuberculosis of the appendix, with caseating mesenteric glands.
	May 2nd.			4,478,000	10,000	—	—	—	—	—
	,, 10th.			4,332,000	7,900	—	—	—	—	—
10	April 22nd.	F.	16	3,800,000	9,375	60 2	31·8	7·0	1·0	No peritonitis; no pus; minute ulcer and stercolith.
11	,, 24th.	F.	23	4,112,000	6,500	—	—	—	—	—
	May 1st.			—	7,950	—	—	—	—	No operation.
12	,, 6th.	F.	21	3,664,000	7,150	—	—	—	—	Very slight catarrhal inflammation.
13	April 24th.	F.	28	4,366,000	25,000	85·0	8·0	6·0	1·0	—
	,, 25th.			4,264,000	27,300	—	—	—	—	Appendix long and gangrenous.
	May 1st.			—	29,250	—	—	—	—	—
	,, 3rd.			—	—	—	—	—	—	Abscess evacuated.
	,, 8th.			4,032,800	14,300	—	—	—	—	—
	,, 18th.			5,000,000	6,360	—	—	—	—	Healed.
14	,, 9th.	F.	30	4,984,000	36,570	85·0	6·6	7·6	0·8	Appendix partially gangrenous; patch of gangrene on cæcum; no pus.
	,, 13th.			5,010,000	17,880	—	—	—	—	—
	,, 21st.			4,976,000	11,450	—	—	—	—	Healed.
15	,, 17th.	M.	9	4,432,000	18,440	91·0	3·8	5·8	0·4	General peritonitis; sero-pus and lymph; no stercolith found; died.
	,, 18th.			—	19,080	—	—	—	—	—
16	,, 7th.	F.	31	4,320,000	35,900	89·2	5·6	4·8	0·4	Extensive foul abscess.
	,, 11th.			4,410,000	25,260	—	—	—	—	Discharge plentiful.
	,, 18th.			3,552,000	19,710	—	—	—	—	—
	,, 30th.			—	8,587	—	—	—	—	—
	June 11th.			3,950 000	10,170	56·4	33·5	8 0	2·1	Healed.
17	,, 2nd.	M.	11	5,330,000	29,520	82·6	10·0	7·0	0·4	Stercolith; perforation; abscess; death.
18	May 30th.	M.	11	4,325,000	16,220	77·6	12·6	9·6	0·2	Two days after operation; large abscess.
	June 6th.			4,450,000	11,767	—	—	—	—	—
19	May 29th.	M.	24	4,233,000	13,993	83·0	12·0	5·0	0·0	—
	,, 31st.			4,150,000	8,620	—	—	—	—	Small abscess with thick walls.
	June 7th.			4,850,000	15,902	—	—	—	—	Much discharge.
	,, 12th.			4,713,000	15,300	—	—	—	—	—
	,, 23rd.			4,420,000	21,870	80·4	9·4	10 2	0·0	Pleurisy at the right base.
20	,, 16th.	M.	21	4,558,000	11,130	46 0	42 0	7 6	4 4	Catarrhal appendix; fleshy adhesions.
21	,, 16th.	M.	28	5,100,000	9,540	57·8	29·0	9·2	4 0	Soft stercolith; no ulceration.
22	,, 15th.	M.	28	5,330,000	21,300	82·6	11·0	6·4	0·0	—
	,, 16th.			—	19,718	—	—	—	—	Appendix gangrenous; operation was performed on the 17th.
	,, 23rd.			—	20,670	—	—	—	—	—
	,, 27th.			5,050,000	28,940	—	—	—	—	The temperature rose to 102° F. on the 26th; it fell on the 28th. Discharge of pus from the wound.
23	,, 21st.	F.	26	5,500,000	6,500	69·0	22·8	7·0	1·2	Old catarrhal inflammation.
24	,, 23rd.	M.	49	5 980 000	24,650	75 4	16 8	7·0	0·8	Large subcæcal abscess opened on the 25th.
25	,, 26th.	M.	55	4,500,000	18,760	84·5	5·0	9·0	1·0	No pus. The appendix was gangrenous in its distal half.

TABLE I.—SHOWING BLOOD COUNTS IN CASES OF APPENDICITIS—*(continued).*

No. of case.	Date.	Sex.	Age (years).	Red corpuscles.	White corpuscles.	Differential count percentages.				Remarks.
						Polymorphonuclears	Lymphocytes.	Hyaline cells.	Eosinophiles.	
26	May 19th.	M.	32	5,016,000	32,334	85·2	7·6	6·8	0·4	Acute appendicitis with abscess.
	,, 22nd.			4,833,000	15,266	—	—	—	—	—
	,, 28th.			5,000,000	12,723	—	—	—	—	—
	June 6th.			4,000,000	11,130	60·0	30·2	8·0	1·8	Healed.
27	,, 28th.	M.	12	5,430,000	34,920	87·4	7·2	5·0	0·4	Large foul abscess; the appendix was not seen.
28	,, 29th.	M.	45	5,067,000	19,080	82·6	9·0	7·6	0·8	Large thick-walled foul abscess.
29	,, 13th.	M	23	5,260,000	18,500	80·6	10·0	9·4	0·0	—
	,, 14th.	9 30	A.M.	5,216,000	16,220	—	—	—	—	—
	,, ,,	8 0	P.M.	—	18,784	—	—	—	—	—
	,, 15th.			—	—	—	—	—	—	The appendix was found to be acutely inflamed; drops of pus.
	,, 27th.			5,500,000	19,080	79·4	11·0	9·6	0·0	—
30	,, 30th.	F.	14	4,567,000	28,280	84·2	9·8	7·6	0·4	Much recent peritonitis, with matting; small *pocket of pus.*
31	,, 14th.	M.	34	4,900,000	14,937	84·6	8·2	6·6	0·6	Much recent inflammation round appendix; no pus.
	,, 26th.			—	11,250	66·0	23·0	9·0	2·0	—
32	,, 28th.	M.	40 (?)	4,900,000	41,340	91·2	3·2	5·6	0·0	General peritonitis; death.
33	,, 11th.	M.	28	5,800,000	23,530	86·8	7·2	5·6	0·4	Acute appendicitis; sero-pus; mucous membrane gangrenous.
	,, 12th.			5,617,000	25,125	—	—	—	—	The temperature rose to 102° F.; bronchitis.
	,, 14th.			5,150,000	19,920	—	—	—	—	—
	,, 23rd.			4,900,000	11,560	—	—	—	—	Discharge.
	,, 29th.			4,620,000	9,850	70·0	19·0	8·0	3·0	Healthy granulations.
34	,, 27th.	F.	11	3,916,000	29,259	92·0	3·6	4·4	0·0	General peritonitis; sero-pus not offensive; the right tube and ovary were acutely inflamed.
35	April 22nd.	F.	21	3,300,000	25,750	75·6	19·0	5·0	0·4	—
	,, 23rd.			—	31,000	—	—	—	—	Large pyosalpinx removed.
	,, 27th.			3,384,000	21,150	84·0	10·0	5·4	0·6	Discharge; fæcal fistula.
	May 8th.			3,700,000	17,170	—	—	—	—	—
	,, 18th.			4,000,000	14,620	—	—	—	—	—
	June 5th.			4,230,000	8,900	52·2	33·4	10·8	3·6	Wound healed soundly.
36	,, 12th.	F.	24	4,067,000	29,910	92·6	4·8	2·4	0·2	Sero-pus not offensive; pelvic peritonitis; right ovary acutely inflamed and suppurating.

48 squares divided by six and multiplied by 100,000 gives the number per cubic millimetre in the blood.

In counting the number of white cells the method which is generally adopted is as follows. They are easily differentiated by the purple stain and their refracting character. An objective about $\frac{1}{6}$th or a Zeiss D is used with a low eyepiece. The ruled lines on the slide are then sought and the draw tube of the microscope is pulled out until the diameter of the field exactly corresponds to eight squares. The cubic contents of the field in view can then be easily calculated by the
a cylinder, since
metre and each sc
11 as $\frac{22}{7}$ the cubi
$\frac{4}{25} \times \frac{1}{10} = \frac{22}{875} = \frac{1}{79\cdot54}$. If then we count 50 fields and find an average of one cell per field we find that one cubic millimetre of the mixture contains 79·54 white cells; as the dilution was 1 in 200, the number of leucocytes per cubic millimetre of blood works out at 15,908. This method is quicker and more accurate than counting the leucocytes by means of the squares. The actual counting and calculation do not take more than a few minutes. Having thus found the numbers of red and white cells the films must be stained by means of Jenner's stain in order to arrive at a differential count of the leucocytes.

The four ordinary varieties met with are (1) polymorphonuclears (an irregular deeply staining nucleus with fine neutrophile granules); (2) lymphocytes (a small with deeply staining spherical nucleus and a little protoplasm); (3) hyaline cells (a large pale blue indented nucleus); and (4) eosinophiles (a pale blue nucleus, often double; large eosinophilous granules). Basophiles are so rarely met with that I have not taken them into account. 500 consecutive leuco*cytes are then counted*, half on each film, and the percentages are arrived at. In the few cases where the hæmoglobin was estimated Haldane's method was employed. Having thus arrived at a result of the blood examination, what can we draw from it? The basis of the matter is the fact that an increase of leucocytes accompanies acute inflammation. Typhoid fever at once occurs to our minds as an exception. Putting that aside leucocytosis is a sign of acute inflammation provided that (1) the resistance of the patient is capable of reaction; and (2) the intensity of the infection is capable of exciting reaction. The outcome of these factors means that a large leucocytosis will be provoked where the patient is in a high state of resistance and the infection is severe, while a patient in a low state of resistance will in the same circumstances exhibit but a feeble leucocytosis. The balance of these factors may later be of value in determining the prognosis of a case. I am not prepared to state that any definite relation exists between the amount of the leucocytosis and the intensity of the infection, but we can work upon the hypothesis that leucocytosis is the expression of nature's effort to counteract toxæmia.

In describing the effect on the blood generally it will be best to take each element in turn. I have not devoted any particular attention to the red cells or the amount of hæmoglobin. Da Costa, however, who investigated this question, came to the conclusion that in the average acute case there was a loss of 500,000 red cells and 30 per cent. hæmoglobin. The thickness of the fibrin network is, I believe, generally increased, but I cannot speak on this point from my own observation. The number of blood platelets is also increased; although I never counted them my impression is that I have seen more of them in cases with a large leucocytosis. The greatest alteration is found in the white cells. The normal number may be taken as 7500, of which from 60 to 75 per cent. are polymorphonuclears, from 20 to 30 per cent. are lymphocytes, from 4 to 8 per cent. are hyaline cells, and from 1 to 3 per cent. are eosinophiles. The great increase of the total number is of course the most prominent feature of the blood picture; almost equal in importance is the increase of the polymorphonuclear element; and, thirdly, the diminution of the eosinophiles and lymphocytes. The hyaline cells about keep their place. The polymorphonuclears and hyaline cells are the most active phagocytes in the blood.

In the accompanying table of blood counts in cases of appendicitis (Table I.) it was found on taking the averages of the acute and of the more or less chronic cases that the leucocytosis of the 22 acute cases averaged 27,990, of which 84·9 per cent. were polymorphonuclears and 0·4 per cent. were eosinophiles. Of the 14 subacute and chronic cases—I take the pathological condition as the basis of classification—the average leucocytosis was 10,614, of which 63·1 per cent. were polymorphonuclears and 2·1 per cent. were eosinophiles. The average count of five acute cases after operation and just before leaving the hospital was as follows: white corpuscles, 10,500; polymorphonuclears, 60·1 per cent.; and eosinophiles, 2·5 per cent.; or a condition almost exactly similar to the chronic cases.

There are certain special factors which have to be taken into consideration. Firstly, the influence of age. An analysis of the 22 acute cases gives the following results:—

TABLE II.—*Showing the Influence of Age upon Leucocytosis.*

Age.	No. of cases.	White corpuscles.	Poly-morpho-nuclears (per cent.).	Eosino-philes *(per cent.).*
Up to 20 years ...	6	26,100	85 8	0·3
From 20 to 30 years	8	24,320	83 9	0·35
„ 30 to 40 „	5	39,610	86·8	0·32
Over 40 years	3	21,160	80 8	0·8

The number of cases is, of course, too small for these results to be of much value, but so far as it goes the table shows that leucocytosis is most free between the ages of from 20 to 40 years and diminishes after 40 years. The physiological influence of age on leucocytosis is marked in the early months of life. At birth the number averages 18,000, sinks to 12,000 at the sixth month, and reaches the normal about the fifth year. The normal percentage of polymorphonuclears in infants is from 28 to 40 per cent. Marked leucocytosis also accompanies the later stages of pregnancy. An increase of from 2000 to 3000 leucocytes may occur after a large meal or exercise in a healthy adult.

Reference must be made to cases where there is little or no leucocytosis although the lesion is severe. First, there is a class of case in which the toxæmia is so intense that the reaction of the patient is overwhelmed. This class of case must, I think, be rare. Case 15 may, perhaps, be regarded as an example, as the lesion was very acute and extensive and the patient was a pale, ill-nourished boy, nine years of age. Secondly, a thick wall of inflammatory material surrounding a collection of pus may prevent the escape of the toxins which in some way cause the increase in the number of leucocytes. But in these cases valuable information may be gained from the differential count, a high percentage of polymorphonuclears indicating the possible severity of the lesion. Case 19 is a good example of this. The leucocytosis was only 14,000 on admission but 83 per cent. were polymorphonuclears. The count sank to 8600 in two days but on operation a small thick-walled abscess was discovered. In Case 31, however, where the blood picture was much the same, no pus was discovered but the parts were the seat of considerable recent inflammation.

Other cases which I might refer to are Cases 8 and 13

TABLE III.—SHOWING BLOOD COUNTS IN VARIOUS ABDOMINAL AFFECTIONS.

No. of case.	Date.	Sex.	Age (years)	Red corpuscles.	White cor puscles	Differential count percentages.				Remarks.
						Poly-morpho-nuclears.	Lympho-cytes.	Hyaline cells.	Eosino-philes.	
1	May 2nd.	F.	11	4,800,000	12,400	54 0	31·8	7 4	6·8	Tuberculous peritonitis, with fluid; ascaris lumbricoides was passed.
	„ 10th.			4 640,000	7,950	—	—	—	—	—
2	April 23rd.	M.	16	3,344,000	10,500	70 0	23·0	6·4	0 6	Tuberculous peritonitis, with fluid; chest clear.
	May 6th.			3,840,000	7,632	—	—	—	—	—
3	„ 23rd.	M.	7	3,500,000	8,270	52 0	35·0	12 2	0·8	Tuberculous peritonitis, with fluid; chest clear; hæmoglobin = 60 per cent.
	„ 29th.			4,003,000	8,580	—	—	—	—	Colour index 0·85.
4	Feb. 20th.	F.	17	—	20,000	75 0	20 0	4·0	1·0	Tuberculous (?) infection of mesentery, with pockets of pus.
5	April 17th.	F.	25	3,933,000	20,000	—	—	—	—	Suppurating tuberculous gland in the front of the kidney.
	„ 23rd.			—	16,500	60 0	25·0	11 0	4·0	—
	May 3rd.			4,600,000	13,650	—	—	—	—	—
6	April 21st.	M.	13	4,883,000	14,500	69·0	17·0	12 0	2 0	Tuberculosis of appendix, with caseating mesenteric glands.
	„ 28th.			4,550,000	17,100	—	—	—	—	—
	May 2nd.			4,478 000	10,000	—	—	—	—	—
	„ 10th.			4,332,000	7,900	—	—	—	—	—
7	June 28th.	F.	30	4,400,000	7,310	62·4	23 6	8·2	5 8	Hæmoglobin was 84 per cent.; colour index was 0·95; hydatid cyst.
8	May 20th.	M.	35	3,880,000	18,440	78·4	11·2	9·0	1·4	Suppurating hydatid of the liver.
9	„ 7th.	M.	25 (?)	5,000,000	22,950	—	—	—	—	Perforated gastric ulcer; count taken six hours after sudden onset of abdominal pain.
10	June 7th.	F.	35	3,815 000	20,350	77 4	16·4	6 0	0 2	Hæmoglobin was 48 per cent.; colour index was 0 75; small abscess in connexion with carcinoma of the stomach.
11	May 6th.	F.	57	3,760,000	14,300	80·2	11·0	8·0	0·8	Mass round uterus; amputation of the breast was performed ten hours previously; inflammatory or malignant.
	„ 11th.			3,910,000	10 100	—	—	—	—	—
12	„ 12th.	F.	28	5,032,000	10 230	65·6	24 0	8·4	2 0	Question of infective cholecystitis (?)
	„ 17th.			—	6,300	—	—	—	—	—
13	Feb. 22nd.	F.	16	3,240,000	23,000	70 0	10·0	15 4	4 6	Question of malignant endocarditis, with splenic infarct or subphrenic abscess; no necropsy was allowed.
	March 10th.			3 500,000	25,000	76 6	16 0	6 6	0 8	—
	„ 27th.			3,940,000	28,125	—	—	—	—	—
	April 4th.			—	25 000	—	—	—	—	—

In the former, that of a spare man aged 51 years, the leucocytosis never rose above 11,500 and yet although there was no pus there was most extensive ulceration of the appendix. The clinical symptoms seemed to accord with the result of the blood examination. Case 13 is interesting. The girl was admitted to hospital in no very serious condition from the clinical point of view The leucocytes numbered 25,000 with 85 per cent of polymorphonuclears ; on the next day they were 27,300 and on operation a long and gangrenous appendix was removed The temperature fell, the wound healed, the bowels were opened, and no pain was felt The clinical picture was in all respects highly satisfactory. Yet nearly a week after the operation the leucocytes were 29 250. The evacuation of a deep collection of pus a few days later explained this apparent anomaly. Perhaps Case 25 may be noticed as an example of the influence of age.

Table III, showing blood counts in various abdominal affections, presents some interesting points. In Case 1 the somewhat high eosinophile count was probably caused by the presence of worms. In the first six cases, which were tuberculous in character, the number of lymphocytes is rather high. Cases 7 and 8 are high in eosinophiles which is said to be the distinguishing feature of the blood in hydatid cases. Case 9 is particularly interesting. The man was seized with sudden abdominal pain about 1.30. He was admitted to hospital in a very collapsed state and remained so for three hours; he then vomited slightly twice and there was a streak of blood in the vomit. The pulse rose from 80 to 100. The abdomen was rigid but not tender and there was some diminution in the hepatic dulness. At 6 30 reaction began to set in. At 7.30 I counted his blood but unfortunately omitted to make any films. The leucocytes, however, numbered 22,950. The abdomen was opened at 8 15 and free fluid and a little gas were found ; there was no lymph but the peritoneum was infected. A perforation of the stomach was found. The interest of this case is the fact that the leucocytosis occurred with such rapidity.

In conclusion, I must express my indebtedness to the medical and surgical staff of St. George's Hospital for their kindness in placing their clinical material at my disposal. I hope that the tables will serve as an illustration of the value and the shortcomings of blood examinations in abdominal diseases. I think that we cannot regard a leucocytosis as an absolute and infallible indication of the presence of pus, but as an indication of toxæmia its value appears to me very great. Although I do not think it possible at present to fix any definite relationship between the amount of the leucocytosis and the intensity of the toxæmia, yet the broad fact remains that an increasing leucocytosis is, other things being equal, the most scientific means at our disposal for gauging the increasing virulence of an appendicular infection. On the other hand, a decreasing leucocytosis is evidence of decreasing virulence or walling off of the toxic products.

I cannot do better than sum up the practical moral in the words of da Costa : "The surgeon who attempts to use the blood count in appendicitis as a definite pathognomonic sign will soon run afoul of diagnostic disasters ; but he who regards it as only a symptom invariably to be correlated with other equally, if not more, important clinical manifestations cannot fail to find this method of inquiry of signal value in routine clinical surgery."

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

AN UNUSUAL VESICULAR ERUPTION.

By JOHN REID, M.A, M D., C.M. ABERD.

IN February, 1902, I saw a young man who was supposed to be suffering from herpes of the face following influenza. There were a few vesicles about his neck, and the influenza—now bronchitis only—soon disappeared. The young man was of a healthy family and he had up to this date had no illness whatever. As the rash continued to spread over the body and extremities in the shape of vesicles or bullæ some were three inches long and about half an inch wide the disease was treated with antiparasitic remedies. The fluid of the vesicles was clear and it never contained pus at any stage ; even after the vesicles were pricked they never produced pus. They dried up into scabs or scales The large raw surfaces on the abdomen and other parts of the body made life uncomfortable for the patient whose health otherwise was good. The patient worked in a dairy and had much to do with chaff-cutting, the straw in many cases being described by him as containing "smut" The vesicular fluid, dried and examined under the microscope, also undried, contained what appeared to me to be *uredines*, or very like the growth obtained by me in November, 1885, from growing rust from wheat in connexion with a pneumonia epidemic. The disease improved by the treatment but was very stubborn.

Southfields, S.W.

SPONTANEOUS CURE OF AN UMBILICAL FÆCAL FISTULA.

By GOPAL R. TAMBE, M.A., B.Sc., L.M. & S.,

STATE SURGEON, INDORE.

ON June 14th a man, aged 45 years, a Mahomedan, came under my care at the Maharajah Tukoji-Rao Hospital in Indore, Central India. He suffered from a fluctuating tumour at the umbilicus, which latter bulged out for a distance of one and a half inches from the abdominal wall and presented a small opening surrounded by exuberant granulations. On gentle pressure being made a drop of purulent discharge escaped from the opening. I therefore afterwards administered chloroform and cautiously opened the abscess on a director, when to my surprise I found three solid masses resting on the floor of the cavity. Much pus was washed out and the cavity was stuffed with iodoform gauze. Further examination of these three masses under the microscope and otherwise showed that they consisted of fæcal matter and had apparently escaped from a fæcal fistula which had subsequently become closed. The history given by the patient was that the abscess had been of a [illegible] previously to noticing it he had n[illegible] trouble or inconvenience. Consi[illegible] involved in perforation of the intestine and the great amount of care and attention required in surgical operations on the intestine, the cure imperceptibly effected by natural processes in this case is remarkable.

Indore, Central India.

NOTE ON THE INTERNAL ADMINISTRATION OF FORMALIN IN CASES OF PUERPERAL FEVER.

By CHARLES STEELE, M.D. DURH., F.R.C.S. ENG.

SOME time ago I saw a note of seven cases of puerperal fever having been treated by hypodermic injections of formalin with remarkable and rapid recoveries. I decided to try the method in any suitable case, but as I saw no detailed statement on the subject in the medical journals I was careful to use the drug only in small doses. The following are the results.

CASE 1.—The patient, the mother of three children, a delicate woman and very susceptible to the influence of drugs, miscarried on Feb. 4th, 1903, being in fair health at the time and only six months pregnant. The conjectures offered to me as to the cause of this occurrence at such an unusual period did not satisfy me; with this exception, that she had slipped off her chair and suddenly bent forwards a few days before it took place. She did well for a week and then had a rigor followed by a temperature of 102° F., slight odour in the lochia, and pain in her uterus. I prescribed one minim each of formalin and tincture of aconite in an ounce of water, every hour at first, gradually lengthening the intervals as improvement took place. She liked to take this medicine as it gave a comfortable, warm sensation in her stomach, spreading through the abdomen and the system and induced a cheerful feeling of its "doing good." [illegible] I gathered to be due to undue ex[illegible] needs of the system. Steady [illegible] relapse occurred after two weeks but soon yielded to treatment. Weakness was felt for altogether five weeks but complete recovery took place. She was reluctant to give up the formalin on account of the comfort which it induced.

CASE 2.—The patient, who was the mother of a boy, two and a half years old, was confined at full term after four hours of steady labour on May 13th, 1903, and did remarkably well for four days. On the afternoon of the fifth day her husband came to tell me that she had a rigor and a temperature of 104° F. and that she looked very ill. I went at once and found the temperature to be 106°, the pulse 120, and the respirations 36. The lochia were normal and lactation was uninterrupted. No cause for the attack could be found. She had an excellent nurse There were profuse saturating perspiration and severe headache; her lips were blue and on the next day the finger-tips were blue also. Three grains each of antifebrin and antitoxin were administered every hour until the temperature dropped, then these drugs were given less frequently. I also gave one minim of formalin in an ounce of water every half hour at first and then every hour. It should be mentioned that five days after her first confinement she had a slight feverish attack which yielded quickly to a few doses of Dover's powder (five grains) and also that about a year previously she had an extremely prostrating attack of influenza which depressed the action of the heart to an anxious extent, but from which she steadily recovered.

This patient expressed just the same feeling of comfort and warmth in the stomach, spreading through the abdomen and the system and making her feel altogether better, as did the previous patient. There was no cough, bronchitis, pleurisy, or pneumonia, or any other mischief. The urine was condensed for a few days owing to the free perspiration, but it was otherwise normal as were also all the functions, including the nursing of the child, which was carried on without injury to herself or the baby. She is now (July) perfectly well. On the second day I went prepared to inject antistreptococcic serum, but was thankful to find it unnecessary, as the remedies which I have described had sufficed.

Clifton.

A Mirror

OF

HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Prooemium.

BOLINGBROKE HOSPITAL, WANDSWORTH COMMON.

A CASE OF PERFORATED DUODENAL ULCER; OPERATION; SUBSEQUENT DEVELOPMENT OF SUBHEPATIC ABSCESS; RECOVERY.

(Under the care of Mr. HAROLD BURROWS.)

THE patient, a man, aged 24 years, was admitted to the Bolingbroke Hospital on March 4th, 1903, with symptoms of perforative peritonitis. On the previous night at about 11.30 he was playing billiards and as he stooped down to make a stroke he was seized with a sudden severe pain in the right hypochondrium. He felt sick and faint and was given some brandy which neither increased the pain nor made him feel better. Shortly after this the patient began to retch and to vomit, these symptoms, together with severe pain in the abdomen, continuing up to the time of the operation; in fact, the vomiting was so frequent that a diagnosis of intestinal obstruction had been suggested. The patient's last meal before the onset of the attack had been at 6 P.M., five and a half hours previously, and had consisted only of three cracknel biscuits and some tea. He stated that he had always enjoyed good health except for indigestion, from which he had suffered for years. He described it as pain or "a feeling of weight on the stomach" coming on about one and a half hours after a meal and always relieved for a time by taking more food. On examination in the ward the patient was evidently in acute pain. He was lying on his back with the legs extended; his expression was one of great anxiety and he was hiccoughing and frequently retching. The abdomen showed the usual characters of general peritonitis with these special points—viz., the pain and tenderness were most marked in the right hypochondriac region, rigidity of the abdominal muscles was more marked above the umbilicus than below, and the right rectus muscle was distinctly more rigid than the left.

Laparotomy was performed at 2.30 P.M., 15 hours after the onset of acute symptoms. A vertical incision was made through the upper part of the right rectus three-quarters of an inch from the middle line. As soon as the peritoneum was opened odourless gas escaped, together with some fluid which resembled weak tea with milk. On raising up the liver and pressing down the transverse colon a perforation about one-sixth of an inch in diameter was found on the upper surface of the duodenum near the junction of the first and second portions. Bilious material was oozing through the opening. The duodenum and neighbouring parts were coated with plastic lymph. No induration could be felt in the neighbourhood of the ulcer. The peritoneum was taken up at three points beyond the margin of the ulcer by a fine silk ligature and the included area was then inverted and the suture was drawn tight and knotted. Some difficulty was experienced at this stage on account of the awkward position of the ulcer and the constant oozing out of bilious material which prevented a good view of the seat of the lesion. When this had been accomplished the surrounding peritoneum was swabbed dry, an indiarubber drainage-tube with a gauze wick inserted down to the site of the perforation, and the abdominal wound sutured. The patient recovered from the immediate effects of the operation but afterwards developed a subhepatic abscess which was opened and drained through the right loin on April 14th, 41 days after the first operation. After this convalescence was uninterrupted. When last seen, on August 10th, the patient was in good health and stated that he was quite free from pain or discomfort after food.

Remarks by Mr. BURROWS.—The above case is of some interest because comparatively few cases have been recorded where perforation of a duodenal ulcer has given rise to symptoms sufficiently characteristic to allow of a correct diagnosis being made previously to operation or necropsy. In this instance, fortunately, the symptoms both before and after perforation pointed rather definitely to the duodenum as the site of the lesion.

ST. MARY'S HOSPITAL, MANCHESTER.

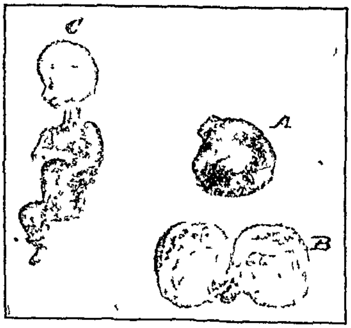
A CASE OF ECTOPIC GESTATION REMOVED BY ABDOMINAL SECTION WITH A DERMOID TUMOUR OF THE EXTREMITY OF THE LEFT TUBE.

(Under the care of Dr. D. LLOYD ROBERTS.)

THE patient was a married woman, aged 29 years, who was admitted into St. Mary's Hospital, Manchester, on April 23rd, 1903. Her menstrual history was as follows. The first menstruation occurred at 12 years of age and the last on Jan. 1st, 1903; it had previously been regular every three weeks; the duration was five days, the amount being small. There had been amenorrhœa for four months. She had had no previous pregnancy. She had had pains in the stomach on and off since the last period. The pains came on very severely on the day of admission; the patient was sick but did not faint. During the last month she had had several attacks of pain and collapse, two of the attacks having occurred within the last four days. On admission the patient was exceedingly blanched; she had much pain, with considerable tenderness. There was an indefinite swelling in the lower part of the abdomen, especially on the right side; dulness was present in both flanks. Per vaginam the vaginal orifice and the walls were normal; the os and the cervix were also normal. There was some bulging in the posterior and right fornices; the uterus was rather heavy. There was a semi-cystic swelling on the right side about as large as an emu's egg.

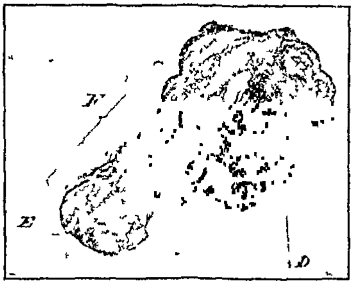
Operation was performed on April 24th. On opening the abdomen a large quantity of dark-coloured blood escaped which with a considerable amount of laminated clot and a fœtus about three inches long were removed. The right tube was then found to be ruptured, with apparently the placenta protruding. The tube and the ovary were removed. Attached to the left tube was found a small rather firm tumour about one and a quarter inches long and three quarters of an inch broad, which was removed (see Figs 1 and 2) The abdomen was then washed out with sterilised water. The abdominal wound was brought together by a single row of silkworm gut sutures The dressing consisted of aseptic gauze and cotton-wool secured with broad strips of plaster The temperature rose to 99 8° F. on the evening of the operation, after which it was never above 99 6°. The ligatures were removed on the eighth day and the subsequent recovery of the patient was uneventful

FIG 1.



A, Small teratoma as removed *B*, The same in section *C*, Fœtus

FIG 2.



D, Ruptured tubal sac. *E* Ovary *F*, Pedicle composed of severed broad ligament

Remarks by DR LLOYD ROBERTS —Naturally it may be asked why vaginal cœliotomy was not performed and the sac and its contents removed through the orifice so made I should certainly prefer this route if the sac were fixed, adherent, and applied to the upper wall of the vagina and the floor of the pelvis But in cases similar to this one, where the sac has burst and where the contents have escaped into the pelvic cavity, and where the ovum has separated from its placental attachment and is floating along with blood, fluid, and débris in the peritoneal cavity, I prefer the abdominal route Moreover, sight as well as touch is of material help to the operator when dealing with complicated cases of ectopic gestation Also as the separated ovum in this case had ascended into the abdominal cavity it would have been very difficult to find and to extract it by the vaginal route

A word as to the question of irrigation *versus* cleansing the abdominal cavity with sponge or swabs of cotton wool. When numerous small clots and a large amount of fluid are present I much prefer irrigation with sterilised water to sponging as it is well nigh impossible to remove the fluid and clots from the recesses behind and about the intestines with the sponge.

Another point of interest in this case was the small tumour which was attached to the fimbriated extremity of the other Fallopian tube and proved to be a small teratomatous growth, containing bone, cartilage, connective tissue, and necrotic masses which, so far as can be judged, were of epithelial origin Dr W E Fothergill, who kindly examined the tumour for me, says that it must be regarded as a teratomatous growth and is probably a dermoid cyst No chorionic villi were found in it

DURHAM COUNTY HOSPITAL

A CASE OF FOREIGN BODY IN THE URETHRA

(Under the care of Mr S W PLUMMER)

A YOUNG man, aged 22 years, was admitted to the Durham County Hospital on June 9th, 1903, complaining that on Feb 5th last he had passed down his urethra a hat pin of about the length of his finger His mental capacity was weak and he had often been in trouble with the police for minor offences. Two years previously he had been operated on in the hospital for the radical cure of hernia when his behaviour gave great trouble On examination the hernia was completely cured Passing a sound into the bladder a foreign body was easily felt in the prostatic urethra, and when the sound was passed fully into the bladder it distinctly gave the impression that the foreign body projected into the bladder As the man said he had passed the pin head first into the urethra it was decided to open the bladder suprapubically, feeling that if pressure were made on it by the perineum it would only be forced still further into the bladder This was done but no trace of the pin could be felt on digital exploration A median lithotomy staff was then passed and the urethra was opened in the perineum and after some little difficulty a steel hat pin two and five eighth inches in length with a large *black glass head was extracted*

Remarks by Mr PLUMMER —On a previous occasion[1] I recorded in THE LANCET a case of removal from the male bladder and urethra of a hat-pin five inches in length The Editors then gave some references to similar cases The above notes of another instance may be of interest The chief point in this case is the length of time (over four months) during which the hat-pin had been in the urethra without causing any trouble , indeed, when the patient applied for admission he did not complain and only stated it was there Mr Brunel's manœuvre of reversing the pin could not in this case be carried out The urethral wound was sutured and the after treatment directed to the suprapubic cystotomy.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Fractures in Skeletons of Large Apes —Cancer on Nerve or Trophic Areas —Cartilaginous Body from the Knee joint —Prostatectomy —Congenital Sacral Tumour removed from a Girl, aged one year

A MEETING of this society was held on Oct 20th, Mr RICKMAN J GODLEE, the President, being in the chair

Mr W L H DUCKWORTH read a paper entitled Notes on Fractures and other Skeletal Lesions in Anthropoid Apes " and illustrated his communication by specimens and by lantern slides He said that in the course of observations on the skeletons of anthropoid apes he had been struck by the large number of instances of bony lesions presented by these animals The examples shown consisted principally of cases in which the natural repair of a fractured bone had been attended by an excessive production of callus Pathological bone formation due to osteo arthritis and to periostitis of obscure nature was also met with In conclusion, it was pointed out that the large apes were much more liable to fractures than were the smaller apes and that among the larger apes the most arboreal example—viz , the orang outang—was the most susceptible This would indicate that the orang-outang had increased in size to the utmost limit appropriate to a mammal with an arboreal habitat and that it was thus very delicately adjusted to its environment This no doubt explained its limited area of geographical distribution. Secondly, anthropoid apes in the wild state were able to survive very terrible injuries consequent on traumatic lesions. Thirdly, the investigation of such pathological specimens had important bearings on the particular case of the femur which was described as that of an intermediate form between the apes and man and which bore a large exostosis springing from the linea aspera.

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[1] THE LANCET, Nov 7th, 1891, p 1039

Mr. G. L. CHEATLE said that in a former communication to the society he had pointed out that Rodent Ulcers and Squamous Epithelioma occupied certain areas which he thought were nerve areas and sensory nerve areas. He wished now to amplify that point. He alluded to the difficulty of demonstrating squamous epithelioma occupying nerve areas, a difficulty which he believed could be explained by the separation of cells from the primary growth and hence complicating matters by becoming secondary deposits. He wished further to strengthen another observation which he had made—viz., that the incidence of cancer frequently occurred on those points at which a nerve became cutaneous—and to show that the genesis of carcinoma was very frequently associated with points which Dr. H. Head had described as maximum points, and here again a difficulty was experienced in bringing into line squamous epithelioma with rodent ulcer. He divided his paper into two parts: (1) the spread of cancer in nerve areas; and (2) the incidence of cancer on Head's maximum points. In illustration of these points he showed a number of lantern slides of cases of rodent ulcer, proving that the growth tended to occupy certain nerve areas and also that the growth tended to start in Head's maximum points. On the face it might be asserted that these points corresponded to embryonic clefts, but such an argument could not be advanced against the growth on the trunk which also originated in Head's maximum points.

Mr. RAYMOND JOHNSON brought forward a specimen of a Pedunculated Cartilaginous Body removed from the Knee-joint. The portion of the synovial membrane to which the pedicle was attached was also removed and the interest of the specimen consisted in the presence of numerous nodules of hyaline cartilage in the synovial membrane around the attachment of the pedunculated body. It thus demonstrated in an unusual way the formation of such a chondroma by a growth of cartilage in the synovial membrane. A specimen of a Cartilaginous Tumour removed from a Tendon Sheath in the Hand was also exhibited. No record had been found of a similar specimen.

Mr. S. G. SHATTOCK discussed certain anatomical points in connexion with the operation of Prostatectomy from an examination of a series of specimens which had been presented by Mr. P. J. Freyer to the Museum of the Royal College of Surgeons of England. The two questions upon which controversy had arisen were: (1) how far the prostatic portion of the urethra was preserved, and (2) was the whole of the prostate removed. Much of the interest in regard to the urethra had now gone, since its preservation was no longer regarded as of any moment. The subject of the urethra had to be considered firstly in the case where the gland was removed with its circumference entire, and secondly, when the gland was divided in front of the urethra with the definite purpose of saving the canal. As an example of the first Mr. Shattock selected the eighth case recorded by Mr. Freyer in the *British Medical Journal*, Feb 1st, 1902, a case in which Mr. Freyer thought that the urethra had been preserved. Here, after the gland was detached all round, with the catheter passing through its axis, the whole mass, on counter pressure being made from the rectum, was suddenly propelled into the bladder and it was thereupon noticed that the catheter was covered by the urethra for about two inches from the triangular ligament; this portion of urethra was regarded by Mr. Freyer as prostatic, off which the gland had been drawn like a bead from a thread. The specimen showed beyond the anterior end of the gland a cord-like process which was viewed by the operator as the pubo-prostatic ligaments. A minute examination of this, however, showed it to be urethral mucosa covered on one side with columnar epithelium and continued without solution of continuity into the bore of the gland. This must be regarded as membranous urethra avulsed in connexion with the prostate and this, Mr. Shattock imagined, was the urethra felt on the catheter after the gland had been displaced into the bladder and whilst the finger was still in front of, or on the distal side of, the gland. In a second class of cases the gland was parted in the mid-line in front of, or above, the urethra with the object of peeling the latter off and afterwards completing the removal of the enucleated gland by displacing it into the bladder. As an example, in Case 9 of Mr. Freyer's lists this was thought to have been carried out, but examination showed that except at the anterior end the urethral and vesical mucosa remain on the enlarged gland, the depth of the canal being, as usually the case, largely increased. Mr. Shattock showed a like condition in an enlarged prostate removed by Mr. A. Pearce Gould where a similar attempt was made to preserve the urethra and where almost the whole of the mucosa remained, in places so thinned that it could hardly be raised on dissection, yet microscopically showing a rosary of prominent epithelium and traceable without interruption to the flaps of thicker mucosa remaining on the vesical surface. In fact, the object aimed at in such circumstances was so incompletely attained that it could not, properly speaking, be said to have been carried out, such extensive tracts of thinned urethral mucosa did examination disclose adhering to the deepened bore of the gland. Passing on to the other question, how much of the gland was removed, Mr. Shattock had selected the most clearly extirpated of all Mr. Freyer's specimens (Case 28, *British Medical Journal*, April 18th, 1903) The gland was removed with its circumference quite entire. After hardening, it was cut completely through at right angles to the axis of the urethra and microscopic sections were made of the entire area, midway between the upper, the vesical, and the lower ends. To prevent confusion it was necessary to use terms in the same sense as Mr. Freyer. By the "sheath" was to be understood the fibrous investment furnished by the recto-vesical fascia; by the "capsule," the fibro-muscular cortex which was directly continuous with the stroma of the gland, but into which the gland tissue did not itself penetrate. The transverse section in Mr. Freyer's specimen displayed a well-marked cortex of unstriped muscle fibre completely surrounding the glandular mass. It was at once obvious that what had been carried out was not the mere enucleation of an adenomatous formation. The surface of a prostatic adenoma, like that of others, was smooth and lobulated or tuberous. In the various other of Mr. Freyer's specimens also the same held true. The mass removed was invested with a cortical zone of fibro-muscular tissue, through rents or bosses in which the smooth tuberous adenomatous mass of the enlargement presented itself to view. Mr. Freyer's operation, therefore, was a prostatectomy. But was it as *complete* a prostatectomy histologically as it was from a surgical aspect? Did the line of enucleation absolutely and everywhere pass beyond the limits of the gland tissue? A critical study of the muscular cortex in Mr. Freyer's specimen showed that this was not the case. For long distances the cortex was solely of plain muscle concentrically disposed, but here and there were the unmistakeable flattened masses of gland tissue and so involved were these in the line of enucleation that one could not but believe that others had remained behind. For in this, as in the others of Mr. Freyer's specimens, the transversely fasciculated character of the surface of the capsule showed that the line of enucleation was not beyond but through it. From the histological side, therefore, Mr. Shattock thought that prostatectomy was in most cases incomplete. A complete prostatectomy, in short, could hardly be verified in this strict sense except by the microscopic examination of the parts left behind.

Mr. H. J. CURTIS read a short paper on a case of Congenital Sacro-coccygeal Tumour successfully removed from a girl, 12 months old. It formed a prominence, surmounted by a tuft of fair hair, over the lower part of the right border of the sacrum and coccyx. The greater part of the tumour lay between these bones and the rectum, clearly visible at the operation. The tumour consisted of a series of cyst-like cavities imbedded in a mass of fat. The cysts were really tubules more or less dilated. In the fresh condition they were filled with clear, viscid, mucoid fluid. Microscopically the "cysts" were seen to be lined by a single layer of large, non-ciliated, fully developed, columnar epithelium cells. To such tumours Bland-Sutton had applied the name "thyroid-dermoid," in reference to the closed spaces lined by cubical or columnar epithelium containing mucoid fluid. Like Middledorpf's case the tumour contained connective tissue, mucous membrane with characteristic follicles, submucous tissue, and longitudinal and circular layers of muscle fibres; in other words it clearly represented a portion of bowel. In addition, areas of cartilage and of epithelial or epithelioid cells massed together without intervening stroma existed. The epithelial element in all probability was the remnant of the undifferentiated embryonic tissue from which the tumour itself originated.

OBSTETRICAL SOCIETY OF LONDON.

Extra-Uterine Gestation.—Ruptured Tubal Gestation.—Abdominal Pregnancy.

A MEETING of this society was held on Oct. 7th, Dr. EDWARD MALINS, the President, being in the chair.

Mr. JOHN D. MALCOLM read a paper on an Operation for Extra-Uterine Gestation between the Third and Fourth Months of Gestation, with Removal of a Living Fœtus. The patient, a healthy woman, was married on Oct. 9th, 1899, at the age of 23 years. In the middle of April, 1900, she felt depressed, menstruation became irregular, and she had attacks of pelvic pain, with nausea, commencing in May. On July 17th a large abnormal mass was felt behind the upper part of the vaginal wall, nearly filling the pelvic cavity and rising to about half-way between the pubes and the umbilicus. The uterus was somewhat enlarged, was dragged up, and was pushed over to the left side of the pelvis. On July 18th an incision was made in the middle line above the pubes, a small collection of pus being opened, and through it the amniotic sac was evacuated. A fœtus of between three and four months' development was extracted without opening the peritoneum and the placenta was felt with an extensive attachment over the right side and floor of the pelvis. The cavity was packed with iodoform gauze and no attempt was made to remove the placenta. The latter remained alive and there were frequent and sometimes profuse hæmorrhages when the gauze packing was changed between July 24th and August 10th. On the latter date an attempt was made to break up and to get away the placenta. A small piece was torn off but hæmorrhage was so alarming that the wound had to be packed immediately. The placenta was killed by this procedure and there was hardly any blood los [illegible] y bit of the placenta had to be [illegible] sues and its removal was not co [illegible] There was an inflammatory attack with some intestinal difficulty in September and the wound did not finally heal until the middle of December. The patient was now in perfect health.

Dr. C. H. G. LOCKYER contributed a paper on a Case of Ruptured Tubal Gestation in which the ovum continued to live for about four months, the gestation sac becoming implanted on the omentum. The symptoms began with uterine hæmorrhage and the passage of a (?) decidual membrane on Dec. 27th, 1902; this was after a period of amenorrhœa dating from the end of October (eight or nine weeks). Signs of internal hæmorrhage appeared on Jan. 11th, 1903 (about the eleventh week of gestation). A swelling in the left ovarian region was palpable on Jan 20th. An operation was performed on Feb. 11th and death took place 24 hours later. The primary tubal rupture occurred through the upper, or peritoneal, aspect of the tube and the fœtus escaped into the abdominal cavity; chorionic villi gained immediate attachment to the lower edge of the omentum, which approximated, and presumably was adherent, to the tube prior to rupture. The omentum enveloped the gestation products and soon shut them off from the general peritoneal cavity. The secondary gestation sac so formed seemed to have remained intact from Jan. 11th to Feb. 5th. On Feb 9th, the time of the third crisis, the fœtus probably escaped through a rent in the amnion, since it was found in the peritoneal cavity two days later at the time of the operation. The way in which implantation on to the omentum took place was analogous to that which occurred when, the rent having been below, the villi grew out between the layers of the broad ligament, but events proved that the risk of secondary rupture was greater when the sac was formed of omentum than when the envelope was composed of the broad ligament folds.

Dr. J. B. HELLIER brought forward the report of a case of Abdominal Pregnancy secondary to a Partially Ruptured Pregnant Tube.

Dr. G. E. HERMAN said that he could not agree with Mr. Malcolm's recommendation of prompt operation in all cases of ectopic pregnancy in which the fœtus was living, whatever the period of pregnancy. In the first half of ectopic pregnancy certain dangerous events, such as rupture of the tube or of the gestation sac, were frequent, but dangerous accidents of any kind were rare in the second half of ectopic pregnancy. When the patient got to term spurious labour came on and at this time the patient was in practically no danger. Then the child died, the liquor amnii was absorbed, and, finally, after an interval, the length of which was not yet exactly known, the placenta became thrombosed. The patient was as a rule in no danger until suppuration took place, but suppuration might not occur at all and the patient might remain in good health to the end of a long life, subject only to the inconvenience of an enlarged abdomen. He therefore thought that in the second half of ectopic pregnancy with a living child the safer course was to wait until symptoms of suppuration had begun.

Dr. W. F. V. BONNEY said that within the last few months two similar cases had come under his own notice. Both these two patients were operated on by Mr. J. Bland-Sutton and an enormous retroperitoneal collection of blood was found in the first, whilst from the second, who had also suffered from two months' amenorrhœa, a perfect and unruptured secondary abdominal sac, containing a living fœtus of between four and five months, was removed with a successful result.

Dr. AMAND J. M. ROUTH gave some further details of the history of Dr. Lockyer's patient. She had had three attacks of collapse from internal hæmorrhage with amenorrhœa for nine weeks. The diagnosis of extra-uterine gestation was made from the history and the physical signs. It was assumed that it was a secondary intraperitoneal pregnancy after tubal rupture owing to the tumour being entirely distinct from the retroverted uterus. At the operation the placenta was found to be already separated on its central maternal surface and adherent at several parts of its circumference to the omentum and the broad ligament. After its removal there was a profuse general capillary hæmorrhage from all the underlying structures. This was at once arrested by firmly applied gauze pressure. As the anæsthesia passed off uncontrollable vomiting ensued and she died from exhaustion in 24 hours. Dr. Routh asked for the experience of those present regarding the persistent amenorrhœa in this case and the one mentioned by Dr. Bonney instead of the usual metrorrhagia. Was it peculiar to these cases of secondary intraperitoneal pregnancy?

Specimens were exhibited by Dr. W. E. BATCHELOR, Dr. H. R. SPENCER, Mr. J. H. TARGETT, and Dr. A. W. SIKES.

HARVEIAN SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Oct. 15th, Dr. W. WINSLOW HALL, the President, being in the chair.

Dr. HERBERT TILLEY showed a man, aged 49 years, upon whom he had *operated five and a half years ago for* Squamous-celled Epithelioma of the Right Vocal Cord. The only symptom for the relief of which the patient applied to the hospital was "hoarseness" of two months' duration. Laryngoscopic examination revealed a well-defined pale nodule occupying the anterior two-thirds of the right vocal cord. It was of the size of a small horse-bean and surrounded by a slight zone of congestion. The vocal cord upon which it grew was *motionless* in phonation. This fact, coupled with the appearance of the growth, determined the diagnosis of epithelioma. There were no enlarged glands in the neck. The operation consisted of a preliminary tracheotomy, followed by insertion of Hahn's tampon cannula in order to prevent the blood passing into the lungs during the operation. The thyroid cartilage was divided in the middle line and the halves were held apart while the diseased cord with the ventricular band was completely dissected out. Finally, the halves of the thyroid cartilage were brought into accurate apposition by a catgut stitch, the external wound was sutured for three-quarters of its length, and the cannula was removed from the trachea. The patient made a rapid recovery. The points of interest in the case were that the hoarseness was the only symptom of such a grave disease and the excellent voice which the patient then possessed. The place of the original vocal cord had been taken by a cicatricial band forming a sort of fixed false cord. Dr. Tilley laid stress on the importance of an early diagnosis in these cases. If the radical operation was performed early in these intrinsic cases a very high percentage of cures (compared with malignant disease in other parts of the body) could be obtained.—Dr. ATWOOD THORNE would have liked to hear more with regard to the microscopical results.—Dr. TILLEY replied that the sections of the growth exhibited at the Laryngological Society showed it to be a squamous epithelioma with cell nests.

Dr. WILFRED J. HARRIS showed a man, aged 40 years, who three years ago fell a distance of about four feet on to his left shoulder causing Immediate Paralysis of his Arm. This was followed by wasting of the deltoid, infra-spinatus, biceps, brachialis anticus, and supinator longus, and by anæsthesia of the thumb and index finger. No improvement occurred after treatment by galvanism. An operation by Mr. V. Warren Low in June last on the upper roots of the brachial plexus showed that they were buried in scar tissue. This was cleared away and stimulation of the roots by faradism showed the fifth root to be quite destroyed, while the sixth root gave good reactions. The fifth nerve was then cut across and sutured into a nick made in the sixth root. Immediate improvement resulted in the anæsthesia of the thumb and finger. The galvanic reactions of the affected muscles have also since improved.—The PRESIDENT asked if the man was likely to recover complete power in the limb. —Dr. HARRIS replied that muscular power might begin to return after six months.

Mr. E. LAMING EVANS showed a case of Spina Bifida in a child, aged three years, involving the third, fourth, and fifth lumbar vertebræ and the whole of the sacrum. Control over the bladder was absent. Associated with the trouble was a talipes equino-varus involving both feet, of congenital origin The electrical reactions of the muscles of the legs were normal. The skin of the feet was atrophic. Mr. Evans considered the case to be one of meningo-myelocele and recommended no operative interference except for the correction of the deformity of the feet —Mr P. L. DANIEL suggested arthrodesis on the ankle- and knee-joints so as to fix the joints and to enable the child to walk.—Mr. EVANS replied that as there was good muscular power in all the muscles of the leg and as the child had already walked upon her feet in the deformed position arthrodesis did not seem called for. The child would be able to walk well with a plantigrade foot after the equino-varus deformity had been corrected

Mr. LAMING EVANS also showed a woman, aged 21 years, with Double Pes Cavus and other Deformity of the Feet which had existed as long as she could remember. No history of an infantile paralysis could be obtained. Situated over the eleventh and twelfth dorsal spines was a swelling one and a half inches in diameter over which the skin was freely moveable, tender to the touch, and not attached to the underlying tissues by any definite pedicle. Hypertrichosis was absent. Mr. Evans suggested the possibility of the swelling being connected with the meninges and that the condition of the feet was dependent upon some spinal cord mischief of congenital origin.

Mr. DANIEL showed a man suffering from Tabes Dorsalis with a perforating ulcer at the base of the second and third toes, causing absorption of the phalanx of the third toe. He called attention to the fact that cases of untreated mild syphilis and cases of "soft sore" were frequently followed by tabes and ulcer many years after infection. He thought that "soft sores" with tendency to spread, to infect by contact, and to produce enlargement of the glands of considerable acuteness were all probably syphilitic and should be so treated. Malignant change in perforating ulcer was rare; and this fact was not in accord with the idea that nerve control was a great factor in cancer distribution and causation. The loss of nerve control in perforating ulcer in association with the chronic nature of the wound should lead to frequent malignant change on the "nervous theory."—Mr. F. JAFFREY suggested treatment by oxygen, obtained by applying peroxide of hydrogen for half an hour daily. At other times the ulcer should be protected with boric lint.—Dr. HARRIS considered these ulcers to be due not merely to pressure but to be also of trophic origin.—Mr. LAMING EVANS suggested removal of the ulcer and diseased bone, as thereby relapse was more likely to be avoided. He considered that the trophic element entered largely into the causation of these ulcers.—Mr. DANIEL, in reply, said that he had no belief in trophic [illegible] instances, in removal of the Gasserian ganglion, [illegible] which followed was always due to sepsis and [illegible]. As regards treatment he proposed to [illegible] the toe and the diseased tissues.

[illegible] showed, for Mr. T. CRISP ENGLISH, an old man with an enormous Ventral Hernia, apparently containing a large proportion of the abdominal contents. In consequence of the absence of Mr. English no notes on the case were forthcoming.

MEDICO - PSYCHOLOGICAL ASSOCIATION. — The autumn meeting of the Northern and Midland Division of this association was held on Oct. 9th at the Northumberland County Asylum, Morpeth, by the kind invitation of Dr. T. W. W. Macdowall.—The members first visited one of the villas recently built to the east of the main asylum block. It provided for 40 male patients. The accommodation given was excellent and there was a great sense of freedom, there being no locks and the patients being free to go in and out at will. The cost was very moderate, £120 per bed including furniture. Dr. Macdowall, the president of the meeting in the afternoon, in giving an account of the new departure, claimed that about 25 per cent. of pauper patients could be accommodated in villas similar to those which the members had seen and that it was much less expensive and much more comfortable for the patients than a large asylum building. He further claimed that chronic patients improved mentally on removal to the more homely surroundings provided in small houses of this description.—Dr. A. W. Campbell of Rainhill gave a demonstration of Histological Studies of Cortical Localisation. He gave a detailed account of a long series of researches into the structure of the cortex and showed the great value of this branch of study in correcting and confirming the results of experimental investigation. He showed a beautiful series of drawings of sections of the cortex and demonstrated the differences in structure between the different areas. He showed that his results confirmed the previous conclusions of Mr. W. Bevan Lewis which at one time had seemed to be in opposition to experimental results. It had now been shown that the conclusions arrived at by the histological investigation as regards the limits of the motor area had been fully confirmed. The President, Dr. W. F. Menzies, and Dr. J. Middlemass congratulated Dr. Campbell on his brilliant research and discussed some of the points raised and Dr. Campbell replied.—Dr. Middlemass exhibited a case of Development of General Paralysis [illegible] in which the history and signs of congenital syphilis were very clear. He pointed out the gradual growth in opinion that general paralysis was always due to syphilis, inherited or acquired.—The President, Dr. W. M. A. Smith, and Dr. Menzies joined in the discussion which followed.—Dr. Bedford Pierce showed an automatic fire alarm box containing an emergency key which it which had been fitted at Throxenby Hall, Scarborough, a branch of the Retreat. He claimed that this automatic arrangement of alarm and emergency key was a great safeguard in case of fire and it also prevented the key being used by unauthorised persons.—Dr. Norah Kemp read notes of a case in which thyroid treatment repeatedly produced temporary success. The case was a very striking one: a chronic maniac [illegible] and [illegible] years, the patient had had a lucid interval on [illegible] a few days on four occasions following the administration of thyroid extract.—The President, Dr. Middlemass, Dr. Smith and Dr. Pierce joined in a discussion and all agreed that on the whole the results of thyroid treatment were disappointing and the President pointed out the real danger of cardiac failure from using the drug.

DERMATOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on Oct. [illegible], Dr. H. Radcliffe Crocker being in the chair.—Mr. Malcolm A. Morris showed two cases of Lupus Erythematosus in both of which the buccal cavity was affected. The first case was that of a man, aged 53 years, who had suffered from the disease more or less since he was 22 years of age. The present attack dated from about a year previously and was associated with severe abdominal pain, loss of smell, and numbness in the fingers but the sense of smell had returned. The tongue was red and raw-looking, there were lesions on the palate, and the cutaneous eruption affected the hands and the face. The second case was that of a woman, aged 30 years; the disease had started on the hand and then spread to the face and arms which were very severely affected. There were several small annular patches on the tongue showing a pale atrophic centre with red, congested margins.—Mr. Willmott H. Evans showed a boy with a Linear Mole affecting the area supplied by the dorsal branch of the left ulnar nerve on the back of the hand.—Dr. J. H. Sequeira showed a girl, aged 15 years, with a number of Ulcers and a Scar-leaving Eruption on both lower extremities. The eruption had started as blind boils in June, 1903.—The general opinion of those present was that it was a form of tuberculosis.—Dr. E. G. Graham Little showed: (1) A single woman, aged 45 years, who had suffered for 13 months with an Ulcerating Spreading Eruption on the Dorsum of the Right Foot and for a shorter time from a somewhat similar patch on the Left Thigh. That on the foot showed multiple steeply cut ulcers with very high tumour-like edges. There was no history of syphilis but this was the diagnosis generally offered.—Mr. Arthur Shillitoe showed a case of Gyrate Psoriasis in a man who had been also attacked with gonorrhœa. The case was shown to demonstrate the improvement which had taken place in the psoriasis from the administration of copaiba resin given for the gonorrhœa.—Dr. S. E. Dore showed a Russian suffering from Recklinghausen's Disease. The patient was covered with *café au lait* patches and small freckles and also exhibited numerous tumours beneath, and in, the true skin. One on the right forearm seemed to be connected with a nerve and this and one on the back were tender on pressure. The pigmentary changes had been present since birth, while the tumours were said to be still appearing.—Dr. A. Whitfield showed a man, aged 25 years, who had had syphilis five years before. 12 months previously a new outbreak of cutaneous gummata had appeared on the front of the neck leaving extensive scarring. At the same time some pustules had appeared on the back of the neck and had formed tumours. When shown there were two keloidal masses on the nape of the neck at the hairy margin and in these the hair follicles were gathered together by the contracting fibrous tissue so that the hairs issued in little brushes. The condition was a rare one and was known as acne keloid and generally believed to be unconnected with syphilis.

HUNTERIAN SOCIETY.—A meeting of this society was held on Oct. 14th, Dr. W. A. Dingle being in the chair.—The first Hunterian Lecture was delivered by Dr. W. Hale White, the subject being Some Clinical Considerations concerning certain of the Rarer Forms of Enlargement of the Heart. He first alluded to the difficulty of estimating by percussion whether the heart was enlarged and he then pointed out how much it might become hypertrophied as a result of pericarditis. This was due to the fact that the main function of the fibrous pericardium was to support the heart and to prevent its dilatation; hence when the pericardium was softened by inflammation the heart readily dilated and as when dilated it acted under a great mechanical disadvantage it soon underwent compensatory hypertrophy. The object of treatment must be to overcome the dilatation, because experience showed that when adhesions took place on the heart which was not dilated very little harm followed, but if the adhesions took place on the dilated organ the [illegible] his life from all the more [illegible] The treatment of pericarditis was discussed and also the best [illegible] Dr. Hale White next alluded [illegible] the specific fevers [illegible] which was due to [illegible] Four cases were narrated. In three of them a post-mortem examination was held and no other cause than alcoholic drink could be found for the enlargement. These three hearts weighed respectively 22, 20, and 20 ounces; no valvular disease or adherent pericardium could be found. The muscle was histologically healthy. The chief symptoms of the condition were dyspnœa and a rapid, feeble, and often irregular pulse; the cardiac impulse was displaced outwards and the sounds were faint; no murmurs were present. If the patient lived long enough severe dilatation might ensue and then there were all the symptoms of backward venous congestion. Owing to the presence of albuminuria such cases were difficult to distinguish from chronic interstitial nephritis. It was shown that such cases were especially common in those German towns where large quantities of beer were drunk. The cause of the condition was discussed and it was shown that nothing histologically abnormal could usually be found in the heart and that the condition could not be ascribed to any particular constituent of the beer, or to the quantity of the fluid drunk, or to alcoholic neuritis of the vagus. The last rare form of enlargement considered was that due to a fibroid heart and it was shown that this was a frequent cause of sudden death. Dr. Hale White mentioned that probably an alcoholic heart was commoner than was usually supposed.—A hearty vote of thanks was accorded to Dr. Hale White for his most interesting paper.

SOUTH-WEST LONDON MEDICAL SOCIETY.—The first meeting of the session of this society was held at Bolingbroke Hospital on Oct. 14th, Mr. E. F. White, the President, being in the chair.—Mr. P. J. Freyer read a paper entitled "Some Practical Remarks on the Enucleation of the Prostate." Having first referred to erroneous ideas regarding the anatomy of the prostate he described the prostate as consisting of [illegible] together to form a twin organ. [illegible] fœtal life the two lobes were [illegible] animals they were distinct throughout life. Each lobe was enveloped in a strong fibrous capsule and an outer capsule was formed by the recto-vesical fascia in which the large veins were imbedded. The ejaculatory ducts entered the prostatic urethra but did not pierce the capsule. Enlarged prostate was associated with a decline of sexual powers and assumed the form of an adenomatous outgrowth. As it grew it pushed the recto-vesical fascia before it. It could not advance in front owing to the triangular ligament. It advanced laterally until the levator ani and obturator were crushed against the sides of the pelvis. Then it grew into the bladder and gave the appearance of a middle lobe, but there was no middle lobe, only a prolongation of a lateral one. The main obstruction was caused by the lateral pressure of the two lobes, not as was generally supposed by the "middle" lobe acting as a ball valve. Mr. Freyer described the stages of the operation. Having performed a suprapubic cystotomy a finger of one hand was passed into the rectum and the prostate was pushed up into the bladder. The most prominent part was then attacked. The mucous membrane was scraped through with a sharpened finger-nail and the capsule was reached; this was tense and was not likely to tear. The organ was then enucleated with varying degrees of difficulty, but in the majority of cases it was easily peeled off. The cavity quickly contracted, similarly to the uterus after labour, and there was very little hæmorrhage. In no case had there been any contraction causing stricture and patients regained the power of retaining and passing urine without the aid of an instrument. Mr. Freyer showed a number of specimens which he had removed.

GLASGOW NORTHERN MEDICAL SOCIETY.—The first meeting of the session 1903–04 of this society was held on Oct. 13th, when the business reports of last session were read, [illegible] Campbell. Vice-Presidents: Mr. C. F. Spinks and Dr. J. Galbraith Connal. Treasurer: Dr. James Todd. Secretary: Dr. J. G. Gray. Reporting secretary: Dr. J. A. C. Macewen. Sealkeeper: Dr. J. C. Edmiston. Auditors: Mr. T. D. Waddell and Dr. John Ritchie. Ordinary members of the council: Dr. J. W. Allan, Dr. J. A. Wilson, Dr. J. B. Miller, Dr. J. Baird, Dr. M. Black, Dr. R. G. Inglis, Dr. W. Campbell, Dr. M. Campbell, Dr. J. Rutherford, Dr. Campbell S. Marshall, Dr. Muir, and Dr. J. Donald.

FOLKESTONE MEDICAL SOCIETY.—A meeting of this society was held on Oct. 9th, Dr. Thomas Eastes, the President, being in the chair.—The President read notes of a case of Division of the Ulnar Nerve and the Flexor Sublimis Tendons by a Piece of Glass. The nerve and tendons were sutured and all did well except that the final deep branch of the nerve was not known to be divided and escaped observation at the operation, so that the two distal joints of the little and ring finger were contracted.—The President also read notes of operations for relapsing appendicitis, chronic intestinal obstruction, hydatid cyst of the liver, and the radical cure of inguinal hernia; also of cases of ovariotomy, cholecystostomy, and myomectomy.

WIGAN MEDICAL SOCIETY.—An ordinary meeting of this society was held on Oct. 8th, the President, Dr. M. Benson, being in the chair.—Mr. C. M. Brady showed a Fibro-myomatous Uterus removed by Abdominal Hysterectomy.—The President opened a debate on Forceps in Midwifery with especial reference to Axis-traction Forceps.—An interesting discussion ensued in which the following members took part: Dr. F. Rees, Dr. J. Blair, Mr. M. G. McElligott, Mr. Brady, Mr. W. Mill, and Mr. W. Berry.—The President replied.

Reviews and Notices of Books.

Modern Materia Medica and Therapeutics. By A. A. STEVENS, A M., M.D. Pennsylvania. Third edition. London and Philadelphia: W. B. Saunders and Co. 1903. Pp. 663. Crown 8vo. Price 16*s*. net.

THIS work refers almost wholly to the drugs and preparations of the last United States Pharmacopœia which was published in 1893 In addition to these official medicines a few of recent introduction are mentioned but these are quite without references to authorities and the work in respect of comprehensiveness does not come up to our English Extra Pharmacopœia. The book is well bound in cloth and the print is large and clear but the volume seems to us unnecessarily heavy; if a book is to be a good deal in use it should be easy and light to handle. In this, the third edition, there is an entire rearrangement of the subject-matter and several of the chapters are quite new. The drugs are no longer in their alphabetical order but are classified according to their medicinal effects. The new arrangement seems satisfactory enough but there is but one general index for all parts of the book and to find any particular drug it is best to look for it under the name of one of the diseases for which it has been used as a remedy. Failing to find it there the reader may look for the drug under its own name and in case of non-success he is tempted to lay the book aside. As an instance of this, calcium chloride sought under the heading of chorea, or tuberculosis, or "scrofula," will not be found, though the drug has been widely used for the tuberculous glands of children. Under the heading of "calcii chloridum" it will not be found, though the drug is official in the United States Pharmacopœia. Under "hæmorrhage" the name will be found and on referring to p. 379 a short notice of the drug is given, no mention at all being made of its use in "scrofulous" affections of glands.

The part of the volume devoted to therapeutics only is on the whole satisfactory. There are excellent paragraphs on the sanatorium treatment of pulmonary tuberculosis. Among the directions as to how to deal with active hæmoptysis there is one with a quaint old-fashioned flavour about it. It seems to refer to the principle on which Junot's boot was used in the time of our grandfathers. "The application of firm ligatures to the limbs in order to lessen the volume of blood returning to the lungs" is what the author suggests as a practical method.

There is a good chapter dealing with remedial measures other than materia medica as the term is generally understood. Therein will be found notes on massage, medical electricity, the Schott treatment of chronic heart disease, the transfusion of blood and saline solution, phototherapy, blood-letting, and lavage of the stomach.

On the whole, Modern Materia Medica seems to be free from errors and a fairly readable book but we are a little doubtful whether it will become popular in this country.

A Manual of Practical Anatomy. By D. J. CUNNINGHAM, M D. Edin. and Dub., D.Sc. Dub., LL.D. Glasg., D.C.L. Oxon., F.R S., Professor of Anatomy at the University of Edinburgh. Vol. II.; Thorax, Head, and Neck. Third edition, illustrated with 222 Engravings, many in Colours. London and Edinburgh: Young J. Pentland. 1903. Pp. 607. Price 10*s*. 6*d*. net.

THE first volume of this new edition of Professor Cunningham's Manual has already been noticed in these pages. The second volume appears to be in every way equal in excellence to the first. It shows signs of careful revision and has been brought quite abreast of modern knowledge. The section which shows most change is that which deals with the positions and relations of the thoracic viscera. Here full advantage has been taken of the results of recent methods and investigations and the section affords an admirably lucid *précis* of present knowledge regarding the lungs, the pleuræ, the heart, the pericardium, and the mediastina. Very few of the old illustrations are to be found in this portion of the book, they having been replaced by an entirely new series. The remainder of the book is devoted to the dissection of the head and neck. Here we do not find any very striking alterations in the text but the new illustrations are a great improvement on those which they have replaced. An admirable feature of Professor Cunningham's book has always been the excellent description of the dissection of the brain. With the assistance of the artist this section has been rendered even more attractive than before. Throughout the whole volume the system of numerical references to the details of the illustrations has now been abolished and a system of guide lines and names has been substituted. By slight modifications in the type the size of the book has been reduced by a few pages in spite of the increased information contained. The book is very practical and by following the instructions given a student cannot fail to make the most of the part which he is dissecting. He should be warned, however, not to allow the manual to replace the use of a systematic text-book of larger size. The descriptions are so lucid and full that there is apparently a danger in this direction.

Die Wirkung einiger Bakterien und ihrer Toxine auf verschiedene Organe des Korpers. Arbeiten aus dem Pathologischen Institute zu Helsingfors (Finnland). Herausgegeben von Professor Dr. E. H. HOMÉN. (*The Action of Certain Bacteria and their Toxins on Different Organs of the Body. Research Work from the Pathological Institute at Helsingfors, Finland.* Edited by Professor E. H. HOMÉN). With 13 plates. 1902 Pp. 523. Price 30*s*.

IN this publication will be found an account of some important and interesting bacteriological work which has extended over a period of nearly eight years and has been carried out by Professor E. H. Homén and others at the Helsingfors Pathological Institute. In reviewing the work it will not be possible to do more than to indicate the nature of the researches and the conclusions that have been drawn from them.

Professor Homén has already published the results of his work on the action of streptococci and their toxins on the peripheral nerves, spinal ganglia and cord of rabbits, and he has now carried out similar researches with staphylococci, pneumococci, bacilli coli, bacilli typhosi, and their toxins. Cultures or their filtrated toxins were injected into the sciatic nerve of rabbits and also into the spinal cord. The animals were killed at varying intervals of time after injection and the nerves and the cords were examined microscopically. Professor Homén finds that the propagation of these bacteria takes place similarly to that of the streptococci *viâ* the lymph channels, especially along the inner side of the perineurium of the nerve and along the serous spaces and central canal of the cord, but that the extent and nature of this propagation vary somewhat for the different species of bacteria. Various inflammatory, destructive, and regenerative changes were found at the point of injection and in adjacent parts and these also vary for the different bacteria in nature, intensity, and extent, but we cannot go into further details on these points.

Dr. Ernst Ehrnrooth has carried out a series of experiments to determine how far trauma may act as a predisposing cause to changes in the brain which have been brought about by bacteria or their toxins injected into the bodies of rabbits. The main conclusions to which these experiments lead are that trauma predisposes the animal to infection of the brain or meninges by bacteria injected intravenously and that the degree, extent, and frequency of infection vary directly with the intensity of the trauma and inversely with the interval of time allowed to elapse between the trauma and the bacterial injection.

Dr. Max Björkstén contributes an article on his researches as to the action of certain bacteria and their toxins on the liver. Streptococci, staphylococci, pneumococci, and their toxins were injected into the bile-duct, directly into the substance of the liver, and also subcutaneously and intravenously, and the animals were either killed or died at varying intervals of time after injection and the liver was examined microscopically. This very thorough and extensive series of experiments shows that the bacteria in question are able to set up changes in the liver of a degenerative and necrotic nature which may terminate in a complete cirrhosis. Dr. Björkstén considers that the formation of fibrous tissue is secondary to the degeneration of the parenchymatous cells of the liver and that only later the presence of this new tissue formation causes atrophy of the liver cells. Dr. Björkstén also makes a preliminary communication on the action of staphylococci and their toxins on muscle tissue.

Dr. O. Streng gives a full description of his work on the action of certain bacteria and their toxins on the kidneys of rabbits and the separation of these organisms from the body through the kidneys. Pneumococci, staphylococci, bacilli coli, streptococci, bacilli typhosi, and bacilli prodigiosi were employed in these experiments and they were injected either into the large veins in the ear of the rabbit or subcutaneously. At varying intervals of time after the injection—from half an hour to 12 hours—the animals were killed and the kidneys and the urine in the bladder were immediately examined microscopically and by culture. The shortest time in which the bacteria appeared in the urine varied for the different organisms from half an hour for the bacillus coli to from six to eight hours for the staphylococcus and appeared to depend upon the rapidity with which the bacteria were able to set up inflammatory changes in the kidneys. Only at the end of longer intervals of time—from six to 12 hours after injection—when inflammatory changes with hæmorrhages were well established, did the bacteria appear in the urine in any quantity, so that Dr. Streng is led to the important conclusion that the passage of bacteria through the kidneys is dependent upon the changes previously set up in them by the organisms or their toxins and that bacteria are not excreted into the urine by normal healthy kidneys. His experiments with the filtrated toxins show that only exceptionally are they able to give rise to a parenchymatous nephritis. Dr. Streng also makes a preliminary communication on the cachexia caused by the injection of bacterial toxins into rabbits.

Dr. J. Silfvast has concluded a series of experiments on the action of staphylococci on the lungs and finds that intratracheal injections of the organisms into rabbits are able to set up a pneumonic process in the lungs. Inhalation of the cocci produced a similar result only when the animals inhaled fine particles of charcoal at the same time. A reduction of the temperature of the chest appeared to further the pneumonic process. Dr. Silfvast also concluded from his experiments that the lungs possess a considerable power of destroying the invading bacteria and that the phagocytes—the alveolar epithelium and leucocytes—play an important part in their destruction.

The authors have evidently conducted their researches with thoroughness and have set forth their results in a clear and concise manner

LIBRARY TABLE.

Tumours, Innocent and Malignant: their Clinical Characters and Appropriate Treatment. By J. BLAND-SUTTON, F.R.C.S. Eng., Surgeon to the Chelsea Hospital for Women, Assistant Surgeon to the Middlesex Hospital. Third edition, with 312 Engravings. London, Paris, New York, and Melbourne: Cassell and Co., Limited. 1903. Pp. 556. Price 21*s.*—This work well deserves the high reputation which it has attained. It deals with tumours in a fresh, unconventional manner and especially novel when it was first published was the abundant reference to the tumours occurring in the lower animals. In matters anatomical and physiological we have derived much valuable light from a study of the structure and mode of action of the organs of the lower animals, but the resemblances existing between the morbid processes in man and the rest of the animal kingdom had hardly been utilised at all until the appearance of the first edition of this book. It is true that John Hunter's researches into the region of animal pathology were numerous and important but much of his work was lost. Our knowledge of the etiology of tumours is very scanty and this applies alike to the innocent and malign growths, as the author points out; therefore this work does not devote to the discussion of this question space which can be more usefully employed otherwise; but, as we mentioned in reviewing the second edition, we should like to have his opinion on this difficult subject. The attention which Mr. Bland-Sutton has of recent years paid to gynæcological surgery is evidenced by the prominence given to new growths of the uterus and the ovaries, and we must acknowledge that he has thrown much light on an obscure subject. An important alteration in this edition is the separation of the myelomata from the sarcomata. They differ, indeed, in so many respects from the sarcomata that they deserve separate consideration but we think that there is an equal amount of reason for removing also the melanomata from the group of sarcomata. We are glad to see that the author has abandoned the name "epithelioma"; it has been used indefinitely of late years, for it has been applied to the columnar carcinomata as well as to the squamous variety and therefore it is far better to give up the word entirely. It is rather a pity to quote Kocher as having operated on 555 cases of "colloid struma"; the expression is sure to be misunderstood for the majority of the readers of the book will be unaware that "struma" in this place is merely the German for goitre.

Studies in Physiology, Anatomy, and Hygiene. By JAMES EDWARD PEABODY, A.M., Instructor in Biology in the Morris High School, New York City. New York: The Macmillan Company. London: Macmillan and Co. 1903. Pp. 332. Price 5*s.* net.—In the preparation of this volume the author has attempted to combine the following features. Emphasis is constantly laid on physiology, while anatomical details are given only so far as is necessary to make physiological processes intelligible Hygiene is discussed at the end of the study of each system. The simpler principles of chemistry are discussed in order that physiology may be understood. Physiological facts are considered from a comparative standpoint and the historical development of each is referred to. Scientific terminology has been avoided unless common names fail to give sufficient precision. Instruction is given regarding the effects of alcohol and narcotics and in this connexion extensive quotations have been made from the most recent report of the Committee of Fifty on the Physiological Aspects of the Liquor Problem. The book, which is intended as a manual of instruction for high schools and for the public, is very clearly written and the author has used every endeavour to secure freedom from errors. It is a very readable volume and the subject-matter is well arranged. The author's remarks on the care of the voice are well worthy of consideration. Colour-blindness is, however, irremediable, though a certain training in tints is, of course, practicable; from the remarks on this question at p. 307 a reader would suppose that colour-blindness could be corrected by training. The paper and print are excellent and the illustrations are for the most part good but the one of the human blood corpuscles (Fig. 43) cannot be included in this category. Some subjects appear to us to be treated with unnecessary minuteness considering that the book is intended for the non-medical public.

The Pedagogue at Play. By G. M. A. Hewett, Author of "The Open-Air Boy." London: George Allen. 1903. Pp. 296. Price 6*s.*—The author apologises in his preface for presenting for perusal so trifling a record of very ordinary doings. He has been tempted "to press in," first because he is always blundering up against the impression in the outer world that a schoolmaster is a sort of cross between an automatic machine and an iceberg and, secondly, because there seems to be very little record of the doings of ordinary men on ordinary holidays. These pages, however, require no apology for their production and certainly prove the first reason for their existence to be false. If any of our readers who are fond of sport and of descriptions of beautiful picturesque scenery dip into this volume they will find much to revel in. The English is good, the descriptions are breezy, the humour is ever-flowing, pure, and sparkling, and it is utterly devoid of morbid sentiment. The ten chapters mean delightful hours spent in the company of one who fully realises the art of enjoyment and who has tasted very fully of the pleasures of country life. Though many of the spots chosen have been sought out "in weariness of the everlasting presence of boy," we think that many a youngster, especially if he be a fisherman, will find much to satisfy him in Mr. Hewett's book, notwithstanding that the author does emphasise "the sort of joy that steals over the boy-ridden man when he finds himself for half a day turned loose on the grass with the harness off." In his chapter entitled "A Swiss Winter" he asks the question whether you want to renew your youth, whether you want to throw off 20, 30, or 40 years, whether you want to go through a spell of harmless but utter intoxication with no evil after-effects. There is but one answer to such a query and those of us who cannot know the joys of Grindelwald at its best may yet gain something worth having by following the author's glowing descriptions of places literally bubbling over with life and happiness. "The world is so busy, even over its pleasures, that it does a man good now and then to steep his soul in utter idleness amid such surroundings as these." We quote from the book and we know that to the busy practitioner hours spent in the perusal of this volume will pass as those of playtime. The author of "The Unspeakable Scot" should make the acquaintance of Mr. Hewett's "Mac."

Danish Self-Taught with Phonetic Pronunciation (Thimm's System). Edited by W. F. Harvey, M.A., formerly Universitetslektor at the University of Lund. London: E. Marlborough and Co. 1903. Pp. 120, crown 8vo. Price, wrapper 2*s.*, cloth 2*s.* 6*d.*—This manual, completing the Scandinavian group of languages in Marlborough's "Self-Taught" Series, is designed for the use of students and to meet the general requirements of tourists, merchants, commercial travellers, and other visitors to Denmark. The vocabularies are in three columns headed—"English," "Danish," and "Pronunciation." The idea of the phonetic or third column is to give in an intelligible manner the pronunciation at a glance of Danish as it is spoken among the educated classes at Copenhagen so far as words can possibly convey the exact sound. The system of phonetics is so simple that those previously unacquainted with Danish can with its aid make themselves understood without difficulty. The editor is an acknowledged authority on the Scandinavian languages and literature. Dr. A. Brahde of Copenhagen, a philologist of high repute, has revised the vocabularies and elementary grammar, while the phonetics have been composed under the superintendence of Mr. J. Thrige also of Copenhagen. The book is both practical and useful and will enable students and others to acquire the language by home study; the simplified grammar will also prepare the way for a more advanced course. With the small volume is bound up an extract from an article entitled "In the Queen's Country," which appeared in the *Christian World* and which tells of Denmark's picturesque scenery, its friendly people, and its historical and literary associations. We congratulate the publishers on the production of another of these useful serial volumes.

Die Sterblichkeit der Haupt- und Residenzstadt Budapest in den Jahren 1901–1905 und deren Ursachen. (*Mortality of Metropolitan and Residential Budapest in the years 1901–05 and its Causes.*) By Dr. Joseph V. Korosy. Second (tabular) volume, part 1, 1901. Berlin: Puttkammer und Mühlbrecht. 1902. Price one mark.—At first sight it seems strange that Dr. Körösy should have been able to state the death-rate for the years 1901–05, but probably that is the title which it is intended to put over the whole five years' work when it is finished. According to the results of the census of Jan. 1st, 1901, the population of Budapest amounted to 703,448 (exclusive of military 16,484). Of this number 339,649 were males and 363,799 were females. As regards age, the greatest number were between 20 and 30—viz., 160,392 persons—and 14 persons were over 100 years old. As regards religion, Roman Catholics numbered 427,112 and next in order came Jews with 166,198. 417 617 persons were unmarried, 238 256 persons were married, and 47,575 were widowers, widows, or divorcees. 562,237 persons each dwelt in from three to ten rooms. In March and January the greatest number of deaths were recorded (1386 and 1381 respectively), while in September and October the lowest numbers were recorded (961 and 976 respectively). The total deaths for the year were 13,923. The chief causes of death were: diseases of the organs of respiration, 4682; "morbi constitutionales," 2493; diseases of the nervous system, 1766; diseases of the organs of digestion, 1537; infectious diseases, 1130; and diseases of the circulatory system, 1084. The list of diseases is printed in Hungarian and Latin and the remainder of the report is printed in Hungarian and German. Incidentally it affords a useful dictionary for those interested in the study of languages.

The Story of my Life, by Helen Keller, with her Letters (1887–1901) and a Supplementary Account of her Education by John Albert Macy. London: Hodder and Stoughton. 1903. Pp. 441. Price 7*s.* 6*d.*—This is the autobiography of a most extraordinary woman—of a young lady who, although totally blind and deaf, has learned by the sense of touch to communicate with friends, to read, to write on the typewriter, and to speak French and German as well as English—in fact, of one who has broken down the barrier between herself and the outside world. The work has created some sensation in the United States and is one of the most remarkable records of the triumph of human endeavour over physical affliction. Mark Twain has said that "the two most interesting characters of the nineteenth century are Napoleon and Helen Keller." The book is in three parts. The first two, Miss Keller's story and the extracts from her letters, form a complete account of her life so far as she can give it. For the third part the editor is responsible, and in writing it he has had the advantage of the advice of Miss Sullivan—Miss Keller's friend and teacher; it is a further account of her personality and achievements. The book is a beautiful record clothed in expressive language of the wonderful perseverance of a pure-minded human being—a record of how one terribly afflicted has conquered and passed from darkness into light, from isolation to friendship, companionship, knowledge, and love. It is the story of one who has heard a voice which said, "Knowledge is love and light and vision," who is in love with noble things, with noble thoughts, and with the characters of noble men and women.

THE LANCET.

LONDON: SATURDAY, OCTOBER 24, 1903.

The Huxley Memorial Lecture.

THE subject selected by Professor KARL PEARSON for the Huxley Memorial Lecture is one which must appeal to the interest of all classes of society and his conclusions will be endorsed by all medical men who work much among the poorer classes. The title of his lecture was the Inheritance in Man of Moral and Mental Characters and its Relation to the Inheritance of Physical Characters, but his conclusions from careful inquiry suggest that a less cumbrous title would have been more attractive and equally appropriate, since they turn on the relative national advantages of education and of physical training with improved hygienic conditions. For the last six or seven years he has been collecting information in three directions—namely, first, an inquiry into the actual values of inheritance of the physical characters in man; secondly, a comparison of the inheritance of the physical characters in man with that of the physical characters in other forms of life; and, thirdly, an inquiry into the inheritance of the mental and moral characters in man It is not necessary to reproduce the statistics upon which he has worked, since arrays of figures, though instructive, are often repellent. In the present instance they serve to demonstrate the truth of a contention often advanced in these columns—viz, the danger to the community of excessive attention to education, with comparative neglect of the general physique. Professor PEARSON is emphatic in his statement that no scheme of wider or more thorough education would bring hereditary weakness up to the level of hereditary strength in the scale of intelligence. This is another way of stating that we are what our forefathers have made us, that there is a certain hopelessness in trying to work upon raw material if the raw material is of poor fibre. In our public schools this elementary fact has long been recognised and acted upon, but the question is more widespread, since only a very small proportion of the community can enjoy the advantages calculated to produce a sound mind in a sound body. Clearly, however, from the statistics before us these two must be more widely conjoined to prevent mental and moral decadence in any race.

This, indeed, leads to the most difficult problem of sociology, since it involves an interference with the present freedom from control. Professor PEARSON maintains, although he admits the difficulties in the way, that the only remedy is to alter the relative fertility of the good and bad stocks in the community. The children who inherit poor mental, moral, and physical characters are apparently numerically outweighing those of superior powers and the result is a rapid levelling down which defies all efforts at improvement by education. Every practitioner is familiar with the large families living in cramped insanitary surroundings on poor wages; the poor man in adversity generally has numerous olive branches struggling for existence and handicapped from the outset by insufficient food and by overcrowding. The craft of forestry suggests thinning and weeding out to prevent stunted undergrowth from hindering healthy development and in SWIFT'S "Modest Proposal" a sufficiently savage method of weeding was suggested; but human beings cannot be treated like superfluous trees or kittens and the alterations of relative fertility in different classes of society must be antenatal The prevention of improvident marriages might do some good but it would be a bold Ministry which would venture to introduce an Act of Parliament to render matrimony dependent upon any fixed weekly wage. Still, many of the employés of banks and city firms have to submit to a regulation which discountenances early marriages on insufficient means.

Professor PEARSON looks, however, to the upper rather than to the lower classes in fixing the responsibility for decadence. It is not so much the increase in the fertility of the latter as the diminished fertility of the former which tends to reduce the mental, moral, and physical standard. He states that for the last 40 years the intellectual classes of the nation, enervated by wealth or by love of pleasure, or by following an erroneous standard of life, have ceased to give us in due proportion the men wanted to carry on the ever-growing work of our empire, to battle in the fore rank of the ever-intensified struggle of nations. Can medical men in the ordinary course of their work do anything towards the solution of the difficulty? We venture to think that the influence of the medical profession is continually being exerted in directions which would meet with Professor PEARSON'S approval. For instance, advice on the subject of matrimony on the score of physical weakness, inherited or acquired, is frequently sought and indeed forms one of the most painful duties of a profession overburdened with responsibility. With the other side of the question, however—the encouragement of those who with advantage to the State might and should marry but do not—we have little to do. Indeed, the subject of the Huxley Memorial Lecture, though fascinating, can only in part be dealt with by the medical profession; it really can only be approached by modern statecraft. But there is one obvious conclusion to be drawn—viz, the need of greater expenditure on hygiene and physical training than upon mere education. It is to be hoped that the committee appointed to consider certain aspects of the alleged physical deterioration of the people will not lose sight of the importance of its bearing upon the mental and moral characters which must so largely influence national welfare.

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The Vintage and its Relationship to Health.

THE question as to whether a vintage is or is not a success is of some importance to the public health. The terms used by the wine-grower to describe a vintage such as "a stout and full-coloured vintage," "a beautiful clean vintage," "fine quality distinguished by body rather than elegance," and "very thin and inferior," if colloquial are expressive and often contain within them a meaning of hygienic significance. The success of a vintage is a matter for congratulation, not merely because it spells prosperity to the viticulturist and all who are industrially concerned, but because also it means that when plenty and quality are the rule a good, sound, and wholesome wine will be the result, while necessarily a rich, abundant harvest is calculated to reduce the opportunities of the adulterator. On the other hand, when the vintage fails, or partly fails, or the yield is small and the fruit is immature or perhaps attacked with disease, temptations may arise to adopt devices by which the wine may be made marketable. It is a pretty fair conclusion to draw, we think, that bad or inferior fruit will make bad wine or that fruit attacked by oidium or other disease will yield a more or less unsound product. This much importance, therefore, is to be attached to a vintage, that according to whether it is a success or a failure so will its influence be calculated to be for good or for bad upon the health of the wine-consuming public. There is yet another hygienic aspect of the quality of the vintage. In the years of abundance, when there is plenty of sun to ripen the grape and to produce much rich juice, the wines are generous in character, they are full, more invigorating, and contain more "vinosity" and alcohol than the wines of wet, sunless years, and such rich wines should, of course, be consumed in comparatively sparing quantities or, better still, be put aside until the remarkably softening and ripening influences of time are brought to bear upon them. The wines produced in our colonies, which are invariably richer and stronger than those produced in France or Germany, would lose much of the crude qualities which are characteristic of them were they left to mature. While these wines, be it said, have many excellent points they cannot at present compete as regards delicacy or *finesse* with the more classic wines of French growth. But the vintages of our colonies, owing to the steadier condition of climate and to an abundance of sun, are, as a rule, more certain and more regular than the French or German vintages and thus the wines of Australia are constant in character, always full, and always generous. Of a similar character are the wines of California Spain, Algiers, Greece, Turkey, and Persia. There is an undoubted future for our colonial wines and some day not far distant it is to be hoped that they may appeal to the connoisseur's taste more than they do now and be of a more refined character. Colonial wines at the present time are very popular, partly because they are cheap and partly because of their "vigorous" character. It has been said that the day of glorious vintages in regard to French wines has passed and that never again shall we see such exquisite wines as were produced in the Médoc, for example, in 1864, 1865, 1874, 1875, or even 1888 or 1889. We do not believe it. It is confidently to be hoped that the wretched weather which has prevailed in this country during this year, and in many of the finest wine-growing countries, may prove exceptional and that seasons of sunshine (than which no other agent is more essential to the health and the life of the grape) as well as those other beneficent meteorological conditions which marked the years of famous vintages will again contribute towards making the vineyards as productive as ever of wines of refinement and quality. In spite of indifferent seasons, however, ordinary table claret when procured through respectable channels has never been so good, so plentiful, and so cheap.

According to the latest accounts it is to be feared that the prospects of the present vintage which is just being gathered are somewhat cheerless and unpromising. The yield in general will be small and the year 1903 will not figure in the coming records of vintages as a year of much brilliance. White wines are a conspicuous failure, although some small success is promised in regard to the famous sparkling wines produced in the neighbourhood of Reims, owing to the spell of fine weather in September. Long-continued rains have damaged the vines of the Bordeaux districts and the crop is small. From Beaune comes a similar story, while the news from Jerez de la Frontera, where the heat has been intense and the season dry, is in favour of a fairly good vintage. Again, port will not rank high either in quality or quantity this year and the yield of wine along the banks of the Rhine and the Moselle is small and the wine is without any great promise of fine development. The harvest in the Charente is also small, owing to which circumstance probably much of the wine is being bought for direct consumption and will not reach the still at all; the yield of brandy, therefore, is likely to be small. Against all this we have the report that the vintages of South Australia and California are satisfactory as regards both quality and quantity.

The choice of a wine is a matter so frequently referred to the medical man by his patient that it may be well to recapitulate some of the facts about the composition and character of various wines as disclosed from time to time in our analytical columns. The soundness of a wine may be largely judged from its degree of acidity, which is commonly higher in white wines than in red wines. Moreover, as we have frequently pointed out, white wines as a rule contain decidedly more sugar than do clarets, although frequently a white wine is ordered because the reverse is supposed to be the case. Claret would appear to have, therefore, certain advantages over white wines for those suffering from diabetes or gout. A good, sound claret seldom contains more than 0·20 per cent. of sugar, 0·10 per cent. of acetic acid, and 0·20 per cent. of free tartaric acid, while sauternes, for example, frequently contain from 1·5 to 3 per cent. of sugar, about 0·10 per cent. of acetic acid, and from 0·30 to 0 50 per cent. of tartaric acid. A sound burgundy again contains rather more sugar than does claret, the amount of the acetic acid is about the same as that in claret, but the amount of tartaric acid is higher. Champagne ordinarily described as "extra dry" contains from 1½ to 3 per cent. of sugar, while a "brut" champagne—i.e., an unliqueured wine—contains about the same amount of sugar as does sound claret. The percentage of tartaric acid in champagne is decidedly high. Champagne, in fact, is rich in the salts of the grape which resolve into alkaline carbonates in the body. Many persons experience a sense of thirst after drinking champagne, probably for this reason. The ethers in champagne, with the exception perhaps of old sherry, exceed in amount those in most white wines, a fact, coupled with its effervescent qualities, which makes it a rapidly diffusible stimulant and a sense of well-being is experienced much sooner after drinking champagne than is the case with most other wines. The wines of the Saumur district have improved very much of late; they closely resemble champagne but are lighter in character. As regards the dietetic suitability of red wines more attention, it seems to us, might be paid to their astringency which depends upon the tannin-like substances derived from the grape skin. It cannot be supposed, however, that red wines have a very marked tendency to produce constipation, for the presence of tartrates probably prevents any effect of this kind which might otherwise ensue. Red wines, and especially those of the burgundy type, have been observed to produce some blackening of the fæces, which may be due to the iron of the colouring matter of the grape skin, although it is conceivable that tannin might produce a similar effect and the amount of iron in red wines is according to our experience insignificant. White wines, including, however, champagne, contain relatively little tannin and tend to an aperient effect whilst causing little or no change of colour in the dejecta.

Though it may be doubtful whether in the wines of the same vintage and district any important differences in regard to their chemical composition exist, it is nearly certain that such important dietetic constituents as the alcohol, the sugar, the total acids, the ethereal bodies, the astringent principles, and the salts would vary in quantity according to whether the vintage could be described as good, bad, or indifferent. And since the quality of the wine is thus decided it follows that some hygienic importance, as we have said, attaches to the character of the vintage.

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Toxins and Antitoxins.

THEORIES are the weapons of master-minds for the attack of scientific problems but with men of lesser calibre the theory is apt to become the master instead of the servant. The theory of immunity propounded by EHRLICH has been in his hands and also in those of most of his followers used only as a working hypothesis suggesting lines of research which have yielded results of the highest importance. Still, it is well that we should beware lest the theory distort our view of the facts and that we should be reminded, as by the critical paper by Dr. E. F. BASHFORD in THE LANCET of Oct. 17th, p. 1076, that the observed facts may possibly have another interpretation than that usually given. At the same time it is to be noted that Dr. BASHFORD is careful to explain that his criticism does not invalidate the routine prevalent methods for the standardisation and testing of antitoxic sera. EHRLICH'S theory of immunity, which formed the subject of the Croonian Lecture delivered before the Royal Society in 1900, has since been brought prominently before the medical profession in at least two series of lectures—in the Huxley Lecture by Professor W. H. WELCH and by Dr. A. S. F. GRÜNBAUM in the Goulstonian Lectures. It has certainly been fortunate in its exponents. If there be any lingering obscurity it is probably due, apart from the inherent difficulty of the subject, to two main causes. The first is the extremely technical language in which, almost of necessity, it has become involved; and the second is that the theory covers much more than that form of immunity due to the presence of antitoxic bodies with which it has been especially connected in the minds of practical physicians.

It has been well said in a recent work[1] that "the factors involved in securing immunity against infectious diseases are multiple in number and varied in character." Apart from those forms of immunity which rest on general causes such as the difficulty an organism finds in entering the body or the unsuitability of the channel by which it gains access, specific immunity to bacterial disease may, viewed broadly, be said to rest either upon the neutralisation of the poison by which an organism produces its pathogenic effect or upon the destruction of the micro-organism which has gained access to a susceptible host; this destruction may be due directly to cellular activity or indirectly to the action of bactericidal or lysogenetic substances. A valid theory of immunity should, of course, take into consideration all the factors which bring about that condition, and it is the great beauty of EHRLICH'S explanation that it connects by one common bond natural with artificial immunity and the various forms of artificial immunity, whether produced by antitoxins or by bactericidal bodies. Further, it does not invoke any abnormal forms of metabolism but refers the production of these various protective bodies to variations in the normal processes of cell nutrition. Necessary as it is for theoretical reasons to regard the various forms of immunity as a whole we may for practical purposes regard them separately, and indeed this separation is requisite when we deal with the facts as opposed to the theories of immunity. Fortunately, these facts relating to antitoxic bodies are comparatively simple and clear. In a very limited number of bacterial diseases practically all the symptoms of the disease can be produced by toxic bodies found in the filtered cultures of the specific microbe. By the repeated injection of these toxins in non-lethal doses susceptible animals may be rendered immune so as to be unaffected by many multiples of the original fatal dose. In the blood serum of these immunised animals a body is found which is capable of neutralising in vitro or in the animal body the toxin employed in the process of immunisation, so that a mixture of the blood serum and the toxin in certain proportions is no longer capable of producing pathogenic results. This neutralising body is antitoxin and neither it nor the toxin has been isolated: they are recognised only by their physiological properties. Such antitoxins are known in the case of tetanus and diphtheria, in a less definite manner in plague, and possibly, according to the recent work of Dr. A. MACFADYEN, they may be present in typhoid fever. Similar bodies are found in the blood serum of animals immunised against snake venom and the vegetable poisons abrin and ricin. In this very limited class of diseases or intoxications acquired immunity primarily depends on the presence of the neutralising antitoxin. It will be noted that this antitoxic material appears as the result of the injection of the corresponding toxin or may be transferred, as in the injection of antidiphtheria serum, from one animal to another. These facts do not furnish any ground for a general theory of immunity, as even in the diseases mentioned animals naturally immune need not possess any antitoxic body in their blood.

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[1] Vaughan and Novy: Cellular Toxins.

The relation between toxin and antitoxin, at one time regarded as a physiological one, is now considered to be of the nature of a chemical reaction similar to that which exists between an acid and an alkali. Of course, as our test for neutralisation is physiological and not chemical, as is pointed out by Dr. Bashford, there is room for a large margin of error, nor, since we are unaware that there is any phenomenon corresponding to precipitation in this interaction, *can we expect the influence of mass to be absent* in this any more than in other chemical changes. It is, however, possible to fix the neutralising relationship between toxin and antitoxin with sufficient accuracy to satisfy the requirements of practical medicine. It is difficult to believe that such intimate union as is implied by the effects produced by a toxin on the susceptible tissue should be of other than a chemical nature, and it is found experimentally that all toxins capable of giving rise to antitoxic bodies are so intimately combined with the cells that they cannot be separated by other than chemical means. Ehrlich's explanation of these facts is that a toxin poisons a cell by uniting chemically with an unsatisfied affinity—a side chain—of some cell constituent which is required to carry on the ordinary metabolism of healthy cell life. The cells thus poisoned, and possibly also similar associated cells, if in process of recovery reproduce this side chain of the cell constituent with its potential toxin-combining affinity, so that once more the cell can carry on its normal processes. Under the constant stimulus of the toxin, as occurs in the process of immunisation, these toxin-combining side chains are not only reproduced but developed in excess of the cell requirements and are then cast off into the general circulation. These side chains, produced in excess, capable *ex hypothesi* of combining with the toxin and existing free in the circulation, constitute the antitoxin. There are many facts which go to show that antitoxin is the product of cell activity under the influence of a stimulus, generally that of the corresponding toxin, but in some cases that of non-toxic derivatives of the toxin, and the yield of antitoxin in an immunised animal may be increased by the injection of such a cell stimulant as pilocarpin. The widely extended use of antitoxin in the treatment of diphtheria makes these neutralising bodies bulk large in our conceptions of the means by which immunity is produced, but it is in but a very limited number of diseases that antitoxins can be shown to exist The production and therapeutic use of antitoxic sera are, of course, based on solid experimental grounds. The means by which the relations between toxin and antitoxin are gauged have also an experimental basis, though theoretical *reasonings have led to the development of the present* practical methods.

Annotations.

"Ne quid nimis."

EPSOM COLLEGE.

We are sure that many of our readers will be glad to hear that the council of the Royal Medical Benevolent College of Epsom has decided to take the necessary legal steps for the purpose of changing the official title of the institution to "Epsom College." It will be seen on reference to our advertising columns that an extraordinary general meeting of the governors is to be held on Wednesday, Nov. 11th, for the purpose of making the requisite alteration, since the amending Act of Parliament obtained in 1894 provides that the passing of a motion at a general meeting to the effect that the name of the College is to be altered will be all that is required to effect the legal change of title. Those qualified to judge have for many years believed that two words in the long title have militated against the success of the educational side of the institution. "Medical" certainly conveys the idea that the College is a "class" school and almost all persons nowadays grant that schools for the children of members of a single profession are undesirable; and the term "Benevolent" serves to stamp all scholars as being in receipt of an education more or less of an eleemosynary character. As Epsom College contains a very large number of pupils who pay full fees, many who are not sons of medical men paying as much as 75 guineas a year, the word "Benevolent" applied to the school as a whole is certainly misleading. The Lancet was probably the first to take exception to this word, for in the year 1851, when the late Mr. Propert inaugurated this noble work, the following appeared in our columns: "We wish then the proposal of Mr. Propert good speed. We should like to see the term 'benevolent' omitted from the title, but for the objects of the institution, whether for eleemosynary or educational purposes, we have but one word and one thought—that of hearty coöperation and support." Soon after this a rumour was circulated that it was proposed to make the College a class school, and as a consequence we wrote in a leading article on Nov 29th, 1851, as follows: "It has gone abroad as an objection to the scheme that the school will not only be exclusively for the sons of medical men but for those sons only who are intended for the profession. The idea is monstrous. We have authority for stating that the school will not be confined to the sons of medical men, but the foundation will be exclusively for the orphans and sons of distressed members of our own profession, whatever be their future destination." The advertisement shows that in proposing to change the title the council is not unmindful of the importance of the charitable side of the institution—namely, the giving of pensions to 50 aged medical men or to their widows and the provision of board, education, and clothing free of charge for 50 foundation scholars the sons of medical men in distressed circumstances. It is proposed to pass a standing order of the council directing that in documents issued from the office in London the following words shall appear immediately after the title: "Established in 1855 as a public school with a Royal Medical Benevolent Foundation." The idea appears to be a happy one, for it not only traces the institution under its new title of Epsom College back to its foundation close upon 50 years ago, so that friends of the old title may easily recognise it under the new one, but emphasis is laid upon the fact that a great medical charity is combined with a public school. This fact was never clear under the old, misleading title of "Royal Medical Benevolent College," since the granting of pensions cannot by any stretch of the imagination be associated with a *college*. There is one other side to the question and it would have held good even if the College had contained only foundation scholars: it is not true charity constantly to remind those who, owing to adverse circumstances, have been compelled to receive a gratuitous education that they have been to a benevolent school.

KING EDWARD VII. SANATORIUM.

ANOTHER stage will be reached in the progress towards the realisation of the King Edward VII. Sanatorium for Tuberculosis on Nov. 3rd when the foundation stone will be laid by His Majesty the King at Lord's Common, Easebourne, Midhurst, Sussex. The advertisement for the best essays and plans appeared in THE LANCET of Jan. 4th, 1902, between pages 36 and 37 and the name of the donor of the £200,000 for the sanatorium, Sir Ernest Cassel, K.C.M G., was announced in our columns on Jan. 11th, 1902, p. 111. The result of the prize competition for the best essays and plans was given by us on August 9th, 1902, p. 369, and the three prize essays and plans were published in THE LANCET of Jan. 3rd, 1903. In our issue of May 16th, 1903, p. 1391, we stated that the site chosen had been acquired from Lord Egmont at Lord's Common, Easebourne, six miles south of Haslemere and about three from Midhurst, and that it was 150 acres in extent. Midhurst is about 64 miles from Waterloo station (L. & S.W.R.) and the time occupied by the journey is from two and a half to three hours.

THE DEATH OF MISS HICKMAN.

THE body of Miss Hickman was found on the afternoon of Sunday, Oct. 18th, in one of the inclosed plantations of Richmond Park in a condition which leaves no doubt that it had lain there during the whole, or almost the whole, of the period which has elapsed since her disappearance from the Royal Free Hospital on August 15th. The inquest which is being held upon the remains will submit to the test of open inquiry and cross-examination such information as may be available as to the last occasions upon which the deceased lady was seen alive and to a considerable extent, if not in every detail, should elucidate the mystery of her fate. The mere discovery of her body in such circumstances has served to dispel the more distressing and alarming of the theories which have been suggested and circulated. To some extent also an explanation may be afforded before the coroner of the fact that in a public park and pleasure resort within eight miles of the centre of London the dead body of a person of whose disappearance everyone is aware may lie, practically unconcealed, for more than two months. It is true that the public are excluded by the regulations of the park from the wood or plantation in question and that owing to the preservation of game some care is no doubt exercised to enforce the rules laid down. It was not, however, in any way physically inaccessible and, as a matter of fact, the small boys who made so grim a discovery while looking for horse chestnuts had no difficulty in entering or leaving it. That Miss Hickman had been seen in the park was one of the most tangible of the many rumours regarding her movements after leaving Gray's Inn-road and the past residence of her family in the neighbourhood gave a certain colour of probability to the story. The fact, however, remains that neither police nor parkkeepers, either in the exercise of their ordinary duties or in consequence of the suggestions put forward, made a discovery which would have spared a long period of anxiety to those upon whom the terrible period of suspense and the complete absence of information have weighed most heavily. The matter may tend to prove the limitations to which investigation is necessarily subjected upon such occasions rather than to show that want of care or intelligence can be attributed to those concerned; the fact, however, of the presence of a corpse having so long remained undiscovered in such a place will remain as one of the conspicuous features of a tragedy which has aroused the sympathy and wonder of the whole country. To the bereaved relatives and friends of Miss Hickman we tender our respectful condolence in their sorrow which has now lost the element of suspense together with whatever faint hope may have hitherto survived. At the inquest which was opened on Oct. 21st before Mr. M. H. Taylor, coroner for Mid-Surrey, medical evidence was given by Dr. M. H. Gardiner and by Mr. A. J. Pepper that no signs of death from violence were found at the post-mortem examination. The result of the examination as regards the cause of death was entirely negative. The inquiry was adjourned to Nov. 5th.

THE HATCHING OF CHICKENS FROM PRESERVED EGGS.

IN a letter from a correspondent published in our present issue attention is again called to the remarkable preservative effects on eggs of silicate of soda Some months ago[1] we referred to a statement which had been made that a chicken had been hatched from an egg which had then been preserved for 12 months. Our correspondent endeavoured to hatch eggs which had been preserved for three months. This he entirely failed to do but he found that the eggs, even when they had been incubated for over three weeks, remained perfectly fresh and could not be distinguished from recently laid eggs. He points out that if the preservative effect of the silicate of soda is due to the formation of an impermeable substance in the shell of the egg—and there seems no reason to doubt this explanation—then it can hardly be expected that the chick will develop unless some method is adopted in order again to render the shell permeable to air. Experiments in this direction would be of great interest.

MORAL DELINQUENCY IN CHILDREN.

IN an annotation which was published in THE LANCET of July 18th last (p 175) reference was made to the observations and cases recently reported by Dr. A. McLane Hamilton concerning insanity and moral delinquency in children. In the *Daily Express* of Sept. 25th an account was given of a little girl who was the subject of murderous tendencies of a peculiar sort. The child is described as "a bright-eyed girl of nine, innocent looking, with a happy smiling face," who had a propensity for luring little boys to a brook and throwing them in and leaving them to drown. Twice during the week preceding her trial she had sought to carry her murderous instincts into effect. Some time previously she lured a boy six years old and pushed him into a stream but after watching his struggles for some moments she helped him out again. For this deed she was kept in close confinement for ten days and almost her first act on regaining her freedom was to entice a little boy aged three years to a brook, to throw him in, and to run away By the merest chance the incident was witnessed by a man who was working near and the little one was rescued. She had attempted to drown another child in the same way. A curious absence of the sense of remorse was exhibited by this youthful criminal. Questioned by the magistrate she is said cheerfully to have admitted that she threw children into the stream but she could not say what prompted her to do it. Apparently, all motive was lacking except the innate instinct of murder. That the child was mentally abnormal was shown by the evidence of her mother. "From a very early age she had been a source of endless trouble to her—disobedient, wilful and mysterious in her ways, and developing instincts of the most amazing character." On the magistrate making the order that she should be sent to an industrial school, where she was to remain till she was 16 years of age, she manifested no concern. Her composure was not disturbed in the least, so the report states, by the strange surroundings of the court, the presence of policemen, the recital of her misdeeds, or the prospect of a seven years' exile from home and from her mother, and when she was taken away in the charge of a constable she looked quite innocent. Her intelligence is said to be somewhat dull but she exhibits none of the characteristics of ordinary insanity—mental excitement or depression, incoherence, delusions, hallucinations, or stupor. Possibly, a long sojourn in a reformatory, prolonged education and moral training, the influence of religion, and the teaching of some useful handicraft might contribute towards the amelioration of such a case. The advent of puberty may, however, be marked with recurrence or disappearance of bad symptoms.

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[1] THE LANCET, May 16th, 1903, p. 1393.

NEW ENTRIES AT THE MEDICAL SCHOOLS.

WE have not as yet received from all the medical schools of London and the provinces complete returns of the number of students who have entered their names for a full course of medical study during the year 1903-04 and we cannot therefore judge with certainty as to the increase or decrease in numbers. From the figures already to hand, however, London will probably show a slight increase, while the provinces may show a decrease. In London the most notable increase is at St. Mary's Hospital Medical School, where the figures are 42 as against 26 for the session 1902-03. St. Thomas's Hospital Medical School had 42 new entries last year and has 48 this year. The London School of Medicine for Women, which has 36 new entries this year, had 28 last year. One of the dental hospitals of London shows an increase, while another shows a falling off. In the provinces, so far as the figures that we have already received show, there has been a falling off all round with the exception of the Owens College, where the new entries were 48last year and are 51 this year, an increase of 3. We hope to be able to publish a complete table next week.

THE CARE OF PAUPER CHILDREN.

ONE of the most serious matters with which the Poor-law concerns itself is the problem of preventing the children of paupers from following in the footsteps of their parents and the last few weeks have been more than usually prolific in discussion of this vital question. Much has been said for and against the various systems of dealing with the needs of the children and while there is now practically universal agreement that the workhouse atmosphere is ill suited to the development of a sound mind in a sound body there is no uniformity of opinion as regards the selection of a substitute. Schools, scattered homes, collected homes, "boarding out"—each of these has its enthusiastic supporters armed with abundant evidence in favour of the cause. Some time ago we had occasion to notice with approval the Poor-law Schools Exhibition held in the Church Hall at Westminster and we observe that the children who then displayed their capabilities as gymnasts have again been supplying, at swimming competitions held in the Westminster baths, proof of their physical fitness. What has been called the "Sheffield system"—that of scattered homes—was reported on at the North Midland Poor-law conference by the clerk to the Sheffield union who assured his auditors that they might be certain of one thing at least—namely, that the children who passed through the homes did not return to the workhouse. At Plymouth, too, homes of this class seem to have been found to be satisfactory. That there is also something to be said for a colony of cottage homes is evidently believed by the Ecclesall Bierlow guardians for whom the foundation stone of a collection of buildings of this class was recently laid at Bole-hill Lane near Sheffield. The Right Hon. W. H. Long, the President of the Local Government Board, who assisted at the proceedings, took the opportunity of explaining his own position in regard to these different methods. He was, he said, constantly being pressed to lay down a hard and-fast rule as to the measures which guardians should take in connexion with what he described as "this the most important question of Poor-law administration." He had refused to accede to such a request for two reasons, the first of which was that he had never been able to satisfy himself sufficiently that one system was superior to the rest and the second was the confidence he felt in the ability of guardians as a whole to turn their local knowledge to account in deciding which method was best adapted to the special needs of their district.

INTESTINAL ANASTOMOSIS.

ANY difficulty which a surgeon may experience in performing intestinal anastomosis can in no way be attributed to any lack of methods of carrying out this operation presented to his choice. Up to the present some 250 varieties of modes of uniting two pieces of bowel have been described but we should hardly like to assert that they have all been carried out on the living patient, for probably many of them have never been employed in practice. They range in complexity from the simple suture to the ingenious forceps of Laplace and include an immense number of mechanical appliances. There are still many advocates of simple suture—in fact, we consider that we should be justified in saying that this method is used by the majority of surgeons. The essentials of a good method of intestinal anastomosis are that it should be, in the first place, trustworthy and, in the second place, easily and rapidly applied. Both of these conditions are fulfilled by the simple suture. If carefully performed no other method surpasses it in security and with a little practice the application of the stitches does not take much more time than many of the methods especially designed for speed. Moreover, the requirements are obtainable everywhere; if necessary an ordinary sewing needle and cotton can be readily sterilised and employed. In spite of the claims of the simple suture there has been a constant endeavour to obtain some method which can be more rapidly applied. Maunsell's method was ingenious but it inflicted an additional wound on the bowel and it is now, we believe, but little used. In most of the other methods some mechanical arrangement is employed to facilitate the junction of the two portions of bowel and of these Murphy's button is the best known. It is capable of uniting very satisfactorily two portions of bowel and it can be very rapidly applied after a little practice. There is to Murphy's button a very great objection. A foreign body—the button—is left in the bowel and it may be retained there for many weeks or months and though its downward progress may be watched from day to day by means of the x rays and a fluorescent screen, yet its retention for a lengthy period cannot but cause anxiety to the surgeon. To eliminate this difficulty of a foreign body and yet to retain the convenience of a mechanical support various absorbable devices have been tried. We believe that Mr. A. W. Mayo Robson's decalcified bone bobbin was the earliest of these and various modifications of it have been introduced. The latest of these has been invented by Dr. A. MacLennan of Glasgow, who a few years ago devised two other methods. His present invention is certainly ingenious and from *a priori* considerations we should expect it to prove successful. It is a grooved bone bobbin and by means of ligatures the peritoneal surfaces of the two portions of bowel are kept in contact on it. Various sizes of bobbin are made so that one suitable for any particular case may be employed. Judging from the description we should think the process would be simple and speedy but whether it will supersede the simple suture remains to be seen. For the full account of the bobbin we refer the reader to the article published at p. 1156 of our present issue.

WORKHOUSE NURSING AND THE PROPOSED "QUALIFIED NURSE."

AT a meeting of the Hospitals Association which will be held in the Governors' Hall, St. Thomas's Hospital, Albert Embankment, S.E., on Thursday, Oct. 29th, at 4.30 P.M., a discussion on the report of the departmental committee on nursing appointed by the President of the Local Government Board will be opened by Miss Gibson, matron of Birmingham Infirmary, and Dr. T. D. Savill, formerly medical superintendent of Paddington Infirmary. Tickets of admission may be had on application to Mr. Sydney Phillips at St. Thomas's Hospital.

PLACENTAL TISSUE AS A GALACTAGOGUE.

IN THE LANCET of Oct. 3rd, p. 984, our Paris correspondent called attention to the fact that M. Chaleix-Vive has carried out a further series of observations upon the value of the administration of placental tissue to nursing mothers for the purpose of increasing the supply of milk. In the year 1898 M. Iscovesco published some experiments tending to show that placental tissue produces such an effect when given in small doses, whilst a very interesting paper upon the whole subject appeared last year in the March number of *L'Obstétrique* from the pen of M. Bouchacourt. In these days of organotherapy it is interesting to note that placental tissue or placental juice played an important part in the pharmacopœias of 100 years ago. Indeed, much earlier than this these substances were held in great esteem by many primitive people for the treatment of the most varied disorders. As might be expected the placenta was considered of especial value as an aphrodisiac and in the treatment of sterility in the female, whilst it was a common remedy in cases of epilepsy, apoplexy, and infantile colic. In the last disease the cord was also employed and a piece of it powdered was either given internally or placed as a poultice on the child's abdomen. No doubt on homeopathic principles a piece of placenta was often administered to the mother to prevent the retention of the after-birth or membranes after delivery, and amongst the Chinese it played an important part in the treatment of chlorosis. In this connexion it is interesting to recall the investigations of Stieda who has attempted to show that severe chlorosis is associated with imperfect development of the genital organs and breasts. Amongst the natives of the Philippine Islands it is still the custom for the mother after her delivery to burn the placenta, to collect the ashes, and to swallow them with a little water so as to insure the health of her child. The custom almost universal amongst the lower animals of eating the secundines is well known and the observation of the fact that it is followed by no ill results may well have led the primitive savage to employ the after-birth both as a food and a medicine. Various attempts have been made to explain this curious custom. It has been attributed to the promptings of hunger, to the desire on the part of the animal to hide all traces of its recent confinement so as to protect its newly born young from their enemies, or to the natural instinct that leads the mother to remove all traces of blood and dirt from her young and from her lair or nest. In administering the placental tissue as a galactagogue M. Bouchacourt used a preparation which he called "chorionine. This is obtained by washing the minced placenta of the sheep in running water and then submitting it to pressure. M. Chaleix-Vive has employed a glycerine extract of fresh sheep's placenta and reports that he has obtained very good results by its use. In endeavouring to estimate the value of this latest development of organotherapy the chemical composition of the placenta is a point of much interest. The recent researches of Sfameni and others have largely increased our knowledge upon this subject. He has shown that freed as far as possible from blood the human placenta contains a considerable quantity of phosphorus, phospho-carnic acid, various soluble albuminous bodies in small quantities, and salts of potassium and sodium, the latter in excess. In order to come to any real conclusion as to the therapeutic value of this tissue analyses of both the dried extract and of the glycerine extract should be carried out. No doubt such analyses would show that they contained most of the above substances. If this were so then it would be difficult to escape the belief that equally good results could be obtained by the administration of extracts of approximately the same chemical composition obtained from any other tissue of the body. A good deal of further evidence will be required before we can accept the statement that placental tissue has any definite specific action as a galactagogue. If the conjecture, however, for at the present time it can hardly be called more than a conjecture, that the placenta has an internal secretion should turn out to be a true one then it may well be that placental tissue will play an important part in the future treatment both of maternal and of fœtal diseases.

PUBLIC HEALTH IN NATAL.

NATAL became a British colony in 1856 and in 1893 it was provided with a new constitution, a governor, a ministry, and a legislative assembly. It was, however, only in 1901 that the first Public Health Act of Natal was passed. The Act became law in September of that year and one of its results is the publication of the first annual report of the department of public health, dealing with the events of the year 1902. In this report Mr. Ernest Hill, the health officer of the colony, candidly acknowledges that the numerical returns which form the basis of his statistics "are deficient in many respects because of the different systems of registration or the absence of any." Under the new Act births and deaths among natives are registered, but for statistical purposes the returns are of no value because the number of the population is not exactly known and the cause of death is assigned according to the statement of natives only. Even in registering the deaths of Europeans there is much laxity because no medical certificate is required, and the report states that in some parts of the colony it is not unusual for a medical practitioner to give a certificate as to the cause of death of a person whom he had not seen during life. Subject to these reservations Mr. Hill has compiled several tables and charts showing rates of mortality from various causes. The total "European" population of the colony has been taken as 74,600 persons, of whom 51,420 were in the towns and 23,180 were in the country. Among the total "European" population there were 1078 deaths—i.e., 14·4 per 1000—and 3086 births—i.e., 41·3 per 1000. For the town populations the death-rate was 16·1 per 1000 and the birth-rate was 33·1 per 1000; for the country population the death-rate was 10·7 per 1000 and the birth-rate was 59·5 per 1000. Among the "European" population the death-rates per 1000 from tuberculosis and cancer were 1·4 and 0·53 respectively. The local authorities show a conspicuous disregard of such questions as the removal and proper disposal of night soil and rubbish, the abatement of offensive and dangerous nuisances, and the supervision of slaughter-houses, cowsheds, and dairies. Enteric fever has since the war assumed a considerable degree of importance in places where it was previously almost unknown. Plague appeared in Durban at the beginning of December and 15 cases occurred during that month. Tuberculosis and syphilis are said to be increasing among the natives and a beverage called "tshimeyana," the nature of which is not described, is said to be producing serious effects among them.

THE CASE OF DR. LACHLAN GRANT.

THE latest development in the matter of the Ballachulish quarries dispute is that the quarrymen held a meeting on Oct. 5th at which certain proposals submitted to the directors of the company were read. Of those which particularly interest us from a medical point of view were (1) that the interdict against Dr. Lachlan Grant should be withdrawn; (2) that the medical appointment should be in the men's hands; and (3) that no deductions were to be made for medical attendance without the men's express consent. Among other proposals an increase in wages was asked for—viz., that labourers' wages should be increased in winter to 20*s.* and in summer to 22*s.* per week, while quarrymen should be paid as in other slate quarries—viz., "30*s.* per week in failure of contract." The above proposals were considered by the meeting and were carried with applause. On Oct. 8th the manager posted up a notice at the quarries informing the men that he had succeeded in arranging various terms with the proprietors of the quarries among which were the following. That the men should resume work on Oct. 12th under the same rules and conditions as existed in the works on resumption of work in January, 1902, "excepting that no doctor's fees will be collected unless it is otherwise arranged between the men and the manager." Wages were to be 28*s.* per week for quarrymen, with powder allowed, and 20*s.* a week for labourers all the year round. These proposals were considered by the quarrymen on the evening of Oct. 8th and the meeting unanimously refused to accept the terms offered. The men urged that only one point was touched upon in the company's notice—viz., the wages question—and the question of the medical man was left unsettled. The men are still standing firmly by Dr. Grant, as they have been doing for the last 15 months, and for nearly ten months they have been locked out, but up to now practically all of them have obtained work somewhere else so that no great loss has been incurred by them. The company has conceded one point in proposing that the men should be allowed to start work without insisting on deductions for medical attendance and medicine. We may therefore hope that if the men find themselves able to continue their loyal attitude towards Dr. Grant the company will eventually concede the demands of the men on this point also.

CLEANSING OF THE PERITONEUM.

IN the Mirror of Hospital Practice in this issue of THE LANCET is the report of a case of removal of an ectopic gestation by Dr. D. Lloyd Roberts. In his remarks on the case Dr. Lloyd Roberts expresses a preference for irrigation in cleansing the peritoneum when many small clots and much fluid are present. For many years the relative values of sponging and irrigating for the purpose of cleansing the peritoneum have been discussed and even now no unanimous decision has been reached. Irrigation at first sight appears to be the more likely to prove useful for it would seem that it would not be difficult to wash out the whole peritoneal cavity, but experience shows that it is practically impossible in most cases to cleanse the peritoneum by this method; this is very obvious when at a necropsy an attempt is made to wash out the peritoneal cavity. The innumerable pouches shelter much of the material which it is desired to wash away, in spite of very thorough irrigation. Exceptionally, however, there occur cases in which irrigation is capable of efficiently cleansing the cavity. These are instances where much fluid is present and very little adherent exudation, as in the case to which we have referred above. Especially is this so if the fluid is not primarily septic, as in cases of ectopic gestation, for then it matters comparatively little that some of the fluid should be left behind in the peritoneal cavity. In cases, however, where there is much adherent exudation on the surface of the bowel irrigation is of very little value, for it fails utterly to displace the adherent flakes. In these cases swabbing must be employed but the area of peritoneum is so large that to cleanse thoroughly the whole surface is a very tedious task. Fortunately the peritoneum possesses the power of dealing with a certain amount of microbic infection and no surgeon will maintain that by any method that we possess is it possible to render aseptic the peritoneum when its whole surface has become infected.

THE UNCONTROLLED USE OF PRESERVATIVES IN FOOD.

IT is a very regrettable fact that this country is still without any legislative control over the use of antiseptics for the preservation of food and the practice goes on to all intents and purposes unchecked without any regard to the mischief that may be done to the infant, to the invalid, or indeed to the healthy. It is now very nearly seven years since THE LANCET in the report of its Special Sanitary Commission on the Use of Antiseptics in Food drew attention to the necessity of placing some restriction on the kind and amount of chemical agents used very widely for the purpose of preserving food. It is just over four years ago—that is, in July, 1899—that a departmental committee was appointed to inquire into the subject. This committee occupied a considerable amount of time and it must be admitted that the members had a very big task before them. Finally, in November, 1901, very nearly two years ago, the conclusions and recommendations of this committee were made public by the usual channel of a blue-book. Since then absolutely nothing has been done to embody these recommendations, good and reasonable as they are, in the form of a statute and the art of preserving foods still goes on without let or hindrance. It is true that prosecutions have been undertaken but their success has depended upon individual opinions which in many cases have failed to convince the magistrates. The subject ought long ago, as we have urged again and again, to have become part and parcel of the provisions of an Act. We repeat that it is disgraceful that in spite of the careful consideration which, during two years, was given to the question by a committee of experts and of the fact also that its conclusions were made known nearly two years ago, we are still without the necessary statutory powers to control the practice of preserving foods. The delay is unjustifiable and perilous to the health of the community and we fail to see the reason for it.

THE SENSIBILITY OF THE VISCERA.

SOME interesting observations on the sensibility of the viscera have been made by Dr. K. G. Lennander and are recorded in the *Mittheilungen aus dem Grenzgebieten der Medicin und Chirurgie*, Band x., 1902, Hefte 1 und 2. As a result of an investigation of various viscera during the course of cases of operation he states that the parietal peritoneum is very sensitive to all operative measures but that the intestinal canal, the mesentery, the stomach, the anterior margin of the liver, the gall-bladder, the urinary bladder, and the parenchyma of the kidney are completely insensitive to all manipulative procedures and even to the thermo-cautery. The parietal peritoneum itself appears to be sensitive only to painful and not to tactile or thermal stimuli; this sensibility to pain Dr. Lennander attributes to twigs of the intercostal nerves in the subserous areolar tissue. The lungs and the anterior wall of the trachea are also insensitive. The mucous membrane of the rectum is likewise insensitive to all ordinary stimuli but if its lumen be distended to a diameter of three and a half to four centimetres a desire to defecate is produced. Again, the testes and epididymis are insensitive while their coverings are sensitive. Dr. Lennander infers that organs which are innervated from visceral nerves alone are insensitive, while those having branches supplied to them from somatic nerves are sensitive. There is perhaps little that is new in these observations of Dr. Lennander or in his interpretation of them but they lend strong support to the view that at any rate some sensations of pain depend upon nerve fibres anatomically distinct from those subserving tactile and other cutaneous sensations, since the parietal peritoneum is apparently sensitive to painful stimuli only. At the same time that diseased or injured viscera may give rise to painful sensations interpreted locally—that is to say, apart from, or in addition to, referred pain and tenderness—is a matter of daily observation and this variety of pain is usually regarded as due to an exaggeration or augmentation of the common sensibility of the part, of which in health there is no conscious appreciation.

DETERMINATION OF FAT AND TOTAL SOLIDS IN MILK.

IN the August number of the *Archives of Pædiatrics* Dr. Henry L. K. Shaw of Albany, New York, gives details and results of a number of comparative experiments made with different processes for the determination of the fat and the total solids in milk. He first describes the Babcock method of determining fat, a method which, he says, is distinctively American and is widely employed by American dairymen. It requires a centrifuge and at his suggestion a small one has been manufactured for the use of medical men. The process is as follows: 17·5 cubic centimetres of milk are first measured into the test bottle and 17·5 cubic centimetres of sulphuric acid of specific gravity 1·082 are then slowly added. The milk and acid are thoroughly mixed by a rotary motion, placed in the centrifuge, and whirled for four minutes. Boiling water is then added by means of a pipette until the lower part of the column of fat comes within the graduated scale on the neck of the bottle. A second whirling for one minute completes the separation of the fat. The fat thus obtained should form a clear yellowish liquid quite distinct from the acid solution and the height of the column is then read off. The Marchand lactobutyrometer, he says, is better known abroad than in America. It consists of a glass tube closed at one end, with a narrowed segment near the open end. The narrow portion is graduated into 30 divisions. The tube is marked so that the lower portion shall contain five cubic centimetres of milk, the middle portion five cubic centimetres of ether, and the upper portion five cubic centimetres of alcohol. The milk is first introduced up to the point indicated in the tube and a few drops of a 10 per cent. solution of sodium hydrate are added, after which the ether is added and mixed, and the alcohol is then added and mixed. The tube is now immersed in a water-bath at 100° F. for 15 or 20 minutes and the amount of fat is read off from the scale. The other methods or tests made use of were the Gerber method, the Lefferman-Beam (? Leffmann-Beam) test, and the Holt cream gauge. The control estimations of fat, to be taken as the standard, were made in the laboratory of the New York State Department of Agriculture by the Adams extraction method. This consists in spreading the milk over absorbent paper, drying and extracting the fat with ether in a Soxhlet apparatus. The ether is removed by distillation and the fat in the flask is weighed. The process is a good one but is too tedious and complicated for medical use. A comparison of the results of the experiments, 30 in number, showed that the Babcock test could be relied on for accuracy and was the most suitable of all for medical use. Dr. Shaw estimates the total solids from the specific gravity of the milk and the percentage of fat, using a special form of slide-rule for the performance of the necessary calculations.

MEDICAL CONGRESSES IN ITALY.

THE Thirteenth Annual Congress of Internal Medicine will take place this year at Padua from Oct. 29th to Nov. 1st under the presidency of Professor Guido Baccelli. In addition to other subjects which may be brought forward by any of the members of the Congress three selected themes have been put down for discussion—namely (1) the Influence of Individuality in the Pathogenesis and the Ætiology of Disease, to be opened by Professor A. de Giovanni and Professor L. Giuffrè; (2) Immunity in Acute Infective Diseases, to be opened by Professor Lucatello and Professor N. Pane; and (3) the Medical Indications for the Interruption of Pregnancy, to be opened by Professor Zaggri and Professor V. Ascoli. The Congress of the Italian Pathological Society was held in Florence from Oct. 5th to 7th under the presidency of Professor Pestalozza. An important paper was read by Professor Foà upon Cytotoxic Serums. Various papers were contributed by the Roman school; amongst others one upon Sclerosis of the Coronary Arteries by Professor Marchiafava, another on the Alterations of the Nerve Centres consecutive to Infantile Cerebral Lesions by Professor Bignami, and another on the Acute Ascending Paralysis of Landry by Dr. Nazari. Before closing it was decided to hold the next Congress in Milan in the spring of 1905 and to endeavour to transform the society from a national into an international one, Professor Foà and Professor Golgi being appointed to approach the Pathological Association of Germany with the object of bringing this about. At Messina there will be held in the first half of November the National Congress for the Hygiene of the Alimentation and Care of Early Childhood.

REPORT OF THE MINER'S PHTHISIS COMMISSION IN SOUTH AFRICA.

THE report of the commission which was appointed in 1902 to inquire into, and to report on, the disease commonly known as "miner's phthisis" has now been issued together with the minutes of the proceedings and the minutes of evidence. The terms of reference were as follows: (1) to inquire into the extent to which miner's phthisis prevails; (2) to ascertain the cause of the disease; and (3) to make recommendations as to the preventive and curative measures which should be adopted either by legislation or otherwise. The evidence adduced and the deductions therefrom form interesting reading. It appears that the disease is largely confined to miners who have worked for some time in metalliferous mines and is chiefly noticeable among the rock drill miners of the Witwatersrand gold mines. It was further shown that the disease prevails to a very great extent and that a high mortality is due to it. The commissioners were fully convinced that the pathology of the condition is a silicosis produced by the inhalation of minute particles of inorganic matter with which the atmosphere of the mine is naturally charged. This conclusion was the only one to be expected and the chief interest in the report lies in the suggestions which are made for the protection of the workmen. Valuable investigations were made as to the composition and quantity of the air circulating throughout the working places in the mine and as to the composition of the gases given off during blasting operations in varying circumstances. It was also found that the sanitary state of the mines left much to be desired and that the conditions under which the miners lived were not satisfactory. Efficient "change houses" were not provided in many of the mines, so that the men could not obtain facilities for washing and for changing and drying their clothes The commissioners therefore are of opinion that it is urgently necessary to prevent as far as possible by means of sprays and jets the discharge of the minute angular particles of dust into the atmosphere of the mine; to supply the working places throughout the mines with air in sufficient quantities and in such a manner as to render harmless, and to sweep away, the vitiated atmosphere; to maintain underground workings in a clean condition and to institute for this purpose a suitable sanitary system; to provide "change houses" properly warmed and within reasonable distance of each shaft; and to avoid the use of low flash-point lubricants in the air cylinders of compressors. These are practical points the enforcement of which would go far to mitigate the danger to which the workmen are exposed. It is to be hoped that regulations formed with a view to carry out these suggestions will be formulated as speedily as possible.

THE INFLUENCE OF SEASON ON THE OCCURRENCE OF GLAUCOMA.

THE influence of temperature and of season on the supervention of attacks of acute glaucoma is the subject of a communication by Dr. Kurt Steindorff to the *Recueil d'Ophtalmologie* for September. This seems to be a point in the etiology of glaucoma to which but little attention has been directed. It is not mentioned in Norris and Oliver's "System of the Diseases of the Eye" under the article on glaucoma written by Mr. Priestley Smith. Fuchs, Panas, and Swanzy are silent upon the subject, yet, as Dr. Steindorff observes, Hippocrates long ago drew special attention to the influence of temperature and of season on the number of cases and the variety of affections of the eye, whilst support is given to his statements by recent bacteriological researches which show that certain ophthalmic affections are attributable to micro-organisms and that the conditions most favourable for the growth and development of these bodies are coincident with the outbreak of the several diseases which they are believed to occasion. Dr. Steindorff, working in Professor Hirschberg's clinic at Berlin, has had the opportunity of studying that distinguished ophthalmic surgeon's case-books and finds that between May 1st, 1885, and April 30th, 1902—that is, during 17 years—there have been under treatment 7101 patients amongst whom there were 83 patients with acute primary glaucoma, the number of eyes affected being 102. The disease occurred more frequently in women than in men, the proportion being 64 to 19, or 77·1 per cent. By far the most frequent age was the period between 50 and 70 years. Some, perhaps ten, of the 102 cases should properly be excluded because the attack was directly induced by the use of mydriatics in an eye already predisposed to the disease or resulted from operation on the opposite eye. Of the 92 remaining cases 68 were utilisable as showing the effects of meteorological influences, since they occurred in Berlin where the weather reports of the period were accessible. On examining the dates of the attacks of the entire number of 102 cases it was found that 65 cases occurred during the cold period of the year—that is, from October to March—whilst there were only 37 cases from April to September. Of the cases that presented themselves in summer the larger number occurred on the hottest days. Dr. Steindorff calls attention to the well-known influence of cold on blood pressure and therefore on the intra-ocular tension, an influence that is particularly well-marked in those suffering from the arteriosclerosis which is frequently associated with glaucoma. Very high temperatures, on the other hand, have a tendency to lower the force of the heart and to lead in this way to venous stasis. No relation was observed between the attacks of glaucoma and the humidity of the air, the force or direction of the wind, or to storms.

LEUCOCYTOSIS DURING DIGESTION.

IT has long been admitted that during the process of digestion an increase takes place in the number of leucocytes to be found in the blood, but the period of digestion when this increase occurs, the extent and duration of the increase, and the characters of the leucocytes, as well as their source or sources, have not been satisfactorily ascertained. Nor has the effect of the presence or absence of the spleen been determined. The inquiry is a difficult one but it has been attacked by three physiologists working in concert and the results of their experiments have been published in a recent number of the *Journal of Physiology* (vol. xxx., No. 1). The enumeration of the leucocytes was undertaken by Dr. Alexander Goodall, the differential counts were made by Dr. G. Lovell Gulland, whilst to Dr. D. Noel Paton was intrusted the operative part of the proceedings, as the withdrawal of the blood, the removal of the spleen, and the determination of the hæmoglobin. Eight experiments were made, seven being upon dogs and one upon a cat. In each case the animal was kept fasting for a day; a little blood was then withdrawn and the number of leucocytes in a definite quantity was determined by means of the Thoma-Zeiss leucocytometer, whilst simultaneously the amount of hæmoglobin was determined with Oliver's hæmoglobinometer in order that any error arising from differences in concentration of the blood might be excluded. The animal was then fed on as much minced beef and water as it would eat. The experiments showed that there was a tolerably regular rise in the total numbers of leucocytes in the circulation and that this increase reached its maximum about four hours after the ingestion of food. The increase is due partly to a lymphocytosis which is very constant as regards its incidence and degree and partly, in the greater number of cases, to a much more variable polymorphonuclear leucocytosis. Leucocytosis during digestion is not affected by removal of the spleen. The organs to which these experimenters attribute the increased numbers of the leucocytes during and after digestion will constitute the subject of another communication.

THE winter course of lectures and demonstrations in connexion with the Mount Vernon Hospital for Consumption and Diseases of the Chest was opened on Oct. 15th by Professor Thomas Oliver of Newcastle-on-Tyne with an address on Occupation as a Cause of Lung Disease. The lectures are free to qualified practitioners and students of medicine and are given in the lecture hall of the out-patient department at 7, Fitzroy-square, London, W., on Thursday afternoons at 5 o'clock. A full list of the forthcoming lectures will be found in our advertisement columns.

A SPECIAL meeting of the council of the Charity Organisation Society will be held on Monday, Oct. 26th, at 4 30 P.M., at the Royal United Service Institution, Whitehall, London, S.W., when Dr. Edmund Cautley will read a paper on Outpatient Departments and the Rearing of Children. Sir W. J. Sendall, G.C.M G., will take the chair. Communications should be addressed to the secretary of the society, 15, Buckingham-street, Strand, W.C.

ONLY 1 case of plague was discovered in the Cape Colony during the week ending Sept. 26th—namely, at Port

Elizabeth. Plague infected rats were found in the dock at East London. In the Mauritius for the week ending Oct. 15th there were 88 cases of plague and 54 deaths from the disease.

H.R.H. the Princess of Wales has graciously consented to become patron of the British Lying-in Hospital (founded in 1749), the oldest hospital of its kind in London.

WE regret to announce the death of Dr. James Robert Wallace, editor of the *Indian Medical Record*, which took place in India on Sept. 27th.

DINNER OF THE ROYAL ARMY MEDICAL CORPS.

SPEECH BY MR. BRODRICK.

Surgeon-General Sir William Taylor, K.C.B., Director-General of the Army Medical Department, presided at a dinner given on Oct. 21st at the Whitehall Rooms, Hôtel Métropole, London, by the Royal Army Medical Corps, the guests being the Right Hon. St. John Brodrick, the Secretary of State for India.

Sir WILLIAM TAYLOR, after proposing the usual loyal toasts, spoke to the toast of "The Guests." He said that Mr. Brodrick's Reorganisation Committee had introduced many improvements into the medical service of late Amongst these was the issue of a new Warrant and among the benefits resulting therefrom was increased pay, not only for those serving in the United Kingdom but also for those serving in India and the colonies. By the new Warrant charge pay was also given; that had been asked for times without number but had always been refused until insisted upon by Mr. Brodrick's committee There was, further, an increase under the new Warrant of examinations, and when he reminded them that passing these examinations brought with it increase of pay and accelerated promotion he thought no one would deny that that also was of benefit He drew attention particularly to the appointment of sanitary officers to insure healthy quarters and camps. Another result was the removal of the Royal Army Medical Corps school from Netley to London. They were indebted to Mr. Brodrick for the sum of £100,000 voted for the new building. A large increase had been made to the nursing establishment of the corps, resultin [illegible] idition of the wards and of [illegible]. One of the most useful c [illegible] was that on army organisation and he asked if it was not possible to make these lectures more widely useful and to devise some method of registration by which the services of civilian medical men trained for war could be secured.

Mr. BRODRICK, in replying, commented on the great reductions in the Army Medical Department which were carried out in 1886 and which they had ever since had good reason to regret This reduction occurred at a time when the civilian members of the profession were making rapid advances in scientific knowledge. He then proceeded to show its result by quoting the number of entrants for the examinations to the Royal Army Medical Corps and the number of vacancies for a few years back. In 1897 the candidates numbered 28 and the vacancies 35; in 1898 there were 21 candidates and 40 vacancies; in 1899 there were 25 candidates and 28 vacancies; and in 1900 there were 16 candidates and 50 vacancies In 1902, after the reorganisation of the Royal Army Medical Corps, there were 73 candidates for 30 vacancies; in February last there were 50 candidates for 30 vacancies and 78 candidates for 30 vacancies in July last. Mr. Brodrick said that it needed no word from him to point the moral conveyed by these figures. During the late war some people had been surprised that the Royal Army Medical Corps had not expanded to meet the great emergency of that time. But, he said, if on the occasion of the banquet at which they were present instead of inviting 100 guests they had only asked 30 and had called on the cook late in the afternoon to provide for 100 they would not have found fault with the cook but with the man who ordered the dinner if matters had not turned out satisfactorily. Until lately the Royal Army Medical Corps had not been able to keep pace with the advances in medicine because there were no examinations for special promotion and even high positions were filled by men who were chosen in order of seniority and without any selection for merit. There was no study leave granted for scientific research and owing to the shortage in officers the amount of foreign service was excessive Without the coöperation of the civilian heads of the profession and without the free acceptance by the Army Medical Department of the help offered to it the great development and changes in the Royal Army Medical Corps could not have taken place. He considered that the substructure on which any Minister would in future have to work if he wanted to make progress in army matters would be the hearty coöperation of those who had given the orders with those who had to carry them out. Mr. Brodrick then described the friction that he found at the War Office 17 years ago between the civilians and the military men and contrasted that condition of things with those prevailing at the present time when the greatest cordiality prevailed. He failed to find on looking through the pages of the report of the Royal Commission any complaint that the civilian element had broken down. He particularly emphasised the point that the Royal Army Medical Corps had been brought into close touch with the outside world of science and he hoped that the new college of the corps would be rising from the ground within a few months. The money had been voted and the necessary plans had been prepared.

Sir WILLIAM S CHURCH, Bart., K C.B, who also replied to the toast, said that the Royal Army Medical Corps had been enabled to meet the unprecedented demands made on it in the late war in a way that surprised him and his brother commissioners because it had a vast amount of trained material on which to draw, though there was a lack of knowledge of military organisation

Sir LAMBERT H. ORMSBY, President of the Royal College of Surgeons in Ireland, and Sir WILLIAM TURNER, K.C.B., President of the General Medical Council, having also responded, Sir FREDERICK TREVES, Bart, K.C.V.O., proposed the toast of "The Royal Army Medical Corps," which was acknowledged by Sir WILLIAM TAYLOR, and this concluded the evening's proceedings.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on Oct. 15th, Mr. JOHN TWEEDY, the President, being in the chair.

The Secretary reported the death on Sept. 6th, at the age of 66 years, of Mr. Thomas Richard Jessop, member of the Council, and he stated that the President had attended the funeral at Leeds as the representative of the College.

The following motion was passed :—

[illegible]

The Secretary also reported the death on Oct. 12th of Mr. George Lawson, past member of the Council, and a vote of condolence was passed.

A letter was read from Mr. T. Pickering Pick resigning his seat on the Council. The Council accepted the resignation with regret and expressed its feeling of appreciation of the many services rendered to the College by Mr. Pick during his tenure of office as member of Council and of the Court of Examiners.

The PRESIDENT stated that the vacancies on the Council so occasioned would be filled up at the July meeting of the Fellows

A report was read from the Museum Committee reporting the completion of the redecoration of rooms 2 and 3 of the museum.

Mr J. Langton was re-elected a member of the Committee of Management.

Mr. Rickman J. Godlee was elected a member of the Laboratories Committee in the vacancy occasioned by the retirement in rotation of Mr. Henry Morris.

The draft copy of the annual report of the Council was approved.

The following motion was adopted :—

The attention of the Council having been called to the fact that medical certificates are not infrequently made use of by soldiers to assist them in deserting and otherwise evading military discipline the Council desire to call the attention of Fellows and Members to the abuse to which such certificates may be put and to the responsibility which is attached to their issue.

This motion was adopted by the Council in consequence of the following report received from the Discipline Committee, viz. :—

The committee desire to report to the Council that they have had under consideration a communication from an officer in command of a battery of Royal Field Artillery at Aldershot stating that "it is a notorious fact amongst soldiers that a certain class of practitioner will grant a medical certificate to enable a soldier to remain absent on insufficient grounds," that several instances have recently come under his notice, and that in two cases the certificate has assisted the soldier to desert and to conceal his desertion for several days. The officer in question also submits full particulars of one case, from which it would appear that a driver in his battery obtained a certificate of this nature upon insufficient grounds. Without questioning the *bona fides* of the practitioner who granted the certificate in the particular instance to which their attention has been called, the committee, in view of the alleged frequency of such cases, would suggest to the Council the desirability of calling attention to the abuses to which medical certificates may be put.

A letter was read from the President of the General Medical Council stating that he had been authorised to appoint a committee of members of the General Medical Council to confer with representatives of the Royal College of Physicians of London and the Royal College of Surgeons of England in regard to the questions which have been raised respecting the regulations for the first year of study and the first examination of the Conjoint Examining Board and asking to be informed if the College desires such a conference and will appoint representatives.

It was resolved to inform the President of the General Medical Council that his letter had been under prolonged discussion and that a committee had been appointed to confer with representatives of the Royal College of Physicians of London on the subject of the proposed conference.

A letter was read from Mr. Reginald Harrison offering to present to the Council a collection of photographs of the Honorary Fellows of the College. The offer was accepted and the best thanks of the Council were voted to Mr. Harrison for his interesting gift.

Mr. Dent was appointed a member of the Finance Committee and Mr. A. W. Mayo Robson was appointed a member of the Discipline Committee in the vacancies occasioned by the death of Mr. Jessop.

The Council passed the following motion as a reply to a request from the solicitors of the Worshipful Company of Spectacle Makers for the views of the Council on a proposed inclusion of sight-testing in the examination for the diploma of the company :—

The Council of the Royal College of Surgeons have carefully considered the matters upon which they have been invited by the Worshipful Company of Spectacle Makers to express their opinion and desire to submit the following statement of their views for the information of the committee appointed to consider the proposed alteration in the character of the company's diploma :—

Considering the hidden danger and the untoward possibilities that may attend almost any morbid state of the body it is against public safety and welfare that anyone should be deemed competent to order or prescribe any medical or surgical remedy or appliance who has not had an efficient medical and surgical training. More particularly with respect to the petition of working opticians that they should be certified, after due examination, to be qualified to test the sight and prescribe spectacles to correct the various errors of refraction, it is to be observed that, while optical defects often occur in eyes which are otherwise healthy, they are not infrequently associated with diseased conditions which are difficult to detect and whose nature and significance can only be appreciated by persons who have studied diseases of the eye not merely as local affections but in their relation to general disease. Moreover, in many grave affections of the eyes, whether of a local or of a constitutional character, such as inflammation or atrophy of the optic nerves, inflammation or degeneration of the retina or choroid, chronic glaucoma and many other diseases, the earliest and most obtrusive symptom is often impairment of sight, which patients themselves are too prone to ascribe to presbyopia or other optical defects remediable by spectacles. This opinion, the optician, by virtue of his calling, is naturally predisposed to adopt and enforce. In the ultimate interest of the public no countenance should be given to any proposal which is likely to foster the belief that tradesmen, whatever be their technical skill, and whether opticians or orthopædic or other surgical instrument makers, are safe and sufficient guides in the management and treatment of deformities or other diseased conditions.

Obituary.

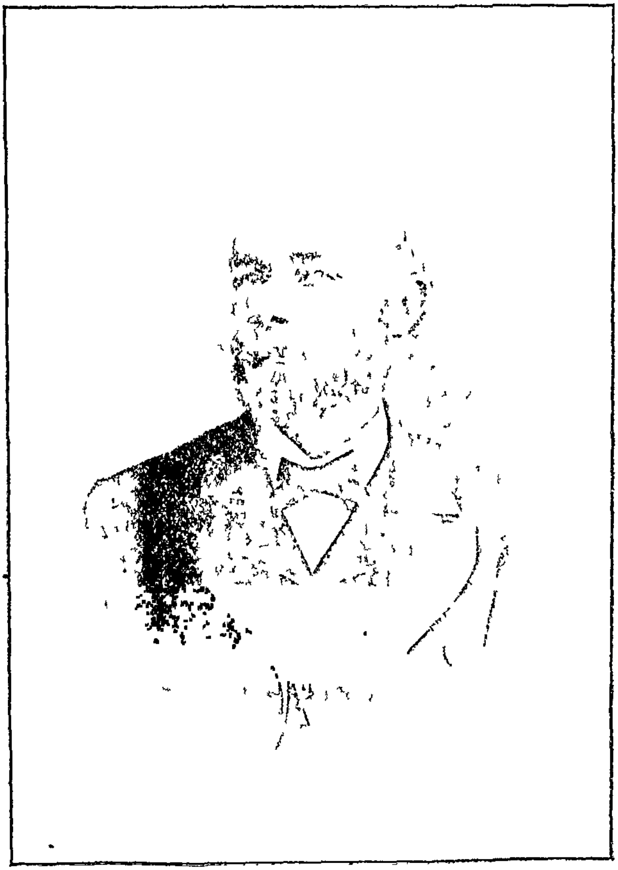
GEORGE LAWSON, F.R.C.S. ENG.,

CONSULTING SURGEON, ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS, AND THE MIDDLESEX HOSPITAL; AND SURGEON OCULIST TO HER LATE MAJESTY QUEEN VICTORIA.

Mr. George Lawson, whose death on Oct. 12th in his seventy-third year we recorded in our last issue, was a man who endeared himself to all who knew him—to his patients, to his colleagues, to his pupils, to his nurses, and also to the porters and the servants of the institutions with which he was connected. His peculiar freshness and charm of manner, his evident sincerity, and complete unselfishness impressed themselves on all who came in contact with him. He was born on August 23rd, 1831, being the second son of William Lawson of the firm of Trower, Trower, and Lawson of the City of London. He received his general education at Blackheath and King's College and his professional training at King's College Hospital. He there came under the influence of Sir William Fergusson who was at that time attracting so much attention by his brilliant operative dexterity. Mr. Lawson became his house surgeon and in a surgical sense may be considered as one of his descendants, whilst in ophthalmology he followed in the footsteps of Sir William Bowman who during Lawson's student career was an assistant surgeon at King's College Hospital.

Mr. Lawson qualified as a Member of the Royal College of Surgeons of England when 21 years of age and the following year obtained the diplomas of Licentiate of Midwifery and Licentiate of the Society of Apothecaries. Early in 1854, war threatening to break out between England and Russia, Mr. Lawson, full of surgical ardour, entered the army as an assistant surgeon and was gazetted on the army medical staff. In March of that year he left England with the first batch of troops for Malta and was there when war was declared. He then accompanied the troops to Gallipoli and afterwards to Varna where he was attached to the third division under General Sir Richard England to attend the staff and those connected with them. From Varna he went to the Crimea and landed with the troops at Old Fort, being exposed to the drenching rain which rendered famous the first night of the Crimean campaign. He marched with the army and saw the first shot fired at the Bulganak. He was at the battle of the Alma, in the flank march which followed some days afterwards, and with the rearguard at Mackenzie's farm. He was also with the third division in front of Sebastopol and on Nov. 5th at the battle of Inkerman was detached to do duty with the fourth (Sir George Cathcart's) division. About the middle of January, 1855, Mr. Lawson was sent to Balaclava as assistant to Dr. Arthur Anderson to attend to the sick officers on board ship and the sick of the staff and commissariat. Towards the end of May, 1855, he caught typhus fever from some mule drivers whom he was attending; in July he was invalided to England and sent home in charge of one of Miss Nightingale's nurses. During 1855 he had been gazetted assistant surgeon to the 3rd Battalion Rifle Brigade. After an illness of five months, the Crimean war having ended, he retired from the army. Throughout the rest of his life he always took the greatest interest in the service and kept a warm place in his heart for any soldier who came under his care He would often take great trouble in helping those who were injured or disabled to acquire an adequate pension or compensation. Mr. Lawson never completely recovered from the effects of the fever—his circulation remained permanently impaired. His pulse-rate was always remarkably slow and his hands were cold and livid. Those who have followed him round the hospital will recall the frequent pauses that he made in ascending any stairs, pauses always enlivened by charming conversation on the wide and diverse subjects in which he was interested.

On giving up the army Mr. Lawson decided to practise in London; he passed his examination for the Fellowship of the Royal College of Surgeons of England in 1857, settled at first at 63, Park-street, Grosvenor-square, and as the outcome of his experience at the Crimea wrote a pamphlet "On Gunshot Wounds of the Thorax" which appeared in 1858 From about this time he began to turn his attention specially to ophthalmic medicine and surgery, influenced probably by Bowman whose clinical assistant he became at the Royal



GEORGE LAWSON, F R.C S

London Ophthalmic Hospital, Moorfields. In 1861 appeared the first of a long series of communications which he contributed to that hospital's Reports; it was the description of a case of congenital absence of the iris. For a short time he held the post of surgeon to the Great Northern Central Hospital. In 1862, on the retirement of Mr. Poland, he was appointed assistant surgeon to Moorfields Hospital and the following year assistant surgeon to the Middlesex Hospital. At each of these two latter institutions he continued to work until he became the senior surgeon and reached the retiring age.

During the first years of his connexion with Moorfields Hospital he devoted particular attention to injuries of the eye and sympathetic ophthalmitis. Several papers were written by him on these subjects in the Ophthalmic Hospital Reports and a pamphlet on the latter was published in 1865. The importance of removing injured eyes or atrophied blind eyes, which were at all likely to endanger the safety of the other eye, was a topic upon which Mr. Lawson was particularly fond of dilating. In 1867 he published his collected experiences on these matters in a book entitled "Injuries of the Eye Orbit, and Eyelids." Two years later appeared the first edition of his "Manual on Diseases and Injuries of the Eye," by which he became widely known outside his own school. It was a book which certainly "hit the moment" and ran rapidly through several editions. It supplied in a most readable form a thoroughly practical work on a special subject suitable for a student. Up to that time no work covering quite this ground had appeared in English, though several books on similar lines have since been written. This year a sixth edition of this work, edited, enlarged, and largely rewritten by Mr. Arnold Lawson, has been brought out. We know that the production of it by his son afforded Mr. George Lawson much zest and interest during his declining years. We are glad to see that in it has been retained much of the practical shrewd common sense which rendered Mr. George Lawson's treatment of patients so eminently successful. He did not stop in his treatment at simply prescribing drugs or lotions. He would instruct a mother how to feed, to clothe, and to train her child, often entering into much detail as to the preparation of the food. He would tell a patient in whom nothing could be done to restore sight what he could still do and how o get to work to earn a livelihood. Many of those who see ut-patients have doubtless wished that they could prescribe or some of them food instead of medicine. Mr. Lawson ctually did this, having an arrangement with a neighbourng butcher by which he could order patients so many pounds f meat. Nor did Mr. Lawson's generosity to out-patients nd with supplying sound advice and meat; many a patient o whom some more than usually disastrous circumstance had occurred would be led quietly aside and return with a miling face and a closed palm.

In his after-treatment of operation cases Mr. Lawson was ull of little devices calculated to further the convenience or welfare of his patients. The twisted wire sides for spectacles, which add so much to the comfort of those who have to wear hem constantly, were originally suggested by him. He had rapid and almost intuitive way of arriving at a diagnosis which was somewhat startling to those who failed to ppreciate the large amount of experience of which it was he outcome. As a general surgeon Mr. Lawson was a udicious, bold, and cool operator, ever ready to meet any mergency that might arise. He reached his zenith before he recent advances in abdominal operations had been ffected and during the latter part of his career he preferred o transfer cases requiring such treatment to younger hands. An operation at which he was particularly successful and dexterous was the removal of the upper jaw and as became a pupil of Fergusson he was a skilful lithotomist He had an exceedingly steady hand which was of special service to him in the delicate operations on the eye. He was an ardent advocate for the use of a Graefe's knife instead of a keratome in cases of glaucoma and preferred curette evacuation to suction for the removal of soft cataracts. It may be noted that Mr. Lawson was in the habit of saying that cataract operations caused him infinitely more anxiety than any general operative procedure. In diseases of the orbit he took a keen interest and his last contribution to ophthalmic literature was a paper on plastic cellulitis affecting that cavity, which he read at the Ophthalmological Society in December, 1894. He was a lecturer on surgery at the Middlesex Hospital. His teaching may be described as more picturesque than systematic. About matters which he felt strongly he was most emphatic and would illustrate them with a wealth of practical observations which could not fail to interest and to instruct.

Mr. Lawson was a difficult man to get the better of in an argument; when you thought you had got him completely in a corner he would in a most innocent manner by some happily expressed phrase or anecdote turn the conversation into an entirely fresh channel. For a time he was an examiner in surgery for the Royal College of Physicians of London but it was a form of employment in which he took but little delight. He was elected a member of the council of the Royal College of Surgeons of England in 1884 and in 1886, at the suggestion of Sir William Jenner, was appointed surgeon oculist to Her late Majesty Queen Victoria, which appointment he held until her death. Mr. Lawson took considerable interest in the improvement of his wards at the Middlesex Hospital and through the generosity of private friends and old patients he was enabled to effect many alterations in their furniture and structural arrangements which proved so advantageous that they were subsequently adopted throughout the hospital. During the later years of his connexion with the Middlesex Hospital he was largely instrumental in the establishment of the chapel. Always a strong Churchman, the superintendence of its erection and beautification afforded him the [illegible] ore fitting place than this chapel [illegible] memorial service at which his [illegible] assembled to take part on Oct. 16th.

Mr. Lawson was a man of very simple tastes, the state of his health incapacitating him from taking any active exercise. He was a great reader and exceedingly fond of animals. He would never allow [illegible] as a constant compani [illegible] and in the summer, h [illegible] large family of boys, [illegible] "The Hut" at the h [illegible] to recuperate from the fatigues of his very extensive private practice and hospital work. On his retirement from the Middlesex Hospital his old assistants and pupils, to whom he was always a staunch friend, wished to honour him by entertain [illegible] man and [illegible] nitely de [illegible] by the death of two of his sons, both of whom had passed through most distinguished careers at the Middlesex Hospital. He saw patients up to within 18 months of his death which occurred at his residence, 12, Harley street, Cavendish-square, on the afternoon of Monday, Oct. 12th, after a long illness.

His wife and five sons survive him; of these latter two are in the medical profession: one, Mr. Arnold Lawson, like his father, is practising as an ophthalmic surgeon and the other is a captain in the Royal Army Medical Corps. By the death of Mr. George Lawson the profession not only loses a most distinguished surgeon but a most generous large-hearted man who was the true type of a Christian gentleman. The funeral took place at Hildenborough on Oct. 16th.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Ernst Pflüger, professor of ophthalmology in the University of Berne. He was a pupil of Donders in Utrecht and of von Arlt in Vienna.—Dr. Domenico Tibone who has been for 38 years professor of midwifery and gynæcology in the University of Turin.—Dr. Ricardo Secondi, professor of ophthalmology in the medical school of Genoa.—Dr. Tschaussow, professor of anatomy in the University of Warsaw, at the age of 54 years.

MEDICINE AND THE LAW.

A Case of Selfish Recklessness.

ON Oct. 15th at the South-Western police-court a working-man in the service of the Battersea borough council was summoned for exposing himself while suffering from small-pox. He had been to a public-house and to the home of a friend while well aware of the fact that it was wrong for him to do so, for he had actually written at that time to someone saying that he was expecting to be removed to an isolation hospital. He was fined 40*s.* and costs, in addition to which he had been deprived of his wages by his employers during his illness in consequence of his conduct. It was stated on behalf of the Battersea borough council that men employed by the council and suspected of sickening with small-pox were, as a rule, treated by its medical staff and isolated without undergoing any loss of pay, so that there was no excuse for the defendant's recklessness.

A Question of Liability.

The Lord Mayor, sitting at the Mansion House, was informed recently of an objection raised by the City board of guardians to defray the cost of treatment in its infirmary of persons arrested on the Tower Bridge. The man in whose case the matter was mentioned had tried to commit suicide from the bridge and was rightly arrested by the City police in whose jurisdiction it is. The bridge, moreover, was erected by the corporation. It is, however, apparently contended by the clerk to the City guardians that for administrative purposes the Tower Bridge is in Whitechapel and that the person in question should have been handed over to the care of the Whitechapel guardians. The Lord Mayor seems to have felt no doubt that this contention was wrong but the question was not before him for decision. It was not suggested that the man, who was ill and in a very weak state, had in any way suffered from the difficulty which had arisen and the point will no doubt be finally settled before another similar case arises.

Horses and the Sausage Trade.

A man was awarded a month's imprisonment recently at the Thames police-court who was found leading a lame and diseased horse to Barking, presumably with a view to shipment to the continent. The magistrate, in sentencing him for the cruelty inflicted upon the animal, spoke of the trade for the benefit of which the poor brute was to be exported as the "organised sausage trade." The evidence of a veterinary surgeon was to the effect that the horse was so diseased that its flesh must be totally unfit for human consumption. Our foreign neighbours are not to be congratulated upon the articles of food manufactured from such animals, a proportion of which are, no doubt, imported to England.

THE PREVENTION OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS.

NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION.

A MEETING of the council of this association was held at 13, Hanover-square, W., on Oct. 12th, Sir WILLIAM H. BROADBENT being in the chair. It was resolved that a committee to make arrangements for the forthcoming congress in Paris in 1904 should be appointed on which all the members of the council and a number of other gentlemen would be asked to serve. A letter from the Incorporated Society of Medical Officers of Health was read, also a memorial to the Principal Secretary of State for the Home Department with reference to the proposed standards of ventilation contained in the first departmental report on the ventilation of factories and workshops presented to both Houses of Parliament in 1902. The memorial expressed the hope that in the interests of public health a standard of ventilation for factories and workshops would be prescribed under Section 7 of the Factory and Workshop Act, 1901, which should not be lower than that now in force in humidified factories—viz., nine volumes of carbonic acid in 10,000 of air, or, preferably, five volumes of carbonic acid in excess of that found in the outside air at one and the same time. Further, that the standard adopted would not be lowered for gas- or oil-lighted factories and workshops in the way suggested in the first recommendation of the committee, such a lowering being entirely unnecessary in view of the fact that efficient means were at present known by which the products of combustion from gas or oil could be easily and readily removed by ventilating outlet tubes placed over gas-jets or oil-burners and communicating directly with the outside air. Indeed, the legislation of a standard as low as that suggested—viz., 20 volumes of carbonic acid in 10,000 of air in gas- or oil-lighted factories or workshops—would practically render all attempts at securing efficient ventilation nugatory. The council entirely endorsed this memorial and as it already has approached the Home Secretary on the subject it expressed its willingness to co-operate further with the Incorporated Society of Medical Officers of Health in any way that might be thought practicable. The council resolved, in view of the by-law against spitting recently passed by the London County Council, to take further steps to induce the railway companies to prohibit spitting in their carriages and about their premises.

Looking Back.

FROM

THE LANCET, *SATURDAY*, OCT. 22, 1825.

LECTURES

ON THE THEORY AND PRACTICE OF PHYSIC,

BY DR. CLUTTERBUCK.

Theatre, General Dispensary, Aldersgate-street.

LECTURE I.[1]

CHEMISTRY will make a part of this Course, (the materia medica,) because it is chiefly of importance in its relation to pharmacy. Chemistry, notwithstanding the vast advances it has made of late years, and the important applications that have been made of it in other arts, has still but a remote relation to medical science. It is of no service to us in regard to physiology; it does not offer an explanation, that is altogether satisfactory, of any one of the functions of the animal œconomy. Decompositions and new combinations are, no doubt, continually going forward in the living body, but they have little or no analogy, that we can trace, with the ordinary processes of chemistry. We cannot form, artificially, the simplest of the animal fluids; nor can we account, in the least, for those wonderful changes which the fluids undergo, by being subjected to the action of the secretory organs. We see the same blood carried to the liver and to the kidneys, and we find separated from it, by the action of these organs, in the one case bile, in the other urine; but neither bile nor urine are to be found in the common mass of blood, nor can we extract them from it by any art of chemistry.

Nor is chemistry of more avail in explaining the changes that take place in the body in disease. We find the condition of the fluids subject to considerable alterations under disease, but the way in which these alterations are brought about we are totally ignorant of, and equally so of the direct means of remedying them. It will enable us to destroy a prevailing acidity of the primæ viæ, and to account, indeed, for its production upon the common principles of fermentation, but it has nothing to do with that derangement of action in the organs which allows the fermentation to go on, and upon which the continuance of the disease depends. Even in calculous disorders, as the stone in the bladder, where chemistry seems to promise so much, it has, in a great measure, failed us, and we are still frequently under the necessity of resorting to a dangerous and painful operation for relief. We have, indeed, solvents which readily act upon the stone out of the body so as to dissolve it, but they are capable, at the same time, of destroying the texture of the body itself, which, in a great measure, precludes their employment.

For a long time diseases were looked upon in no other light than as chemical phenomena, and the cure of them undertaken upon corresponding principles; but the fallacy of this we are now well aware of; chemistry does not adequately explain the production of the simplest of our diseases, and consequently does not suggest any certain means of relief.

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[1] An excerpt only is transcribed.

VACCINATION GRANT.—Mr. A. G. Bateman Lory, medical officer and public vaccinator of the Chudleigh district of the Newton Abbot union, has for the second time received the grant for successful vaccination from the Local Government Board.

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Portsmouth Urban District.—Dr. A. Mearns Fraser embodies in his annual report the very lucid account which he presented to the Portsmouth town council in December last upon the prevalence of oyster-borne enteric fever in Portsmouth. This outbreak, which occurred about the same time as did the remarkable outbursts of enteric fever and other illness which followed the mayoral banquets at Winchester and Southampton, was traced to oysters procured from Emsworth, and Dr. Fraser calls attention to the fact that although the dangerous position of the Emsworth ponds was pointed out in 1896 practically no steps had since been taken to mitigate the danger. It is sincerely to be hoped, as Dr. Fraser urges, that steps will soon be taken to close not only these ponds but also all those which are obviously liable to pollution. Moreover, it is necessary that restrictive measures, albeit they are more difficult to apply than in the case of oysters, should be extended to other shell-fish such as mussels and cockles. With regard to the excessive prevalence of diarrhœa in the neighbourhood of Goldsmith-avenue Dr. Fraser makes a strong report. Although generally speaking the incidence of diarrhœa upon the town as a whole was slight as compared with certain other years there were in a circumscribed population of 817 no fewer than 102 cases (with 19 deaths) of epidemic diarrhœa. This terrible incidence is attributed by Dr. Fraser—and, indeed, by practically all the medical men who attended the cases—to the plague of flies which were attracted to the neighbourhood by the refuse collected near the brick-burning works in the vicinity. It appears that these flies are so numerous that all food has to be kept covered at meal times and that even in spite of this precaution the flies succeed in settling on the food on its way from the plate to the mouth. Dr. Fraser tells us that he found walls, pictures, and furniture covered with fly marks and that the parents were unable to prevent flies crawling into the mouth and eyes of children as they were dying The recent experiments of Firth and Horrocks have shown conclusively that both the legs and the wings of flies which have walked over media infected with disease germs may act as carriers of infection. Dr. Fraser has for several years urged upon the town council of Portsmouth the necessity for the erection of a refuse destructor and it seems difficult to understand how any sanitary authority, more particularly one of the importance of Portsmouth, should have so long delayed this provision in face of the numerous lives which have been yearly sacrificed by reason of the existing method of dealing with and utilising refuse. Dr. Fraser's scheme for the erection of a sanatorium for the county of Hampshire has not so far been successful but now that it is possible for county councils to declare pulmonary tuberculosis a notifiable disease for isolation purposes alone, and such declaration will not subject consumptive patients to all the disabilities imposed upon persons suffering from acute infectious diseases, Dr. Fraser will perhaps feel disposed to make a fresh attempt.

Metropolitan Borough of Hackney.—Dr. J. King Warry strongly deprecates the practice which largely obtains of treating cases of enteric fever at their own homes. He thinks that all cases should be isolated in hospital unless the circumstances are such as to allow of adequate accommodation and the attendance of a trained nurse. In his experience secondary cases very frequently follow when the patients are nursed at home by their untrained relatives. Dr. Warry finds that the patients frequently remain at home on the advice of their medical attendants There can, we imagine. be no question that where proper isolation accommodation and trained nursing cannot be procured the patient's chances of recovery are better at a well-administered hospital Attention is drawn by Dr. Warry to a custom which is not, we think, generally known. It is, he says, the custom of undertakers in Hackney (and inferentially elsewhere) to receive dead bodies on their premises and to keep them there until the date of the funeral. The arrangements for such storage at these improvised mortuaries are far from satisfactory and in one instance a body was even found to have been kept in the front shop adjoining the street, while in another the bodies of infants were stored in a cellar beneath the house. The abuse which a practice such as this might lead to may be gathered from the fact that in two cases the undertakers who were in possession of the bodies refused to bury them until they had been paid the cost of the funeral. The extent of the practice referred to in Hackney may be inferred from the figures of the last census, from which it appears that there are in this borough no fewer than 4827 tenements of one room only and a total of 29,087 tenements of four rooms and under. Dr. Warry thinks that even in the majority of the three- and four-room tenements the dead body is as a rule [illegible]ker, seeing that during 1902 [illegible]ken to the mortuary to await [illegible] by Dr. Warry to the dangers which attend the disposal of stillbirths. It is, he alleges, the custom for the undertakers to receive these bodies and to take charge of them until a convenient opportunity offers for their interment. This practice affords, he thinks, a favourable opportunity for the exercise of foul play, inasmuch as if the body be called a stillbirth no further inquiries are made. In Dr. Warry's opinion the law should be so altered as to provide that all dead bodies which cannot be kept at home should be removed to the mortuary and that all fœtuses which have reached the age of development of seven months should be registered upon the certificate of a medical practitioner.

Blackpool Borough.—Dr. F. J. H. Coutts, in the course of an interesting and carefully prepared annual report, refers to the danger which exists at Blackpool owing to the existence of mussels in considerable quantities on the outfall sewer itself and also upon the pier and he furnishes several instances of enteric fever cases in which the evidence suggests that the consumption of shell-fish may have caused the attack. More than this can hardly be asserted in the majority of instances. Special stress is laid by Dr. Coutts upon one case in which a policeman, nine days before the onset of the disease, procured mussels from a man who had been seen to pick them from the sewer outfall pipe. Both the policeman and one of his colleagues ate some of the mussels and on the next day the colleague was attacked by severe vomiting and purging, while the policeman referred to developed later a typical attack of enteric fever. These two cases are much on a par with those which occurred after the Southampton and Winchester mayoral banquets, when several guests suffered not only from vomiting and diarrhœa shortly after the banquet but also, later, from enteric fever. Dr. Coutts suggests as a remedy for the existing state of affairs that some satisfactory method of sewage treatment should be adopted so as to eliminate the danger of the specific infection of shell-fish. But unfortunately there is no known practical method of rendering a sewage effluent sterile *quâ* disease organisms and nothing which can be done is likely to render the safe eating of shell-fish (uncooked) which have been taken from a sewer outfall or its immediate neighbourhood.

Bristol County Borough.—Dr. D. S Davies is apparently endeavouring to introduce into Bristol that much needed reform, or rather advance, in preventive medicine which consists in the periodical examination of school children, and by way of accentuating this question he furnishes in the current annual report a summary of the practices as regards the inspection of school children which are in vogue in some English and many continental cities. There are now over 60 000 children attending the public schools of Bristol, and the periodical physical examination of these children, more especially if such examinations were followed by the cure or amelioration of defects, would make a very real impression [illegible] population of Bristol. Obviously, too, [illegible] facilitate the detection [illegible] thus would reduce the chances of school outbreaks and the necessity for closing the schools. Bristol, with its population of over 334 000 and its great wealth, might very well set an example to other large towns by initiating a really modern system of the inspection of school children and we hope that next year we may be able to chronicle this advance in the application of preventive medicine in this country. In connexion with the control of diphtheria a somewhat new departure was taken at Bristol during 1902 Those children who had been in contact with undoubted cases of diphtheria and in whose throats Hoffmann's bacillus was detected were treated as out-patients by means of antiseptic washes at the isolation hospital. After the children have been thus treated for a fortnight the throats are examined to determine if they may safely attend school. The experiment, in so far as the evidence is of value, appears to have been satisfactory. As regards the difficulty of the adequate control of milk Dr. Davies draws attention to the fact that Bristol derives its milk from 154 farms and that of this number 85 are in Gloucestershire, 67 are in Somersetshire, and two are in Wiltshire. It is, however, satisfactory in a sense to learn that only four samples out of 74 examined were found by inoculation to contain the tubercle bacillus. In the matter of the treatment of pulmonary tuberculosis the corporation of Bristol has decided to contribute £1000 towards the cost of erecting the sanatorium which is being constructed at a site near Bath for the counties of Gloucester, Somerset, and Wilts, and the corporation has also, subject to certain conditions, agreed to contribute £260 annually in order that it may have the exclusive use of four beds.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8466 births and 4573 deaths were registered during the week ending Oct. 17th. The annual rate of mortality in these towns, which had been 16·3, 15 3, and 15·8 per 1000 in the three preceding weeks, was again 15·8 per 1000 last week. In London the death-rate was 15·3 per 1000, while it averaged 16·1 in the 75 other large towns. The lowest death-rates in these towns were 3·3 in Hornsey, 7·1 in Barrow-in-Furness, 7·2 in Handsworth, 7·9 in Grimsby, 8·1 in Croydon and in Burton-on-Trent, 8·2 in King's Norton, and 9·0 in Wallasey; the highest rates were 20·2 in West Hartlepool, 20·3 in Manchester, 21·1 in Stockton-on-Tees, 21·5 in Burnley, 21·8 in Tynemouth, 22·3 in Hanley, 24·2 in Salford, and 26·3 in Middlesbrough. The 4573 deaths in these towns last week included 634 which were referred to the principal infectious diseases, against 752, 697, and 707 in the three preceding weeks; of these 634 deaths, 420 resulted from diarrhœa, 49 from "fever" (principally enteric), 45 from measles, 43 from diphtheria, 42 from whooping-cough, and 35 from scarlet fever, but not one from small-pox. No death from any of these diseases was registered last week in Hornsey, Reading, Devonport, Grimsby, Bootle, or Newport (Mon.), while they caused the highest death-rates in West Ham, Northampton, Great Yarmouth, Hanley, Smethwick, Burnley, Preston, Middlesbrough, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Stockport, Warrington, and Sunderland; from scarlet fever in Swansea; from diphtheria in Great Yarmouth; from "fever" in Walthamstow, Rhondda, and Merthyr Tydfil; and from diarrhœa in West Ham, Northampton, Hanley, Birmingham, Burnley, Preston, Middlesbrough, and Merthyr Tydfil. The mortality from whooping-cough showed no marked excess in any of the large towns and no fatal case of small-pox was registered during the week The number of small-pox cases under treatment in the Metropolitan Asylums hospitals on Saturday last, Oct. 17th, was 11, against 29, 21, and 17 on the three preceding Saturdays; one new case was admitted last week, against one, one, and two in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1886, 1876, and 1881 at the end of the three preceding weeks, had declined again to 1860 at the end of last week; 208 new cases were admitted during the week, against 293, 235, and 240 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 134, 161, and 146 in the three preceding weeks, rose again to 175 last week, but were 98 below the number in the corresponding period of last year. The causes of 44, or 1·0 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Nottingham, Bradford, Leeds, and in 49 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Smethwick, Liverpool, Bootle, St. Helens, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 16 8, 17·3, and 16·0 per 1000 in the three preceding weeks, increased again to 16·1 per 1000 during the week ending Oct. 17th, and showed an excess of 0·3 per 1000 over the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 13·3 in Aberdeen and 13·5 in Edinburgh, to 17·7 in Glasgow and 20·1 in Perth. The 527 deaths in these towns included 35 which were referred to diarrhœa, 14 to measles, seven to whooping-cough, six to "fever," five to scarlet fever, four to diphtheria, and one to small-pox. In all, 72 deaths resulted from these principal infectious diseases last week, against 77, 65, and 71 in the three preceding weeks. These 72 deaths were equal to an annual rate of 2·2 per 1000, which corresponded with the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of diarrhœa, which had been 44, 42, and 41 in the three preceding weeks, further declined last week to 35, of which 24 occurred in Glasgow, four in Aberdeen, three in Leith, and two in Dundee. The deaths from measles, which had been five, four, and eight in the three preceding weeks, further rose to 14 last week, and included 11 in Glasgow. The fatal cases of whooping-cough, which had been nine, seven, and six in the three preceding weeks, increased again last week to seven, of which six were registered in Glasgow. The deaths referred to different forms of "fever," which had been seven, six, and nine in the three preceding weeks, declined again to six last week and included two in Dundee. The fatal cases of scarlet fever, which had been two and four in the two preceding weeks, further rose last week to five, of which three occurred in Edinburgh and two in Glasgow. The deaths from diphtheria, which had been four and three in the two preceding weeks, increased again to four last week, and included two in Edinburgh. The fatal case of small-pox occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 84, 88, and 62 in the three preceding weeks, rose again last week to 82, but were 47 below the number in the corresponding period of last year. The causes of 24, or nearly 5 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·7, 18·3, and 19·7 per 1000 in the three preceding weeks, declined again to 18·6 per 1000 during the week ending Oct. 17th. During the past four weeks the death-rate has averaged 19·6 per 1000, the rates during the same period being 14·8 in London and 15·8 in Edinburgh. The 135 deaths of persons belonging to Dublin registered during the week under notice showed a decline of eight from the number in the preceding week and included nine which were referred to the principal infectious diseases, against 16, five, and nine in the three preceding weeks; of these, five resulted from diarrhœa, three from "fever," and one from whooping-cough, but not any from small-pox, measles, scarlet fever, or diphtheria. These nine deaths were equal to an annual rate of 1·2 per 1000, the death-rates last week from the principal infectious diseases being 2·0 in London and 1·1 in Edinburgh. The fatal cases of diarrhœa, which had been 14, three, and four in the three preceding weeks, rose again last week to five. The deaths from "fever," which had been one, two, and one in the three preceding weeks, rose again to three last week. The 135 deaths in Dublin last week included 27 of children under one year of age and 27 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons were slightly below the respective numbers recorded in the preceding week. One inquest case was registered, and 56, or more than two-fifths, of the deaths occurred in public institutions. The causes of five, or nearly 4 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Surgeons: E. S. Miller to the *Tartar;* A G. Eastment to the *Impregnable;* E. S. Tuck to the *Cambrian,* for Ascension Hospital; and J. W. W. Stanton to the *Fire Queen.*

ROYAL NAVAL VOLUNTEER RESERVE.

John Macintyre to be Honorary Staff Surgeon (dated Oct. 15th, 1903). The undermentioned have been appointed Surgeons:—Peter Paterson, Alexander Laurie Brown, James Paton Boyd, and Ebenezer Snell (dated Oct. 15th, 1903).

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel A. T. Sloggett, C.M.G., is appointed for duty in the Home District. Captain J. C. B Statham proceeds to Woolwich for duty. Lieutenant W. F. Tyndale embarks for Bengal and Lieutenant A. B. Smallman for the Punjab early next year. Lieutenant-Colonel W. J. Macnamara is appointed Senior Medical Officer at Jersey. Colonel W. L. Chester takes over the appointment of Administrative Medical Officer, Punjab Command.

ARMY MEDICAL RESERVE OF OFFICERS.

Lieutenant J. T. K. Thomson, Glasgow Companies, Royal Army Medical Corps (Volunteers), to be Surgeon-Lieutenant (dated Oct. 14th, 1903), instead of as notified in the *Gazette* of Oct. 13th, 1903, under "Royal Army Medical Corps."

IMPERIAL YEOMANRY.

East Riding of Yorkshire: Richard Hamilton Ashwin to be Surgeon-Lieutenant (dated Oct. 17th, 1903).

QUEEN ALEXANDRA'S IMPERIAL MILITARY NURSING SERVICE.

Lady Roberts, accompanied by Lady Aileen Roberts and the matron-in-chief, Miss S J. Browne, R R C., visited the Princess Louise Hospital, Alton, recently for the purpose of presenting the badges to the ladies of the nursing staff of the hospital.

Correspondence.

"Audi alteram partem."

THE LUNG REFLEX OF ABRAMS.

To the Editors of THE LANCET.

SIRS,—In his letter on the above subject[1] Dr. A. G. Auld refers to the fact that the lungs can be made to expand—as shown by a diminution in the area of superficial cardiac dulness and a descent of their lower margins—by certain devices—e.g., by briskly rubbing the chest for a minute, by the inhalation of irritating vapours such as ammonia, by plugging the nares with cotton-wool, or finally by vigorous percussion of the epigastrium, and he assumes that the expansion in question is due to a reflex relaxation of the bronchial muscles. May I be permitted to point out that this phenomenon is susceptible of another and simpler explanation. I suggest that all the means referred to tend, independently of any influence on the bronchial muscles, to increase the mean size of the chest and thus to cause pulmonary expansion *by exciting the inspiratory muscles*; thus rubbing the chest, pummelling the epigastrium, and blocking the nares all tend by interfering with normal breathing to induce a certain amount of dyspnœa which, as I have pointed out elsewhere, excites the inspiratory muscles and thus leads to an increase in the mean size of the chest for the purpose of facilitating the circulation, notably that through the lungs, and in regard to the inhalation of ammonia there can, I think, be little doubt that it also tends to promote inspiration rather than expiration, although every now and then a violent expiration may be induced by it in the shape of sneezing.

Dr. Auld does not touch upon the interesting question how bronchial relaxation can cause expansion of the lungs in the living body. Assuming the other intrathoracic organs to remain unaltered in size, it is obvious that the lungs cannot expand without a corresponding increase in thoracic capacity. Now the primary effect of bronchial relaxation must be to cause a relaxation of pulmonary tissue and thus, by diminishing the suction action of the lungs on the thoracic walls and diaphragm, somewhat to increase the size of the chest cavity. The thoracic expansion would not, however, end here. I have in another place sought to show that throughout life the inspiratory muscles are ever busy keeping the lungs at the requisite degree of stretch so as to maintain pulmonary suction at the norm—how, e.g., it is largely in this way that the expansion of the chest in emphysema is to be explained, the inspiratory muscles coming into extra play in order to tune up, so to speak, the relaxed pulmonary fibres to the requisite pitch. The same thing doubtless happens when the bronchial muscles relax and thus tend to cause relaxation of pulmonary tissue. Any enlargement of the chest that may ensue in these circumstances is, I doubt not, chiefly brought about by the inspiratory muscles. It is noteworthy that pronounced constriction of the bronchi (sufficient to cause dyspnœa, as in asthma) also causes enlargement of the thorax; and I believe in a precisely similar manner—i.e., through the agency of the inspiratory muscles, in obedience to the law already referred to that dyspnœa favours thoracic expansion.

I am, Sirs, yours faithfully,

Wimpole-street, W., Oct. 18th, 1903. HARRY CAMPBELL.

"IMMEDIATE" AUSCULTATION AND PERCUSSION.

To the Editors of THE LANCET.

SIRS,—I read with great interest the letter on "immediate" auscultation by Sir Isambard Owen in THE LANCET of Oct. 10th, p. 1049. As one who has made use of this method largely and has demonstrated to students its value in certain circumstances again and again I may be permitted to indorse the opinion of Sir Isambard Owen as to the advisability of a "more systematic attention to the practice of direct auscultation than it obtains at present." In my case also it was by accident that I became acquainted with the value of this method. Since then I have met with many medical men who have never employed it and even with some who imagined that without a stethoscope auscultation is not feasible, whereas the fact is that not seldom the immediate is preferable to the mediate method. Very much the same thing applies to percussion. Apart from the fact that the finger is greatly preferable to any other form of pleximeter for regular use, most delicate and accurate work can be accomplished by direct percussion—i.e., by the use of one or two finger tips as a plessor without the intervention of a pleximeter of any kind. In such a case, of course, it is the sense of resistance rather than the "note" which gives the desired information. I remember a most interesting article on this method which appeared in the *Practitioner* some years ago but have forgotten the author's name. To my mind both direct percussion and direct auscultation are deserving of more attention than has been devoted to them by clinical teachers of late years.

I am, Sirs, yours faithfully,

A. E. GRANT, Major, I.M.S.

Ennore, Boscombe, Oct. 11th, 1903

MATERIA MEDICA AND THE MODERN CURRICULUM.

To the Editors of THE LANCET.

SIRS,—I was privileged to hear the address which Professor Schafer delivered at the Yorkshire College, Leeds, on Oct. 1st and in the main consider that his very practical suggestions ought to be of great value to the authorities of the forthcoming new university in framing their medical curriculum. I would like, however, to draw attention to his remarks concerning materia medica, and with this I presume is included practical pharmacy. He says, "Materia medica in the strict sense ought not to be part of the curriculum."

Now there seems to be a growing tendency in all our medical schools to minimise the value of these subjects in forming a part of medical education, and hence no wonder that so many men receive diplomas and degrees to practise medicine and surgery who possess the barest possible knowledge of the simplest drugs. I am well aware, of course, that in degree of importance the subjects of physiology, pathology, anatomy, &c., should take priority, but I am confident it would be a retrograde step to remove materia medica from the curriculum.

My point is this, that inasmuch as probably nine-tenths of [illegible] to-day dispense their [illegible] public *and to the profession* that they should be properly trained to do so during their curriculum. This seems to me, again, the more necessary since the old apprenticeship days are gone, for now many men may qualify without much practical acquaintance with the British Pharmacopœia and a very limited theoretical acquaintance also, a circumstance which they always afterwards regret.

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[1] THE LANCET, Oct. 17th, 1903, p. 1118.

It may be argued that materia medica and practical pharmacy are the province of the qualified pharmacist. Granted this to be the case, speaking on the lines of perfection, but we nevertheless have to deal with what *is*, and so long as the great bulk of general practitioners continue to do their own dispensing I submit that the medical schools ought not to relax their teaching in these subjects in the way which is so evident on all sides.

Professor Schäfer goes on to say: "A scientific acquaintance with the action of drugs under both normal and abnormal conditions is quite another story and pharmacology must in future have its due position in the medical curriculum." The student, then, is to know all about the action and uses of drugs without necessarily being acquainted with their physical characters. This savours very much to my mind of mechanical empiricism. I prefer the workman who not only knows how to *use* his tools but knows all about the tools he is using.

In conclusion, let me say that in my opinion this inefficient knowledge of materia medica and pharmacy on the part of many members of our profession is very largely responsible for the reprehensible practice now so prevalent of prescribing and recommending so many proprietary nostrums. If the B.P. is not q.s. along with an addendum, say, such as Martindale's, it *ought* to be, and it becomes a serious reflection on the Pharmacopœia Committee if it be not kept up to date. But this modern practice of prescribing So-and-so's liquid extract and So-and-so's "oids"—very often merely as the result of an interview with an eloquent commercial traveller—is the outcome and the evidence of a most deplorable ignorance which should not prevail.

I am, Sirs, yours faithfully,
Horbury, Wakefield, Oct. 10th, 1903. WALTER ASTEN.

THE VISION OF MYOPES.

To the Editors of THE LANCET.

SIRS,—The fact recorded by Mr. E. Donaldson in his interesting letter in THE LANCET of Oct. 17th, p. 1118, that vision can be improved in a myopic eye by drawing upon the outer canthus with the finger especially appeals to me as being in accord with a theory I propounded some years ago that the external ocular muscles were coördinates that had to be taken into account in considering the so-called static refraction of the eye (vide *Ophthalmic Review*, 1900, p. 211). In that article I mentioned that a myope's sight could usually be improved for the time being by pressing the globe backwards with the finger through the upper lid. I made use of the fact to support some heretical views with regard to polar pressure mechanically making the eye less myopic. Mr. Donaldson's method would have the same effect on the globe and he gives the orthodox explanation that dragging on the outer canthus enables the lid to cut off the diffusion circles, but may it not be that the dragging also causes pressure on the eye, the result of which is that it is somewhat flattened? I do not deny that a diaphragm renders objects clearer by cutting off diffusion circles but in the instance in question I think the fact that dragging the canthus outwards causes diplopia (an observation which can easily be tested) shows that pressure is exerted on the eye.

I am, Sirs, yours faithfully,
Bath, Oct. 18th, 1903. W. M. BEAUMONT.

THE HATCHING OF CHICKENS FROM PRESERVED EGGS.

To the Editors of THE LANCET.

SIRS,—In an annotation on the above subject which appeared in THE LANCET of May 16th, 1903, p. 1393, reference was made to a statement that chickens had been hatched out from eggs which had been preserved for 12 months by immersion in a 10 per cent. solution of sodium silicate. The result indicated seemed so remarkable as to make it worth while to repeat the experiment. Some friends of mine kindly undertook to carry out the following experiment. Twelve eggs were collected in June and immediately placed in a 10 per cent. solution of sodium silicate and completely covered by the solution. On Sept. 5th four eggs were taken from the solution and marked and with nine other newly laid eggs were placed under a hen. All the newly laid eggs hatched out within three weeks but the four preserved eggs did not hatch. One of these eggs was boiled and was quite fresh; the other three were broken and the yelk fell out separately from the white. The whites were whipped up and became quite stiff. This is stated to be the best test of a fresh egg. It is of interest to note that these preserved eggs, even when they had been incubated for three weeks, still remained perfectly fresh, seeming to indicate that the shells were still impermeable to external influences.

Assuming that the remarkable preserving effect of the sodium silicate is due to the formation of an insoluble glass with the lime salts of the substance of the shell it is curious that it has been possible to hatch out a chicken without first making the shell again permeable to air. The experiment is one which should be repeated after the shell has by some method again been rendered permeable, for it seems improbable that the hatching of such preserved eggs can take place if the shell remains impermeable to air.

I am, Sir, yours faithfully,
Oct. 20th, 1903. FREDERICK E. BATTEN.

THE M.D. DEGREE OF BRUSSELS.

To the Editors of THE LANCET.

SIRS,—Dr. P. A. Nightingale states in THE LANCET of Oct. 17th, p. 1119, that the M.D. Brux. confers no right to practise in Belgium and, secondly, that the Belgians take the "State degree" which, in the words of Dr. Nightingale, is "quite another matter." While in Brussels I made inquiries on both these points and was assured that the degree *does* confer the right of practising there after certain legal formalities are gone through and this is evidenced by the fact that two or three Englishmen are now practising there. Moreover, I was given to understand that the examination for foreign candidates is identical in every respect with that of the Belgian students.

I am, Sirs, yours faithfully,
Westcliff-on-Sea, Oct. 18th, 1903. N. LEONARD.

THE MEDICAL REGISTER.

To the Editors of THE LANCET.

SIRS,—I beg to thank you for your courtesy in complying with my request to draw the attention of members of the profession to the importance of accuracy of address. We have had about 300 communications in the past three days and five persons whose names would have been erased at the end of the year under the operation of Section XIV. have saved themselves, so that the result may be considered very satisfactory.

I am, Sirs, yours faithfully,
H. E. ALLEN,
Oxford-street, W., Oct. 14th, 1903. Registrar.

A BIOLOGICAL THEORY OF THE ORIGIN OF NEOPLASMS.

To the Editors of THE LANCET.

SIRS,—As the study of the origins of neoplasms is commanding a great deal of attention at present, I would like to suggest a natural origin for these tumours. I think rather too much attention has been paid to the heredity of the entire organism and too little to the special hereditary tendencies of the cells themselves which enter into the growth. In the endeavour to obtain an idea of these hereditary properties we must necessarily start at the period when all organisms were in the unicellular state; then study the causes that lead to increased proliferation of cells—first, in the protozoa of unicellular type, and, secondly, in the multicellular organisations where the daughter cells do not separate from the parent except to form the foundation of a new colony. In the unicellular group we find that when the normal cell has not sufficient excess of vitality left to continue reproduction by dividing it resorts to coalescence with another cell and from the stimulation derived there results a great output of daughter cells. In the multicellular organisms of a primitive kind we find that although there is already an attempt made to limit the reproductive functions to certain cells, still that the ordinary tissue cells can take on this function and do.

Remembering the above facts, on looking at that great multicellular organism the human body, we find that certain cells are set apart for the reproductive functions and the majority of cells are the tissue elements as in [illegible] organism: should we not expect that at least occa[illegible] an atavism favoured by certain circumstances [illegible] tissue should take on the reproductive function, [illegible] *union of two tissue cells* originate that greatly increased cell proliferation which is a neoplasm. This growth would take on the type of the tissue in which it originated.

And what are the causes likely to favour this reversion of a *specialised cell to the habits of its remote ancestors?* Any cause which renders the cell less specialised in structure, more motile, or more devitalised when a call is made for exertion to proliferate and repair.

Such a cause is found in long-continued irritation causing frequent destruction of tissue The ordinary tissue cells are at first quite capable of dividing to repair the gap without resorting to extraordinary means. But when the destruction of the newly laid down tissue is repeated time after time there arrives a period at last when the cells have grown feebler and feebler and give off more and more stunted and primitively developed daughter cells. They require more stimulus and they resort to the only other means in their cellular history of meeting with the demand—viz., two of them unite and then succeeds the tumour. And it is probable that this happens at the same time to several cells which have suffered equally long from the same strain.

I would point out, in conclusion, that by the coalescence of cells of various kinds at the same time, but each two breeding true to kind, we get a good explanation of mixed tumours, and that looking at the history of cells it should be evident to any evolutionist that there must be atavistic reversions of ordinary cells to the reproductive functions which all cells once shared.

I am, Sirs, yours faithfully,
NIEL FLETCHER MACHARDY, M.B., Ch.B. Edin.
Oct. 17th, 1903.

RELAPSES IN SCARLET FEVER.

To the Editors of THE LANCET.

SIRS,—I should be glad if you would allow me through your valuable paper to ask those who are connected with fever hospitals as to whether they have had any cases similar to those which I now describe. 1. Four months ago I admitted to the Brentford Fever Hospital a young girl, nine years of age, with a very severe attack of scarlet fever. She peeled freely and was discharged in the usual course of events. To-day, two months after her discharge, I have readmitted her suffering from a very severe attack of scarlet fever, both rash and throat being characteristic. 2 I admitted two cases of severe scarlet fever in the early part of the year; during the peeling stage, which was very profuse, they were both taken with rigors, sore-throat, and a fresh rash, just as if they had never had scarlet fever before. 3 Some three years ago I discharged a child who had peeled freely from scarlet fever and had been two months in the hospital. Within a fortnight she was readmitted with a well-developed rash and sore-throat and peeled again all over freely. I have been connected with this fever hospital for some 15 years and have seen some hundreds of cases of scarlet fever, and I must confess that these cases puzzle me very much. I should be glad to know if a similar experience is common at other fever hospitals and, if so, what is the explanation of these cases?

I am, Sirs, yours faithfully,
Brentford, Oct. 13th, 1903. CHARLES DIXSON, M.D. Durh.

A MINISTER OF PUBLIC HEALTH.

To the Editors of THE LANCET.

SIRS,—I have recently had the honour of presenting a communication to the International Congress of Hygiene on the need for Ministries of Public Health and in consequence I beg to be allowed to make certain suggestions. Briefly, I believe the formation of a Health Ministry to be necessary to national prosperity if the latter is to be based on a sound foundation. It is more important than fiscal reform, than War Office reorganisation, than very many matters that fill the lay press day by day, but public opinion is insufficiently aroused and educated at present. How to create a popular "vote" in the interests of health is the work of those associations and congresses that are considering, or have considered, the matter. The British Medical Association, the Sanitary Institute, the Royal Institute of Public Health, the Imperial Vaccination League, the housing associations, [illegible] ssociation, the Madrid Society, the proposed [illegible] many eminent medical [illegible] forces at no distant date. Above all, the British Medical Association could influence representatives of the governing bodies through its branches over the British world to form an Imperial Ministry of Public Health somewhat as in Germany.

In order to raise the matter above party or sect and to place it on the level of international well-being and amity it is necessary to approach the English and foreign members of the international committees of future congresses of hygiene and medicine and to obtain an official recognition of the subject on the programme The views of eminent men of all countries could be obtained thereby, sound conclusions arrived at, and action taken. I do not think it is necesary to labour the point as to the need for a strong State Health Department. Mr. Balfour's recent words applied to the Macedonian trouble appear very applicable, however, at home, where charity is said to begin—viz., a "policy of humanity" is the "policy of wisdom."

Hitherto the evolution of public health progress has followed panic consequent on outbreaks of epidemic diseases such as cholera, small-pox, &c. This should be replaced in the name of common sense and in accordance with our own interests by the continuous and consistent educational efforts of a Ministry. The amount and exercise of the authority that such an expert Minister should possess may be suggested by the opinions of Lord Rosebery in the matter of the War Office, whose expert chief should have important relations to the Cabinet.

I am, Sirs, yours faithfully,
Plymouth, Oct. 15th, 1903. F. BUSHNELL.

*** We have already referred to the subject in an annotation which appeared in our issue of Oct. 10th, p. 1028.—ED. L.

SECONDARY HÆMORRHAGE AFTER ENUCLEATION OF THE EYE-BALL.

To the Editors of THE LANCET.

SIRS,—Referring to the case under the care of Sir William J. Collins which was recorded in THE LANCET of Oct. 3rd, p. 958, I had a *similar experience of persistent* hæmorrhage (following Mules's operation) several years ago in a patient with hæmophilia which quickly yielded to plugging the orbit with pledgets soaked in perchloride of iron which he does not appear to have tried. From his case it would seem that ancient as well as modern treatment is still of value and worth a trial. For in these days of rapidly increasing new drugs, &c., I fear that we all have a tendency to dispose of much valuable treatment as obsolete.

I am, Sirs, yours faithfully,
W. O ROCKLIFFE, M.A. Cantab, M.D. Dub.,
Honorary Ophthalmic Surgeon, Hull Royal Infirmary.
Oct. 19th, 1903.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Traffic in Sores.—The Slow Progress of Sanitation in India.—The Plague Epidemic.

THE nuisance of beggars in India is intensified by the numbers of leprous and diseased cripples who haunt the thoroughfares of most towns. In Bombay it is complained that they stand in rows endeavouring to excite the compassion of passers-by. The sight is not only offensive but revolting and there is probably danger in allowing so many lepers to move about and to live in the most densely populated quarters of the town. The very worst cases and the most contagious are the most in evidence. In Calcutta this traffic in sores is also a serious and constant evil. There is a growing opinion that the time has come for these pitiable mortals to be prevented from turning their misfortunes to account in earning a livelihood to the nuisance and danger of the public and that adequate provision will have to be made to keep them out of the way.

[illegible] of the [illegible] on [illegible] les [illegible] (about £1082) were spent in [illegible] sanitary matters other than water-supply and drainage and the report says that beyond improvement of the water-supply by constructing, repairing, and improving wells and disinfecting them no important works of sanitation were undertaken by the several district boards during the year, though the usual arrangements were made for the sanitation of fairs. It appears that the boards have money allotted to them for the improvement of tanks (as sources of water-supply), but in many cases they could not expend the money because, forsooth, the zemindars who own them were unwilling either to excavate them themselves for the benefit of their tenants or to make them over to the boards. This is the old story. These native landlords draw their steady incomes in the way of rent from the poor peasants (the peasants in nearly all cases owning their own huts) but they will not expend a farthing of it for the benefit of those tenants. Sanitary improvements will never be effected without some form of compulsion.

Since I last reported there has been a great increase in the mortality from plague throughout India. Last week's figures gave a total of 13,996 deaths which compares very unfavourably with 8821 for the corresponding week of last year. The usual autumnal revival has set in with even greater virulence than ever. Bombay Presidency reports 9163 deaths, Bombay city 73, Central India 1712, Berar 745, Mysore State 673, Central Provinces 340, Punjab 83, United Provinces 70, Bengal 39, and Calcutta 27. There have been slight decreases in the Madras Presidency and Hyderabad State. The cities of Allahabad, Cawnpore, and Meerut are all involved by a sudden infection. In Mhow the outbreak continues to be very virulent. Here there has been a real effort made to effect permanent sanitary improvement—viz., by condemning some 150 houses in the most crowded parts of the bazaars. Over 100 deaths a day have been reported and up to Sept. 19th 3744 deaths have been recorded. A small amount of inoculation has been practised with satisfactory results. Of 1200 persons inoculated 12 only contracted plague and there was only one death. The Lucknow people complain that so little is done to combat the plague epidemic. Last year the city had 4000 deaths and 20,000 people fled away. The municipality declines to adopt measures for the extermination of rats and it is thought that the Government is too much inclined to consult native opinion by which the plague officers are deprived of moral support. A serious consequence of plague measures has shown itself in the Punjab during the past year in the increased number of burglaries and offences against property, especially in evacuated houses. This has consequently acted against this salutary measure; the public fearing the loss of their property. With the abandonment of inoculation and the stoppage of the only other successful measure against plague the prospects for the ensuing season are black indeed.

Oct. 3rd.

POST-GRADUATE WORK ABROAD.

IV. BUDAPEST.[1]

(By a Special Correspondent.)

The object of the present article is to call attention to the excellent facilities for post-graduate instruction which may be obtained in Budapest, especially for workers along the special lines to be more fully described below. This city, the capital of Hungary, is four hours distant from Vienna by express train and has a population of over 500,000 people. The hospitals, of which the three larger ones contain over 2300 beds, draw their patients from an unusually extensive area of surrounding country and are consequently well supplied with clinical material. In addition to these general hospitals perhaps the most important teaching centre is the central "Kliniken" which is in reality made up of a number of buildings devoted to the special branches. These central clinics contain from 800 to 900 beds and all branches of medicine are here represented. Special mention may be made of the new surgical section and the new gynæcological section in connexion with these clinics, since they embody all the latest ideas on the subject of hospital construction and are admirably equipped. The physicians and surgeons in charge of these clinics—the more specialised departments of which will be outlined below—are very cordial in the reception accorded to visiting colleagues and offer them many of the facilities enjoyed by themselves. For those who have had especial training in gynæcology and obstetrics, pathology, and diseases of the ear, nose, and throat, Budapest has great attractions, mainly because of the fact that these particular fields are not overcrowded with seekers after knowledge, that visiting colleagues are always welcome, and also that along the lines last mentioned the actual work may be done by the worker himself. Similar facilities can, of course, be secured in other cities on the continent, notably in Vienna, but the ever-present difficulty attendant upon the overcrowding of the field to the detriment of the advanced workers who may contemplate a sojourn on the continent purely for the purpose of "doing the work himself" will be found, perhaps, less evident in Budapest than anywhere else. With regard to language, Hungarian, of course, predominates, but without exception all the medical men in charge of clinics speak German and many of them French and English as well.

Pathology.—Special mention must be made of the excellent pathological institute in connexion with the central clinics above mentioned which is undoubtedly one of the best equipped laboratories in Europe and which was erected some years ago at a cost of £50,000. The necropsies made in this particular institute number over 1000 yearly and ample opportunity is given to workers in pathology of carrying out the examinations themselves. Visitors are most cordially welcomed by the director, Professor Pertik, and every facility and encouragement are given by him to those who desire to undertake particular lines of research. A special working table is allotted to those who contemplate making a prolonged stay and the large stock of museum specimens which have been accumulated during the last nine years, together with an excellently arranged collection of over 10,000 microscopical sections, are freely placed at their disposal. The system of recording the daily observations made in the post-mortem room is an especially good one and the reports of the last 8000 or 9000 cases, arranged in a manner easy for reference, will be found a valuable aid to workers along the statistical lines of research. Professor Pertik's demonstrations during the semester are particularly good from the teaching standpoint, since microscopical preparations of the macroscopic material to be demonstrated are fully described and the mechanism of death is carefully considered.

Gynæcology and obstetrics.—The Universitats Frauen-Klinik—the gynæcological section of the central clinics—the old Semmelweiss clinic—is in charge of Professor Barsony. This clinic is new and very well equipped in accordance with modern ideas; it contains 100 beds for obstetric cases and 40 beds for gynæcological cases. The last yearly report showed that there were 1542 births with two maternal deaths, while in the gynæcological department 298 in-patients were treated, with five deaths. There are 3000 out-patients yearly attending this clinic.

The finest special hospital in Budapest, and perhaps even in Europe, with a possible exception in favour of the recently opened hospital in Dresden, is the new building devoted to gynæcology and obstetrics, which, however, is not connected with the central clinics so far described. This hospital is in charge of Professor Tauffer, formerly first assistant to Professor Hegar in Freiburg, and contains 120 beds. The service here is a large one, consisting of about 2500 in-patients and out-patients yearly in gynæcology, together with about 1000 in-patient and 1500 out-patient midwifery cases yearly. Service in this hospital is offered as follows: first month as interne in obstetric service; second month on out-patient obstetric service; and third month as interne on gynæcological service. This, of course, implies living in the hospital and carries with it a small monthly fee paid to the incumbents.

Surgery.—The opportunities open to post-graduate guests for doing operative work are necessarily few. (In this connexion the word guest is to be taken literally, differing markedly in this respect from many of the other centres of instruction in Europe, since the so-called "private courses" common to Vienna and Berlin, in which a small class is made to cover the ground under an assistant, are made remuneratively worth the assistant's time.) These opportunities will, however, probably be found less difficult to obtain here than elsewhere for those who will be able to spend a few months in the service either of the surgical section of the central clinics or in one of the many hospitals.

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[1] No. I. (Paris), No. II. (Berlin), and No. III. (Vienna) were published in The Lancet of Sept. 12th (p. 781), Sept. 26th (p. 912), and Oct. 17th (p. 1121), 1903, respectively.

Guests will be appointed "externists" which implies actual service in the dispensary and after about two months of such [illegible] operative cases. Professor [illegible] are in charge of the surgical [illegible] This section contains 180 beds; 1400 in-patients are treated yearly and there are from 800 to 900 operations yearly. The dispensary service is divided as follows: (1) general surgery, 5000 patients; (2) orthopædic, 2000 patients; and (3) genito-urinary, 1000 patients. Professor Navratil is in charge of the surgical work in St. Rocus Spital. This contains 100 beds. The in-patients number 1500 yearly, while the dispensary service numbers 11,000 during the same period.

Laryngology and rhinology.—In this department work may be secured in the clinics of Professor Irsai, Professor Onody, and Professor Navratil. For those who wish to study tuberculosis of the larynx the clinic of Professor Irsai may be especially recommended as it is particularly rich in material of this description and Professor Irsai is exceptionally liberal in apportioning operations. The daily average of patients is from 60 to 70. The clinic of Professor Onody is to be recommended for the study of the affections of the nose and the accessory sinuses. (His researches along the lines of the anatomy of the sinuses in recent years make his clinic an especially interesting one from this point of view.) The material here, however, is somewhat less than in the one mentioned above. Professor Navratil occupies the chair formerly held by Czermak who in the early days of laryngology did, perhaps, more than anyone else to advance the science. Attached to the clinic are 24 beds and the yearly number of in-patients is about 550. The dispensary service averages over 3000 patients yearly.

It is not intended that this short article should convey the idea that at last the Mecca for post-graduate work has been found. I merely wish to imply that for a certain class of workers in gynæcology and obstetrics, in pathology, and in diseases of the nose and throat, Budapest will be found an ideal post-graduate school. Such workers need not content themselves with being mere onlookers but may assist the operator or in certain circumstances may do the work themselves. There must be many who would desire to do their post-graduate work under such conditions and to them I cordially recommend a trial of Budapest.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Housing Problem.

AT the recent Worcester Diocesan Conference this subject was matter for a lengthy discussion, a motion, which I had previously communicated to you, having been brought forward by Dr. A. H. Carter who pointed out that whilst the difficulty in London was a want of houses that in Birmingham was of a different nature. The last report of the housing committee had shown that there were 785 houses to be let at rentals of 4s per week. Back-to-back houses were the chief evils in Birmingham, where there were some 42,000 of them. Undoubtedly thousands of our fellow men and women were living under [illegible] ble with physical [illegible] ter also defended [illegible] hich has come in [illegible] ere never was a [illegible] were displaying more energy or had a stronger grip of the problems which the housing question involved and were engaged in work which was more likely to be crowned with success than at the present time. The committee's plan was to make the best of existing property. It was opening up courts, pulling down houses so that courts previously inclosed opened up to the street, and seeing that dwellings were put in proper repair. This work was done at surprisingly small cost and he thought that the citizens should be grateful to the civic authorities for the work which they were doing. An extremely interesting report has been issued by the housing committee for the consideration of the council at its next meeting. It is based upon the evidence which has been obtained during the past 12 months from persons engaged in philanthropic work and others and is thus a very valuable contribution to the literature of a question which has recently assumed such great importance. According to this report the reasons for the existence of so many unsatisfactory houses in Birmingham are that in past times many houses were erected in such a way as to be unfit for habitation according to modern ideas of sanitation. For a number of years the corporation refrained from doing more than ordering minor repairs for fear of increasing the overcrowding in the other houses if extensive pulling down was resorted to. The history of the Birmingham improvement scheme shows that this fear was baseless, for the destruction of 478 houses at that time did not lead to the results which might have been feared. Many of the unfit houses are occupied by persons of drunken and dissolute habits; indeed, the condition of the houses is often due to the tenants themselves. On the other hand, the evidence shows that there are a large number of persons living in cheap houses who could, and would, pay a higher rent if they could get a better class of house. At the same time, there is a proportion whose circumstances will not permit of their paying more than 3s. or 4s. per week in rent, who are respectable in spite of their poverty, and who keep their houses clean and tidy. It had also been shown by the evidence collected that for some years very few houses have been built to let for less than 5s. 6d. per week. The reasons for this are that land has largely increased in value, wages in the building trade have gone up from 20 to 30 per cent. during the last 20 years, and materials have risen considerably in price. The rates are higher and the building laws are much more stringent. Moreover, the average working man requires better accommodation than he used to do. There has been a considerable exodus from the centre to the outskirts of the city, where many industries have been established of late years. The housing committee declares that it desires to do all in its power to encourage a high standard of living and the exodus above spoken of. The committee does not recommend a policy of municipal house building and gives the following as its reasons: 1. Experience shows that in spite of the fact that corporations can borrow money cheaply municipal house building is more expensive than any other. 2. Municipal houses if let at a lower rent than those around must be let at a loss. This means that one class of ratepayers is paying part of the rent of another. 3. The evidence shows that rate-aided competition in house building and letting will drive everyone else out of the field, with the result that the supply will not meet the demand and a house famine will ensue. As a matter of fact, since the council decided to hold its hand in the matter of house building schemes for the erection of flats at rentals of from 3s to 6s. 3d. per week have been started by two different persons. 4. It is urged that the community ought to provide good cheap houses for the respectable poor. But these are just the people who will not come forward for such houses: they will have to be sought for. Meantime, the applications of those who present themselves would have to be scrutinised in an inquisitorial manner impossible for a public body. And supposing such an inquiry were carried out, those just above the limit for admission to a cheap house would suffer a great injustice and would be tempted to earn lower wages, by doing less work, in order to qualify for the better and cheaper house. 5. Municipal house building is a form of rate-aided charity to the poorest inhabitants which must press heavily upon those ratepayers above that limit but who already find it difficult to make both ends meet. 6. The only effect of municipal house building, supposing it to reduce rent all over the city, would be to benefit employers of labour, since it is a well-known fact that wages follow rent. The committee recommends: 1. That every house in the city which is unfit for human habitation should be made fit as soon as possible and that the corporation should do what it can to encourage, and if necessary to compel, the landlords and tenants to keep their houses clean and in good order. 2. That congested courts should be opened to the streets, cleared of all obstructions, and the out-buildings rearranged so that a proper amount of light and air is admitted to every house that remains. 3. That open spaces should be provided in the city wherever possible for the rest and recreation of the people. 4. If, and when, the above proposals create a scarcity of good, cheap houses, then, and not till then, should the corporation contemplate a scheme of municipal house-building. 5. Some of the by-laws have been modified so as to decrease the cost of building without at the same time interfering with the sanitary condition of the houses. It should be considered whether more might not be done in this direction. 6. Miss Octavia

Hill's system of rent collecting, which has been so successful in other places, should be started without further delay in Birmingham. 7. The installation of an up-to-date and complete system of trams in the city itself and cheap through means of communication between the city and its suburbs, so that working men who have to earn their living in the city may be able to live in the country where land is cheap and the air fresh, is strongly to be insisted upon. If this policy is vigorously and prudently followed for the next few years it will, in the opinion of the committee, enable and encourage the poorer section of the community to live in more comfortable and sanitary surroundings. A copy of the evidence given by the numerous witnesses is appended to the report in question.

Medical Practitioners' Union.

The annual meeting of the Birmingham and District General Medical Practitioners' Union recently held, together with the report of the council presented at that meeting, shows that the affairs of the society are in a flourishing condition. The membership is now 281, that being an increase of 31 on the numbers for the previous year, and the treasurer's balance-sheet shows a substantial sum on the right side. The report calls attention to the fact that a code of ethics has been drawn up during the year and circulated. Of this code I have already given an account in your columns as well as of the action of the union in connexion with the notification of cases of chicken-pox.[1] A series of regulations dealing with club practice have been drawn up by the executive committee and are to be circulated amongst the branches for criticism. The union has now secured for itself a position of strength which has never previously been attained by any similar organisation in the city and is perhaps the more needed because the branch of the profession whose interests it has at heart is so singularly in the minority on the ruling bodies of the Birmingham branch and the Birmingham division of the British Medical Association. The six representatives on the branch council from the central (Birmingham) division consist of five consultants and but one general practitioner, whilst of the 15 members of the executive committee of this division 11 are consultants. Considering that general practitioners are to consultants at least as five is to one this division seems a curious one and has been much commented on.

Oct. 20th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Dangers from Sewer Gases.

THE city coroner, Mr. E A. Gibson, held an inquest on Oct. 14th as to the death of a labourer named Foley employed at some chemical works at Clayton, Manchester. He was working at the foot of a well about 14 feet deep when he was overcome by a rush of gas, was drawn up from the well in an unconscious state, and died before a medical man arrived. A witness said that Foley collapsed as he was descending the ladder and that he himself was overcome when going down to bring him up. Another man tried to reach Foley but the fumes drove him back. The medical evidence was that death was caused by asphyxiation. After Foley was drawn up one witness noticed a smell of sulphuretted hydrogen. One of the corporation river inspectors said that he had investigated the matter and after he had taken a rod from one of the six-inch drains there was a rush of greenish liquid containing sulphuretted hydrogen and carbon dioxide. He said that the liquid which went into the drain was not the result of any process of manufacture, "it was drainage from a sump heap." Such a mixture as went into the sewer would give off noxious gases. "The lesson he drew from the occurrence was that the danger could be stopped." He did not think that there was negligence but with their present knowledge the firm should be expected to make the conditions different. "The presence of the gas in the well could not have been foreseen." Dr. Fowler, chemist to the rivers department of the corporation, agreed with this evidence and said that in the course of the investigations more than 600 samples had been taken from the well and drains. The coroner said that "it was clear that there was 'carbonite' in this drain and that, coming in contact with the acid, it had created carbon dioxide gas." Whatever the chemical changes may have been a deadly gas was produced. "The jury could not come to the conclusion that there was anyone to blame so far as the use of the sewer was concerned." The verdict was "Death by misadventure." These deaths from sewer gases, occurring as they do in Manchester too frequently, are greatly to be deplored, for they ought to be guarded against. This was evidently felt by the jury, "who added a recommendation that the corporation should make use of their powers to keep noxious vapours out of the drains and sewers." They also very properly "strongly urged that where wells of this description were used proper appliances should be at hand and that ropes should always be used." These are self-evident precautions which ought not to require enforcing by a coroner's jury and something might surely be done to drive off noxious gases before the descent of workmen.

River Pollution: a Good Word for Salford.

The action of the Mersey and Irwell joint committee against the Salford corporation again came before Judge Parry on Oct. 14th. Mr. Strachan, an expert as to sewage purification, presented some time since a report of what was needed which was adopted by the Salford council, which had practically undertaken to carry out Mr. Strachan's plans. It seems that two pumps are at work and a third is to be erected within the next six months when there will be three at work each capable of pumping 14,000,000 gallons a day. At present the pumping power is inadequate. Judge Parry said his view was that the corporation had done extremely well in this matter now. "As they had put forward this scheme in what he thought a most statesmanlike spirit he supposed the joint committee would try to assist them," which was promised on behalf of the committee. An extension of time was given to the corporation till Oct. 14th, 1904.

Music Licences and Sanitation.

On Oct. 12th some of the applications for music licences were heard before the Manchester justices which had been adjourned either on sanitary grounds or because the premises were unsuitable or for other reasons. The applications were chiefly by beer-sellers and some people may be surprised to hear of the size of the rooms in which it was intended that the charms of music should intensify that of beer drinking. Licences were wanted for rooms 12 or 13 feet by 10 or 11 feet. One beer-seller said that a music licence had been attached to his house for 40 years and entertainments had been given all that time in a place 12 feet 9 inches by 10 feet 9 inches. "Paid talent" was employed, for he had a pianist and a "chairman" and a gramophone. In another case the applicant employed "a blind young lady" as pianist in a room 18 feet by 11 feet. One man wanted his licence renewed for a room like a long passage 29 feet 6 inches by 7 feet 10 inches but the magistrates would not have concerts in passages. This case was adjourned for the production of plans. In several cases the concert rooms could not be reached except through bars or private living rooms and sometimes they were so placed as to be inaccessible to police supervision or there was no retiring accommodation apart from that of the family. One can imagine the pestilential state of the air of many of these rooms crowded with the unwashed in their unwashed clothing, well filled with the smell of beer, and obscured with the fog of tobacco smoke. A considerable number of the applications were refused.

Dr. C. J. Cullingworth on Charles White.

An interesting meeting of the Manchester Medical Society was held in Owens College on Oct. 7th, Dr. A. M. Edge, the President, being in the chair. Dr. Cullingworth delivered an address upon Charles White. The address, the major portion of which appeared in THE LANCET of Oct. 17th, p. 1071, was followed with the greatest attention and interest.

Oct. 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

The Winter Medical Session in Edinburgh.

THE middle of October brings with it the end of the holiday season in Edinburgh and the medical classes have been opened by the various lecturers in the usual undemonstrative fashion. The most important change in the University is the transference of the teaching of anatomy from the veteran teacher Sir William Turner to his distinguished former pupil Professor D. J. Cunningham. In the pathological department an enlarged and greatly [illegible] has been provided by an [illegible] will remember that the [illegible] University new buildings was a very lofty one. By taking some feet off the unnecessary height of the practical class room and adding them to the space under the slates without removing the roof excellent accommodation for the bacteriological department was obtained. This has been done with Carnegie Trust money. The number of students attending this special subject has largely increased and it is said that this result is due to students availing themselves of the Carnegie funds for taking extra classes. It might be well to mention here that students may have their fees paid for extra-mural as well as for University classes, provided that they are studying for a University degree. The Carnegie Trust is also interesting itself in the extra-mural school and in the Medical College for Women. It has indicated its willingness to consider applications for [illegible] purposes and these are at [illegible] view to arrangements being [illegible] the Carnegie trustees. A further development on the part of the trust is that it has taken over the Royal Colleges laboratory on certain conditions. The building has been purchased from the Royal College of Physicians by the trust but the laboratory work is directed by a committee in which the College has the larger number of voices. Another matter of interest which coincides with the opening of the winter session is the opening of the new City Hospital for Infectious Diseases at Colinton Mains. Last week it was thrown open on one day for inspection by the members of the medical profession and on several other days to the general public.

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[1] THE LANCET, May 2nd, 1903, pp. 1270-71.

Imported Enteric Fever at Glasgow.

In THE LANCET of Sept. 19th, p. 852, reference was made to a series of cases of enteric fever which had occurred in Glasgow and which were due to the eating of shell-fish. The bacteriological examination undertaken by Dr. R. M. Buchanan, the city bacteriologist, has now been completed. He reports as follows. The circumstances attending the recent outbreak of typhoid fever amongst the holiday visitors from Glasgow and other places to one of our west coast towns in the latter part of July pointed to shell-fish as the most probable source of the infection. In each case it appeared that shell-fish had been eaten raw or partially cooked and that symptoms of typhoid fever ensued after the lapse of the usual incubation period of about a fortnight. The shell-fish were gathered by the visitors themselves from an area of foreshore constantly polluted by the sewage of the town and of two large public institutions. The shell-fish examined were collected within the sewage-polluted area and also at some distance therefrom where shell-fish are gathered for market. All the varieties of shell-fish (cockles, mussels, winkles, and "muscin") from the sewage-polluted area bore evidence in almost every specimen examined of the presence of a bacillus of excremental origin—namely, the bacillus coli, a bacillus the natural habitat of which is the intestine and the presence of which is an accepted indication of sewage contamination. Cultures of this bacillus were found to have a high degree of virulence, killing guinea-pigs within 18 hours. On the other hand, the shell-fish obtained at a distance of from one to one and a half miles from the sewer outfall were entirely free from the bacillus coli—a fact which indicates that they were beyond the range of sewage contamination and that they might be regarded as perfectly safe for edible purposes. In this fact also we have evidence that shell-fish under normal conditions do not contain this micro-organism and that its presence is therefore an invaluable indication of sewage contamination. It also affords support to those who contend for the proper supervision of oyster, cockle, and mussel beds and laying grounds with a view to their protection against pollution by sewage. It was only in the third series of specimens examined that any trace of a bacillus resembling that of typhoid fever was found and there it was very manifest and abundant. In plate cultures from three cockles collected at 200 yards and one cockle and one "muscin" collected at 600 yards below the sewer outfall it was readily detected. It was a remarkable fact that this bacillus was obtained in great numbers and almost in pure culture in one of these plates. The shell-fish which yielded this almost pure growth was a cockle found on the surface at 200 yards from the sewer outfall. Surface cockles are regarded by cockle-gatherers as "sick" and are carefully avoided by them. It is, however, just such cockles as the inexperienced would be likely to pick up and to partake of, even in the raw condition. As regards the specificity of this bacillus it was found to have all the microscopical and cultural characteristics of the typhoid bacillus. Further, it gave the characteristic typhoid reaction with human typhoid serum and with serum obtained from a guinea-pig immunised against typhoid fever. The finding of this bacillus in such numbers and in so many individual shell-fish is so exceptional that it was repeatedly subjected to trustworthy culture tests and to repeated serum tests and always with the result of proving its identity in every respect with the typhoid bacillus obtained from a case of typhoid fever. The conclusions arrived at are: (1) All the edible shell-fish within the area of sewage contamination showed by the presence of virulent bacillus coli excremental pollution and their consumption must therefore be regarded as highly prejudicial to health; (2) the shell-fish beyond the range of sewage contamination were found to be normal and perfectly safe for edible purposes; and (3) certain shell-fish (cockles and "muscins") within the area of sewage contamination showed the presence of the bacillus of typhoid fever in great number and the consumption of similarly infected shell-fish by holiday visitors in the end of July would sufficiently explain the outbreak of typhoid fever which occurred amongst them after return to their own homes in Glasgow and elsewhere.

University of Glasgow.

The opening of the winter session took place on Oct. 16th. The number of students already enrolled in the various classes is large but another week will require to pass before the work of the session is in full swing. One effect of the Carnegie Trust has been to establish a more uniform rate of fees in the different Scotch universities. Thus, in Glasgow there has been an increase in the fees of most of the medical classes. Formerly for most of them the fee was three guineas, but now it is four guineas, as in Edinburgh.

Nichol Memorial Window.

An interesting ceremony took place on Oct. 17th in the Bute Hall of the University of Glasgow where a memorial window was unveiled. This window, executed by Mr. Henry Holiday of London, was presented to the University by Mr. William Jack, LL.D., professor of mathematics, and his two sons, Dr. William R. Jack and Mr. Adolphus A. Jack, in memory of John Pringle Nichol, LL.D., the celebrated professor of astronomy, his son John Nichol, LL.D., professor of English literature, and his daughter Mrs. Jack. The window was presented to the University by Professor Jack in the names of himself and his sons. Principal Story accepted the gift on behalf of the University. Lord Kelvin and Professor John Ferguson also took part in the proceedings. Professor Jack and his sons received their friends in the Randolph Hall after the conclusion of the ceremony.

Anderson's College Medical School, Glasgow.

The winter session of this school was opened on Oct. 16th by Major Ronald Ross, C.B., F.R.S., professor of tropical medicine, University of Liverpool, who delivered an address on Medical Science and the Empire. He said that if half of the world was not to remain inaccessible to civilisation the diseases which were the scourges of the tropics would have to be overcome. That could not be done by the soldier, by the politician, or by the trader, but only by the efforts of the medical profession. In the evening Major Ross was entertained to dinner in the Council Hall at the City Chambers. On the invitation of the Lord Provost (Sir John Ure Primrose, Bart.), the chairman (ex-Bailie W. F. Anderson) and the members of the health committee a large representative company was present. Major Ross, in replying to the toast of his health, said that the way in which malaria was carried had been definitely ascertained and he would like to see a more general effort by the authorities in this country to deal with the prevention of it in a really business-like manner. Liverpool and Manchester had been actively engaged with this question for a long time and they felt assured that if Glasgow would act with them it would have a good effect. The Lord Provost, in replying to the toast of "The Corporation of the City of Glasgow," proposed by Sir Hector C. Cameron, said that he had no doubt that the corporation would be very willing to support Major Ross in his project of imperial and international coöperation for the prevention of malaria.

St. Mungo's College, Glasgow.

The winter session was opened on Oct. 15th, when an interesting address was delivered to a large gathering by Dr. David N. Knox on the History of Surgery in the Royal Infirmary.

Obituary.

Many will learn with regret of the death at Cradock, Cape Colony, of Mr. Robert Fergus Hutchison, M.B., Ch.B. Aberd., son of Mr. Thomas Hutchison, Ingleside, Cults. Dr. Hutchison had for some time been in weak health and more than a year ago he went to South Africa where he at first showed signs of recovery, only to be seized some weeks ago by a fatal illness. The deceased, who was 28 years of age, graduated in 1898. He subsequently devoted himself to bacteriological work and pursued his studies in London and Paris, returning to Aberdeen a few years later as assistant to Professor D. J. Hamilton. In the line of research which he had chosen Dr. Hutchison gave promise of attaining high distinction.

The Mitchell Family and Marischal College, Aberdeen.

The suggestion that some fitting memorial of the late Mr. C. W. Mitchell of Jesmond Towers, Newcastle-on-Tyne, should be secured for Marischal College, Aberdeen, has been received with general favour. There is already in the picture gallery of Marischal College a bust of Mr. Mitchell's father, the late Dr. Charles Mitchell, and a proposal has informally been made to the effect that a companion bust of Mr. C. W. Mitchell might also be procured for the picture gallery. The total sum which father and son gave to the University of Aberdeen was upwards of £54,000. Dr. Mitchell gave in all £33,000 towards the extension scheme, while Mr. C. W. Mitchell extinguished the debt on the University amounting to £21,171. The cheque for the final instalment of this sum was recently received from Mrs. C. W. Mitchell who is deeply interested in the extension scheme.

Rectorial Address at the University of Aberdeen.

The Right Hon. C. T. Ritchie, M.P., Lord Rector of the University, is to give his rectorial address on Oct. 29th and on the occasion of his visit is to be entertained by the Senatus.

Oct. 20th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Physicians of Ireland.

THE annual meeting of the Royal College of Physicians of Ireland was held on Oct. 19th when the officers for the ensuing year were elected. A motion expressing regret for the recent death of Sir George F. Duffey was passed in silence. Dr. L. Atthill tendered his resignation of the office of representative of the College on the General Medical Council and Sir John W. Moore was elected thereto.

The Granard Union Trouble.

At the last meeting of the board of guardians which took place at Granard on Oct. 19th a resolution was passed appointing as master the official who was recently dismissed by sealed order of the Local Government Board. A conciliatory letter was read from Dr. J. M. S. Kenny in which he again expressed "regret for the unpleasantness of the past." One of the guardians proposed that it should be thrown into the waste-paper basket. It was afterwards, however, decided to forward it to the bishop, Dr. Hoare. Major Fane, who represented the Local Government Board, said that the Board would appoint a master very soon and he warned the guardians that if it became necessary to replace them by two paid guardians it would cost the ratepayers £500 per annum.

Monkstown Hospital.

At a meeting of the committee of the Monkstown Hospital held on Oct. 15th Sir Charles B. Ball was appointed honorary consulting surgeon to the institution.

Smiley Hospital, Larne.

The Smiley Cottage Hospital, Larne, founded through the munificence of Sir H. H. Smiley, Bart., Larne, and endowed by him to the extent of £5000, is now completed and will be ready in a few weeks for the reception of patients. There are wards for male and female patients, each for six adults, and there are in addition spacious day rooms so designed that in case of emergency four additional beds may be placed in each, which will bring the total accommodation of the ground floor up to 20 beds. There is an admirably fitted-up operating room and the most up-to-date sanitary arrangements have been supplied. The hospital will be under the management of a representative consultative committee and a ladies' working committee. The medical staff will be the medical men resident in Larne and Ballyclare.

Queen's College, Belfast.

The session opened on Oct. 20th in the medical faculty. Dr. Max Freund has been appointed Professor of Modern Languages in place of Dr. A. L. Meissner, and Dr. John McLiesh has been selected to lecture on Vaccination. Great sorrow has been felt at the news of the death on Oct. 18th of Professor J. Purser who for many years was professor of mathematics and who trained three senior wranglers, Allen, Larmor (secretary of the Royal Society), and Orr. Old friends of the late Dr. Charles MacDonall will be pleased to hear that an interesting book by him, "The Origin of the Legend of the Holy Grail," edited by his widow, has just been published.

Royal Victoria Hospital, Belfast.

On Oct. 20th in the extern room of the new Royal Victoria Hospital Dr. J. Walton Browne, senior surgeon, delivered an interesting opening address before a crowded audience of students and practitioners. After welcoming the students at the beginning of a new winter session Dr. Browne gave a full and very much appreciated account of the history of the Belfast School of Medicine from its earliest beginnings up to the present time when clinical work begins in the new and beautiful hospital recently opened by the King.—At a meeting of the corporation of the hospital held on Oct. 19th a motion was passed authorising the board of management to sell or to let all or any portion of the old hospital property belonging to the corporation situated in Frederick-street and Lancaster-street, Belfast. The city corporation had the first offer of the place to use it as a temporary fever hospital until the new city hospital was ready but it declined. The income derived from the old hospital is to go to the support of the Shaftesbury Ward in recognition of the generous treatment which had always been received from the Donegal family.

Death of Dr. William Dobbin.

Dr. William Dobbin of Banbridge, co. Down, died recently in Belfast, in his sixty-first year. For some months past he had had symptoms of intestinal obstruction and on Oct. 16th Professor Thomas Sinclair resected a portion of the colon, but the patient's strength failed and he died on the night of Oct. 17th. Dr. Dobbin was the eldest son of a Presbyterian clergyman, the Rev. W. Dobbin of Annaglone, co. Down. He studied at Queen's College, Belfast, where he had a very distinguished career. In 1867 he graduated as M.D. in the Queen's University and in 1886 he became a Fellow of the Royal College of Surgeons in Ireland. He practised in Banbridge, where he was medical officer of the dispensary district and here he gathered round him a large *clientèle* who greatly esteemed and valued him for his professional knowledge. He leaves a widow, one daughter, and two sons, one of the latter being a member of the North-east Bar and the other an M.D. of Edinburgh University.

Oct. 20th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Cerebro-spinal Fluid of Patients in the Secondary Stage of Syphilis.

AT the meeting of the Hospitals Medical Society which was held on Oct. 9th M. Ravaut communicated in his own name and in that of M. Thibierge some statistics based upon the cytological examination of the cerebro-spinal fluid in 118 patients suffering from the secondary stage of syphilis; 54 of these patients had either no obvious secondary symptoms or only showed roseola and mucous or cutaneous plaques. Seven of these only gave a definite lymphocyte reaction, whereas out of 55 patients who showed pigmentary syphilides, papular syphilides, or syphilitic psoriasis, 41 showed a definite lymphocyte reaction, in some cases very marked. Two patients suffering from syphilitic alopecia and two other patients in which facial paralysis had supervened during the secondary period showed marked lymphocytosis Of five patients suffering from syphilitic iritis one only showed lymphocytosis In all the patients who showed the cellular reaction the quantity of albumin which only exists in very small quantity in normal cerebro spinal fluid, was much increased It would seem, therefore, that these facts prove that in patients affected with secondary syphilis there exist together with certain cutaneous reactions nervous reactions which are to be diagnosed by an examination of the cerebro spinal fluid and these nervous reactions would appear to develop on parallel lines with those of the skin The reactions should be regarded as one of the many manifestations of syphilis and when present would appear to show that the treatment should be very thorough

A Scheme for a Hospital for Infectious Diseases

Among the new buildings included in the great plans which have been taken in hand by the Assistance Publique and which have been approved by the Prefect of the Seine and by the Municipal Council is a hospital for infectious diseases which it is intended to build at Ivry sur Seine, in the district of Vitry, a building which is intended to replace a very poor hospital at present in existence at La Porte de Flandre Here it is intended to treat patients suffering from typhoid fever, from small pox, from diphtheria, and should occasion arise those afflicted with plague or cholera The prospect, however, has no charms for the inhabitants of the neighbouring quarter of Paris—namely, that of the Port-à-l'Anglais in the division of Vitry They have protested for some long time but the Assistance Publique has taken no heed This body promises to isolate the building in an absolutely satisfactory fashion, but the promise has not assured those interested in the matter and they have sent a petition to the Prefect of the Seine begging him to ask the administration of the Assistance Publique to give up the idea of building a hospital for infectious diseases at a distance of only 250 metres from the communal school at Port à l Anglais which educates no less than 900 pupils The Assistance Publique, however, declares that the fears of the inhabitants of Ivry are groundless and the best proof which is brought forward of the harmlessness of the proposed hospital is the fact that it will be situated almost alongside a large almshouse where there are some 2500 aged persons for whom nobody seems to have any fear

French Congresses

The sixteenth Congress of the French Association of Surgery was opened at Paris on Oct 19th in the large theatre of the Paris Faculty of Medicine The seventh congress of the French Association of Urology will be opened at Paris on Oct 22nd in the Faculty of Medicine

A New Method of Suicide

A nurse at one of the hospitals has just tried a new way of committing suicide—namely, by swallowing two tubes of Eberth's pure culture of the typhoid bacillus On the following day and the day after that she felt no inconvenience On the third day she had some headache but no fever On the sixth day she felt heavy and stupid and experienced great weakness in her legs, being obliged to take to her bed On the seventh day her temperature was in the morning 37 6° C and in the evening 38 6° C On the eighth day she had two attacks of epistaxis and her temperature in the evening was 40 2° C Several rose spots were also visible On the tenth day serum reaction was positive Otherwise the typhoid fever followed its normal course but it was a very severe attack and the patient had in all 176 baths The remarkable points of this case are the very short duration of the period of incubation—namely, only two days—and the rapid appearance of the rose spots, eight days after infection The physicians who reported the case—viz , M Duflocq and M Voisin—explained the very short duration of the incubation period by the large quantity of bacilli which were introduced at one time into the digestive tract

Oct 21st

BERLIN.

(FROM OUR OWN CORRESPONDENT)

Professor Behring on Tuberculosis

THE most remarkable feature of the recent Congress of German Naturalists and Medical Men was the address on tuberculosis delivered by Professor Behring He commenced by remarking that tuberculosis was an extremely common and widespread disease A series of necropsies made by Professor Naegeli at the Pathological Institute of Zurich showed that in every instance signs of tuberculosis were present in persons over 30 years of age, in 96 per cent of those from 18 to 30 years, in 50 per cent of those from 14 to 18 years, in 33 per cent of those from five to 14 years, and in 17 per cent of those from one to five years Similar results were obtained in living persons by Dr Franz, an Austrian army medical officer, who found that 68 per cent of the men of an Austrian regiment reacted positively to the tuberculin test It had been said that everybody was somewhat tuberculous, and this was true, but tuberculous infection did not always mean pulmonary phthisis To produce phthisis two factors were necessary—namely, (1) a *tuberculous focus and (2) bodily conditions which favoured* the development of tuberculosis Professor Behring was of opinion that communication of pulmonary tuberculosis to adults by contagion had not yet been demonstrated In the cases of butchers laboratory servants, and others who contracted cutaneous tuberculosis it had never been proved that pulmonary tuberculosis had ensued The speaker then alluded to the statistics concerning nurses, prisoners, and other classes of the community which were especially liable to develop phthisis It was, according to him, not their free exposure to infection but the conditions of their life which predisposed them to phthisis, the process being in reality the conversion of a latent focus of disease into an active one Medical men engaged in laryngological practice were exposed to continual risks of infection but nevertheless tuberculosis was not frequent among them because of the absence of other prejudicial influences, such as insufficiency of food The fundamental theory of Professor Behring is that tuberculosis nearly always begins at the earliest period of life and that the germs are communicated to children *by milk. He said that his views might at first sight appear* rather peculiar, for if infants were not suckled by the mother the milk on which they were fed when brought up by hand was boiled or even sterilised Adults, on the contrary, usually drank milk without previously boiling it or taking any other precaution The cause of the liability of infants to become infected was not the contamination of the milk alone but in a great degree the condition of their gastro intestinal canal which by reason of its great permeability was not capable of protecting their systems against the invasion of germs Dr Romer, Professor Behring's assistant, found that in newly born animals albuminates penetrated through the mucosa into the circulation quite unaltered, just as if they had been directly introduced into the blood , in the intestines of adult animals, on the contrary, the albuminates were transformed into soluble peptonates previously to being absorbed Attenuated cultures of anthrax bacilli given with their food to newly born guinea pigs appeared afterwards in the blood Cultures of tubercle bacilli administered in the food always pro*duced tuberculosis of the glands in newly born and very* young animals , with older animals, on the other hand, this occurred only sometimes and not unless very virulent cultures in great quantities had been taken Although the virus was ingested and infection communicated at a very early age, many years might pass before the disease became recognisable by the tuberculin test Under prejudicial influences, *such as exhausting illness, chills, bad* food, unwholesome dwellings and the like the tuberculous infection might then develop into pulmonary phthisis From this point of view Professor Behring spoke favourably of the hygienic and dietetic treatment of pulmonary phthisis His principal object, however, was to discover a method which, like Jenner's vaccination against small pox, would act against tuberculosis and would eventually render sanatoriums and other therapeutic measures unnecessary Speaking of the tuberculosis of cattle he stated that this disease was more prevalent in these animals than was generally believed ; the presence or absence of latent tuberculosis could be ascertained by the tuberculin test with absolute certainty He then alluded to the method devised by him which enabled cattle to be immunised by injections of an antitoxic sub-

preserving these immunising substances so that they might be sent abroad without losing their efficacy Concerning human tuberculosis Professor Behring stated that his researches were not yet finished , he said that for the prophylaxis of tuberculosis in human beings two ways were open—namely, either isopathic immunisation or treatment by antitoxins. He thought that isopathic immunisation might be accomplished in the human species by the inoculation of a relatively attenuated virus of tuberculosis; the antitoxin used for cattle was, however, not fit for that purpose, and even if an immunising substance had been already obtained in that way he would hesitate to inoculate children with it. Among calves treated by the injection of attenuated cultures of bacteria one in 500 might die in consequence of the inoculation and in the human subject it would be obviously impossible for such a responsibility to be accepted deliberately. It was conceivable, however, that the isotherapeutic protective immunisation might become available for children if his experiments succeeded so far as to allow the administration of the attenuated virus of tuberculosis together with food by feeding infants on the milk of immunised cows. As his researches were not yet finished he was unable to supply a remedy against tuberculosis. In conclusion Professor Behring criticised the theories of Professor Koch on the non-identity of human tuberculosis and perlsucht. From the fact that bacilli of human tuberculosis did not produce perlsucht in cattle Professor Koch has concluded that the two species are not identical: this, however, was erroneous. Jennerian vaccine did not produce variola in the human subject, nevertheless no one believed that the virus of vaccine and that of variola were different. Professor Koch, moreover, relied on the fact that infants very seldom contracted intestinal tuberculosis; this argument has, however, now been refuted by his (Professor Behring's) researches on the permeability of the infant's intestinal mucosa. Professor Behring was therefore strongly opposed to any relaxation of the milk control in the manner suggested by Professor Koch. Finally, he said that although some of Professor Koch's views might require to be reconsidered he must ever be regarded as one of the most eminent investigators in connexion with tuberculosis.

Oct. 20th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

Swiss Balneological Society.

THE annual meeting of the Swiss Balneological Society took place on Oct. 4th at the picturesque little town of Rheinfelden, celebrated for its saline baths. The salt beds above which Rheinfelden is situated are 114 metres (380 feet) deep and were discovered in 1844. A number of hotels now provide for the accommodation of the thousands of health-seekers who annually frequent the place in search of relief from manifold ailments, such as chlorosis, amenorrhœa, metritis, disease of the uterine adnexa, scrofula, rheumatic and gouty affections, chronic heart disease, and the various neuroses.—Dr. Keller of Rheinfelden, well known in the scientific world by his various treatises on the physiological and clinical effects of saline baths, spoke on the geological conformation of Rheinfelden and its surroundings. The saline water (Soole) was, he said, the strongest in Europe, containing 311·6 parts of chloride of sodium in 1000 parts of fluid, so that the saline constituent formed 31 per cent. (Sea water contains from 3 to 4 per cent. of chloride of sodium.) The strongest saline baths on the continent, well known as spas, were Inowrazlaw, in Germany (30 per cent.); Bex, in Switzerland (27·5 per cent.); Hall, in the Tyrol (25 5 per cent.); Ischl, in Austria (23·6 per cent.); Salies de Béarn, in France (21·6 per cent.); and Kreuznach, in the Rhine province (16·4 per cent.).—Dr. Theodore Zangger of Zürich spoke on the various indications for the use of weak and strong saline baths. He distinguished normal baths (up to 3 per cent. strength corresponding to sea water), stronger baths (up to 6 per cent.), and very concentrated ones of 8, 10, 12, 25, and even 31 per cent. As the Rheinfelden and Bex saline waters were used for bathing purposes all over Switzerland and were prescribed most extensively both for home use and in bathing establishments it was very desirable that they should be of the proper strength and carefully supervised. Individual treatment was indispensable. Of late the higher strengths were much in vogue but they had to be prescribed with care. The effects of 3 and 6 per cent. saline baths differed greatly, as, in fact, Dr. Keller had demonstrated many years ago by physiological experiments. The former increased diuresis by from 10 to 23 per cent. and the excretion of chlorides by from 31 to 42 per cent.; the latter reduced diuresis by 2·7 per cent. and caused only a small increase of the excreted chlorides (6 per cent). Such variations should receive clinical investigation. Strong saline solutions unquestionably had not only their indications but also their contra-indications and the latter deserved to be carefully studied. They were best prescribed at spas, where the patient had from four to six weeks' complete rest for a proper course of treatment.—Dr. Keller, in his reply, said that it was impossible to give distinct outlines of the indications with regard to strong saline baths. Some patients, especially those with long-standing bone affections, with metritis and myomatous tumours, derived the greatest benefit from them, such as could not be obtained from weak saline baths. Thus other saline spas on the continent (Reichenhall, Ischl, and Inowrazlaw) were introducing stronger baths and following the example which the French spas, especially Salies de Béarn in the Pyrenees, had given for many years.—After the meeting the members inspected the various buildings in connexion with the saline baths of Rheinfelden and assembled at the Grand Hotel for the annual dinner. In 1904 the annual meeting will take place in September at Lugano and Dr. Reali of Lugano has been elected president.

Zürich, Oct. 19th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Canadian Medical Association.

THE thirty-sixth annual meeting of the Canadian Medical Association was held at London, Ontario, on August 25th, 26th, 27th, and 28th, under the presidency of Dr. Walter H. Moorhouse of that city, who is dean of the medical department of the Western University. It proved to be the second largest meeting in the history of the organisation, being only eclipsed by that of last year which was held at Montreal. Dr. James Newell (Watford, Ontario) read a paper on the Surgical Treatment of Hallux Valgus and Bunions. Dr. R. Ferguson (London, Ontario) presented an interesting specimen of an Incompletely Developed Uterus and Appendages removed from the sac of an inguinal hernia. The patient was 32 years of age and was married but had never menstruated. The external genitals and mammary glands were normally developed but the vagina was a mere cul-de-sac without trace of cervix or os. Every four or six weeks the patient had been subject to violent headaches which drove her to the point of distraction. Four and a half months had elapsed since the operation and she had been absolutely free from the attacks of headache. This finished the forenoon session of the first day. In the afternoon the meeting assembled in surgical and medical sections. In the former section Dr. A. B. Atherton (Fredericton, New Brunswick) was appointed chairman and in the latter Dr. R. W. Bruce-Smith (Brockville, Ontario). In the medical section the first question taken up and discussed was the Treatment of Typhoid Fever, which was opened by Dr. W. P. Caven (Toronto). In the opinion of Dr. Caven the conditions calling for active treatment are tympanites and hæmorrhage. For the former he recommended turpentine and asafœtida and for the latter morphine. There should be routine sponging in every case, tepid where the temperature was below 102° F. but above that degree cold sponging should be carried out. Dr. John Herald (Kingston, Ontario) continued the discussion, stating that he would not employ internal medication in ordinary cases. In hæmorrhage he considered the ice-bag to be as useful as morphine. Dr. H. A. McCallum (London, Ontario) lauded strychnine throughout the attack as the most important agent in the treatment of this disease. Dr. J. T. Duncan (Toronto) next read a paper on the Size of the Pupils as an Aid to Diagnosis. Dr. Hornibrook (Cherokee, Iowa, U.S.A.) read a paper discussing the most recent phases of Auto-intoxication. The paper which excited the keenest interest in this section was that by Dr. Jennie Drennan (St. Thomas, Ontario) on the Physiological Generative Cycle in Woman. She stated that evolution was incident to all forms of life. The factors in every phase of life were adaptation to environment and heredity. Structure was determined by function and function was the product of environment. The function of the female mammal was ovulation, pregnancy, and gestation. This cycle had become interrupted by ovulation and menstruation as the result of adaptation to a pernicious environment. The remedy to effect the restoration of the natural cycle would in time be improved environment. In the surgical section Dr. Hadley Williams (London, Ontario) reported on, and exhibited, a very interesting case of Gunshot Injury of the Shaft of the Humerus with destruction of two inches of the musculo-spiral nerve. Four months after the accident the case was brought to him at which time non-union and complete paralysis were present. The nerve and two inches of bone were dissected out and the nerve ends were brought together by through-and-through silk sutures. There was neither union of bone nor relief of the paralysis as a result of this operation. Four months after the first operation he performed a second in which the ends of the bone were maintained in apposition by means of a silver plate secured to the shaft as a splint by four silver screws. In six weeks the bone had united and in nine months from the suture of the nerve ends the paralysis had disappeared and recovery was complete. The treatment of the case was original and the essential details were pointed out as being firm apposition of the fragments by means of the plate and screws and the avoidance of tension on the nerve ends. By placing muscle between the bone and nerve involvement in the callus was avoided. Dr. Henry Howitt (Guelph, Ontario) then reported two cases of Hour-glass Contraction of the Stomach; one was complicated by an ulcer on the posterior wall of the stomach and the other by cancer. Both cases were much relieved by operation. Dr. R. P. Robinson (Ottawa) reported two cases of operation for Morbus Coxæ resulting in cure without shortening, although both cases had reached the abscess stage. Dr. Robinson does not allow his patients to walk for six months. Dr. J. A. Hutchison (Montreal) reported five cases operated on for Typhoid Perforation. The fifth only was successful. The rate of recoveries with operation was now 20 per cent.

A general session was held on the evening of the first day at which Dr. Moorhouse delivered the annual presidential address. He touched upon the importance and advantage of attending meetings like those of the Canadian Medical Association which year by year was becoming of great influence in the medical life of the Dominion of Canada. Charlatanism should be resisted with a steady and constant hand. Dominion registration was something to be desired and he hoped that Quebec would come to its senses and not further frustrate the labours of Dr. Roddick. Following the able deliverance of the President, Dr G. M. Gould (Philadelphia—the editor of *American Medicine*) read an important paper on the Rôle of Eye-strain in Civilisation and Medicine. A lantern lecture on the Open-air Treatment of Consumption was then conducted by Dr. J. H. Elliott, medical superintendent of the Gravenhurst Sanatorium. Following this Dr. E. J. Barrick (Toronto) read a paper advocating the establishment of municipal sanatoriums, the outcome of which was a resolution urging the Government to enact legislation providing for municipal sanatoriums for consumptives.

On the forenoon of the second day, before assembling at the convention hall, clinics were held and operations were performed at the two general hospitals of London. Much regret was expressed at the absence of Dr. Matthew D. Mann (Buffalo, U.S.A.) who was to deliver the address in Gynæcology at the commencement of the morning session. In the medical section Dr. Sprague (Stirling, Ontario) gave a character sketch of the Country Doctor in Canada, and being somewhat of a cartoonist he was able to make the paper a very interesting one. Dr. George F. Butler (medical superintendent of the Alma Springs Sanatorium, Alma, Michigan, U.S.A.) read a very important and able paper on the Inter-Relations of Diabetes and other Constitutional Diseases, a paper which was highly commended by Sir J ve (Toronto), and Dr. he surgical section Dr. T .) read a paper entitled al Anastomosis." In his procedure he draws the gangrenous coil out of the abdomen far enough to permit him to unite the two limbs of the bowel at a point where they seem healthy by means of a rubber ligature. All of that part which is liable to slough is then fastened outside the abdomen and the wound is closed around it. The immediate result is a false anus and in two or three days a new channel has been cut by the rubber ligature and the false anus becomes unnecessary. It may then in time close spontaneously or be closed by the simple operation of inverting and suturing the ends. The advantages over other methods are thus described by Dr. McGraw: simplicity and quickness of application; its aseptic quality, for the rubber fills the opening through which it passes so completely that no extravasation is possible; the delay in opening the passage until the intestines have become well glued together; and the ability to make with it a communication of any desired length. An interesting case of Thrombosis of the Femoral Vein following Laparotomy was then reported by Dr. E. R. Secord (Brantford, Ontario). The thrombosis occurred two weeks after an aseptic operation for double inguinal hernia in which the wounds healed by first intention. The thrombosis was on the left side, where a truss had been worn for 12 years. The address in Surgery was delivered by Dr. Alexander Hugh Ferguson (Chicago) and the address in Medicine by Dr. McCallum. The former took for his subject the Surgery of To-day and the latter read a very able address on the Influence of the Lymph Circulation. In the medical section on the afternoon of the second day Dr. E. G. Wood (Nashville, Tennessee), professor of medicine in the University of Tennessee, read a carefully prepared paper on the Cardiac Affections in Influenza. This excited a good deal of discussion. Other papers contributed were one by Dr. Alexander McPhedran (Toronto) on Amyotrophic Lateral Sclerosis and one by Dr. A. L. Benedict (Buffalo, New York). Dr. Adam Wright (Toronto) read a practical paper on Concealed Accidental Hæmorrhage. Various excursions and a banquet concluded the day's work.

At the business meeting of the morning session of the fourth day the following officers were elected: President, Dr. S. J. Tunstall (Vancouver, British Columbia); treasurer, Dr. H. B. Small (Ottawa); and general secretary, Dr. George Elliott (Toronto). Vancouver was selected as the place of meeting in 1905. A committee was appointed to invite the British Medical Association to meet in Toronto in 1905.

Oct. 10th.

Medical News.

UNIVERSITY OF CAMBRIDGE.—The following medical degrees were conferred on Oct. 15th:—

Bachelor of Medicine.—J. G. Cooper, Trinity.
Bachelor of Medicine and Bachelor of Surgery.—W. F. L. Day and A. O. M. Fehrsen, Gonville and Caius; and F. P. Edwards, Downing.

The First, Second, and Third (Part I.) M.B. examinations will begin this year on Dec. 14th; the Third (Part II.) M.B. and the M.C. examinations will begin on Dec. 8th.—Professor Howard Marsh has begun his lectures on the Principles of Surgery in the new medical school, the buildings of which are nearing completion.

UNIVERSITY OF EDINBURGH.—At the special graduation ceremonial held in the M'Ewan Hall on Oct. 17th the following degrees and certificate were conferred:—

Doctor of Medicine.—*Edmund Thurlow Potts, England, M.B., Ch.B., 1901.
Bachelor of Medicine and Master in Surgery.—Frederic Russell
or of Surgery.—Roland Thomas
George Augustus Davie
Zealand, †Auckland Ca
Godfrey, India; William Denby Sainter Harrison, England; John Ockert Heyns, Cape Colony
Muhammad Inayat Ali K
Twigge, England; John A
David Charles Welsh, Scotland.
Bachelor of Science.—James Andrew Gunn, M.A.; and in the department of agriculture, Thomas Foster Main and George Clay Muirhead.
Special University Certificate in Diseases of Tropical Climates.—Roland Thomas Graves Aickin, M.B., Ch.B.; Farhat Ali, B.A.,

M B., Ch B.; John Allan, M.B., Ch.B.; Marcus Armly Ash-Kenny, M B., Ch.B.; Muhammad Inayat Ali Khan, M.B., Ch.B.; Charles Edward Marshall, M.B., Ch.B.; and Thomas Theodore Thomson, M.B., Ch.B.

* Commended for thesis.

† Passed the examinations with second-class honours.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bologna:* Dr. Giovanni Vitali of Modena has been recognised as *privat-docent* of Internal Medicine.—*Copenhagen:* Dr. Alexander Vincent has been recognised as *privat-docent* of Physiology and Dr. Axel Blad as *privat docent* of Internal Medicine.—*Freiburg;* Dr. Richard Link has been recognised as *privat-docent* of Internal Medicine, Dr. Karl von Eicken as *privat-docent* of Laryngology, and Dr. W. Herrenknecht as *privat-docent* of Odontology.—*Halle:* the title of Professor has been granted to Dr. A. Tschermak, *privat-docent* of Physiology, and to Dr. Ernst Vahlen, *privat-docent* of Pharmacology.—*Kazan:* Dr. V. Bormann has been recognised as *privat-docent* of External Pathology.—*Königsberg:* Dr. R. Beneke of Göttingen has been appointed to the chair of Pathological Anatomy vacant by the resignation of Dr. Neumann.—*Moscow:* Dr. Talientseff has been appointed Extraordinary Professor of General Pathology.—*Naples:* Dr. Antonio Anile and Dr. Vastarini-Cresci have been recognised as *privat-docenten* of Anatomy, Dr. F. Scotti as *privat-docent* of Internal Pathology, Dr. F. Jacobelli and Dr. L. Rizzo as *privat docenten* of External Pathology, Dr. A. Plantieri as *privat-docent* of Operative Medicine, Dr. L. Mosca as *privat-docent* of Dermatology, and Dr. D. Durante as *privat-docent* of Pædiatry.—*Pavia:* Dr. Tansini of Palermo has been appointed Professor of Clinical Surgery in succession to the late Dr. Bottini.—*Prague* (*German University*): Dr. Fischl, *privat docent* of Anatomy, has been promoted to an Extraordinary Professorship; Dr. Walko has been recognised as *privat-docent* of Internal Medicine.—*Rome:* Dr. Mattoli has been recognised as *privat docent* of Surgical Anatomy and of Operative Medicine.—*Vienna:* Dr. Rudolf Schmidt has been recognised as *privat docent* of Internal Medicine, Dr. Heinrich von Halben as *privat-docent* of Neurology and Psychiatry, Dr. Alexander as *privat docent* of Otology, and Dr. Pupovac as *privat-docent* of Surgery.

NEW CREMATORIUM FOR THE CITY OF LONDON.—Mr. R. W. Edwards, chairman of the sanitary committee of the Corporation of London, laid the foundation-stone of the new crematorium at Ilford Cemetery, acting for the City of London Burial Board. The ceremony took place on Oct. 14th. The new crematorium is being built in a secluded part of the cemetery. The design is Gothic in style and is intended to harmonise with the existing chapels in its vicinity. The plans provide for a hall 27 feet in length by 24 feet in width for the mourners to assemble in, with a waiting room 13 feet by 13 feet adjacent and leading out of the hall. The catafalque upon which the coffins will rest will be placed in the centre of the hall and an ante-chamber is provided for the attendants between the hall and cremating chamber. The cremating chamber is at the rear of the hall and will be of sufficient size to admit of two cremating furnaces being erected with an arrangement for the bodies being placed in either furnace by means of a traverse. At the present time it is intended to erect only one furnace, the flue for which will be carried up in the centre of an ornamental tower about 80 feet in height. A small auxiliary furnace will be placed at the base of the tower for the more perfect combustion of the gases arising from the cremating furnace and a staircase is provided for access to the summit. There is to be a basement under the cremating chamber from which the furnace will be attended to, also stores for fuel, the entrance to the same being at the rear of the structure. The cost of the work, including the furnace, will be about £7000. Mr. Edwards in the course of his remarks said that the Corporation of London was now leading the way in the special direction of sanitary science, the crematorium being the first in course of erection within any cemetery of the United Kingdom and the first in course of construction by any corporation or municipal body within the vast metropolis of London. When Sir Henry Thompson in the year 1874 introduced in this country the question of the disposal of our revered dead by means of cremation, perhaps it would not be too much to say that the idea was regarded with antipathy and met with a shudder. The late Commissioners of Sewers of the City of London had the question of providing a crematorium brought before them by one of their members in the year 1891 and although meeting with some opposition it was referred to a committee to consider and to report. The committee reported that the commissioners had no power in the suggested direction. Later in the year 1894 the question was again raised on a motion to promote a Bill in Parliament to obtain the necessary powers. This although agreed to at the time was afterwards rescinded. The subject, however, was not lost sight of and on the promotion of a Various Powers Bill in the year 1900 a clause was inserted giving the corporation the necessary powers to erect a crematorium on this spot. The sanitary committee was not slow in moving the exercise of the power obtained and by an order of the Court of Common Council of Jan. 17th, 1901, it was referred to the committee to consider and to report as to the erection of a crematorium in this cemetery under the powers conferred by the Act of 1900, with instructions to submit plans and estimates for the proposed buildings. Later authority was given to the committee to inspect various crematoriums and a subcommittee visited the crematoriums at Hull, Manchester, and Liverpool, and also the crematorium of the Cremation Society of England at Woking. Plans were prepared and ultimately the Court of Common Council sanctioned those now in process of execution.

THE GUILD OF ST. LUKE.—The annual festival service of the Guild of St. Luke was held at St. Paul's Cathedral on Wednesday evening, Oct. 21st. A very large number of the medical profession attended in their robes and were seated under the dome. The musical portion of the service was beautifully rendered by the special choir of the London Church Choir Association under the able conductorship of Dr. Walford Davies. The Magnificat and Nunc Dimittis were Walmisley in "D" minor and the anthem was Brahm's "How lovely is Thy dwelling-place." The service was intoned by Minor Canon Morgan Brown and the lessons, which were taken from the 38th chapter of Ecclesiasticus and the 10th chapter of the Gospel according to St. Luke, were read by the Rev. W. H. H. Jervois, vicar of St. Mary Magdalene, Munster-square, N.W. An eloquent sermon was preached by the Rev. Prebendary Montague Villiers from Job xxxii., verse 8, the preacher addressing himself principally to the problems which continually confront the members of the clerical and medical professions alike and which would be insoluble were it not for the incarnation of Jesus Christ.

ST. GEORGE'S HOSPITAL.—The Rev. Dr. Warre, headmaster of Eton College, distributed the prizes to the successful students of the St. George's Hospital Medical School on Oct. 15th in the board-room of the hospital. Afterwards he gave an address to those present, in which he referred to the system of examinations. He said he was discontented with things as they were and was liable to make others discontented. Yet he saw no remedy, nor was he able to propose anything which would mitigate the evils of the present system and would at the same time satisfy the public conscience as a method of testing competency or judging merit. Before long, however, the question must demand serious consideration upon a wide platform. He would therefore turn their attention at the present time to the subject of sympathy and its value as a personal influence in the noble profession to which their lives and their energies would be devoted. The mere feeling of emotion at the sight of suffering did not give sympathy any right to rank as a virtue. Such feelings had to be schooled and disciplined if the public were to be supplied with physicians and surgeons capable of fulfilling the duties of their calling. It was no part of sound training to repress these feelings altogether or to sear and to harden the heart so that it became incapable of feeling them. True sympathy was not limited to passive impressions which diminished as active habits increased, nor was it purely emotional, but it was something wider and higher and far more richly endowed with power for good than those passive impressions which were the characteristics of its embryonic stage. In the great treasury of professional success there were many chambers, each of which had its own lock and its own key. Knowledge and skill, patience and accuracy, each of these opened a door and each brought its own reward to successful labour. But the innermost chamber of all could only be unlocked and entered by those who through self-discipline had gained the golden master-key of true sympathy. As to the acquisition of this gift and grace of true sympathy he thought it was not possible of attainment by those whose training left them callous to another's pain and whose aspirations were merely selfish. It might be that hospital practice was not altogether favourable to the acquisition of a sympathetic habit of mind, but that was only all the more reason for students to stir up that gift within them in moments of reflection. In private practice a medical man saw all sorts and conditions of men and he would find the need of that sympathy which self-discipline alone could impart. The key to the knowledge of man was true sympathy and to be able to enter into the feelings of another was the first step towards being able to interpret them and in the right interpretation very often lay the secret of relief. He therefore claimed a place for real sympathy in their equipment as medical men.

LITERARY INTELLIGENCE.—Dr. Gerald Leighton (editor of the *Field Naturalist's Quarterly*) has finished his book on "British Lizards" which will be published immediately by Mr. G. Morton, Edinburgh. The work is a companion volume to the author's "British Serpents" which was published two years ago. It is to be copiously illustrated by reproductions of photographs of living lizards taken by Mr. Douglas English.—The August number of the *Maryland Medical Journal* states that Mr. and Mrs. Harold McCormick have endowed a new medical journal to be known as the *Journal of Infectious Diseases.* Its editors will be Professor Ludvig Hektoen and Professor E. O. Jordan of the University of Chicago. The value of the endowment is $125,000.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—Mr. James Rowlands Essex, M.R.C.S. Eng., J.P., of Pontypool, Monmouthshire, was on Oct. 10th presented with an illuminated address by the workmen of the Glyn collieries as a mark of respect and esteem on the occasion of his retirement from practice.—The members of the Druids Friendly Society at Wiveliscombe, Somerset, have presented to Mr. J. Wyatt Pratt, M.R.C.S. Eng., L R C P. Edin., L.S A., who has been lodge surgeon for the past 26 years and is now retiring from practice owing to ill-health, an ormolu-gilt clock and vases and an illuminated address as a mark of their respect and esteem. Miss Pratt was presented with a pair of silver flower vases.

DEATH OF MR. LEWIS A. TALLERMAN.—The death is announced as having taken place suddenly on Saturday last, whilst entertaining some friends at dinner at the Langham Hotel, London, of Mr. Tallerman whose name is well known in connexion with the localised application of superheated dry air. Whether or not Mr. Tallerman was, as he claimed to be, the inventor of the system, which was introduced to the profession in a clinical lecture delivered at St Bartholomew's Hospital on May 23rd, 1894, by Mr. A. Willett, F.R C S. Eng., and thereafter used in that and many other hospitals, he without doubt spent a large sum of money in making known the treatment which bears his name and he was very severe on any similar treatment which he conceived to be an imitation or adaptation of his own. Mr. Tallerman, who amassed a considerable fortune in Australia in commercial pursuits, although of an excitable disposition at times, had withal a genial nature and opened several institutes in different parts of the country for [illegible] the necessitous poor by his [illegible] of 58 years and was buried on [illegible]

THE METROPOLITAN ASYLUMS BOARD AND ALLEGED PREMATURE DISCHARGE OF A SCARLET FEVER PATIENT.—At a meeting of the Metropolitan Asylums Board on Oct. 17th the hospitals committee reported that it had had before it a letter of complaint from the father of a patient at the Grove Hospital named Arthur Wright alleging premature discharge and consequent spread of scarlet fever among other members of his family and claiming compensation. After considering the medical investigator's report upon the case an approved reply was sent to Mr. Wright stating that a close examination into all [illegible] ence of that class or the medical investigator to account for the illness which followed his discharge and pointing out that the rule of the Board was for no patient to be discharged until the medical superintendent of the hospital was of opinion that the patient might leave the hospital without risk of conveying infection or contagion and it was not until that opinion had been formed that his son was discharged. A writ had, however, been served on the Board's solicitors at the suit of the father of the patient claiming damages for negligence. The committee recommended that the Board's solicitors be instructed to take all necessary steps for defending the action. The recommendation was agreed to and the action of the committee was approved.

Dr. Dawson F. D. Turner has been awarded a Keith prize by the Royal Scottish Society of Arts for papers upon improved Roentgen apparatus and other electrical matters.

THE LORD MAYOR AND THE PRESS.—On Saturday evening, Oct. 17th, the Lord Mayor and the Lady Mayoress gave a banquet at the Mansion House "to meet the President of the Institute of Journalists and representatives of the London Press." A large company was present and some interesting speeches were delivered by the Lord Mayor, Mr. Anthony Hope Hawkins, Mr. A. W. Pinero, Mr. Augustin Birrell, K.C., and others.

DONATIONS AND BEQUESTS.—Mrs. Alicia Isabella Hamilton O'Hara of Kingstown, Dublin, has under her will bequeathed £300 to the Eye and Ear Hospital at Dublin.—By the will of Mr Henry Worton Elliott of Birmingham £100 are left to the General Hospital, the General Dispensary, the Queen's Hospital, and the Hospital for Sick Children, Birmingham, respectively.—An anonymous donor has contributed £1000 towards the funds of University College, Bristol.

THE UNIVERSITY OF LONDON.—The first meeting of the Faculty of Medicine in the session 1903-04 will be held at the University, South Kensington, S.W., at 5 o'clock P.M. on Friday, Oct. 30th. The chief items of business are (1) the consideration of communications from various interested bodies with reference to a proposal to establish a degree in veterinary science and (2) the consideration of recommendations to be made to the Senate with reference to the constitution for 1904 of the boards of studies with which the Faculty is concerned.

MEDICO-LEGAL SOCIETY.—A meeting of this society was held on Oct. 13th. The following were elected as officers for the ensuing year. President: Sir William J. Collins. Vice Presidents: Mr. C. H. Hopwood, Mr. A. J. Pepper, Dr. A. Bostock Hill, and Dr. M Hay. Council: Dr. Garson, Dr. C. O. Hawthorne, Dr. T. N. Kelynack, Dr. Harvey Littlejohn, Dr. George Danford Thomas, Dr. F. J. Smith, Dr. W. McCallin, Dr. F. J. Wethered, and Dr. W. Wynn Westcott. Treasurer: Mr. John Troutbeck. Secretary: Mr. R. Henslowe-Wellington, assisted by Mr. S. B. Atkinson.

SOCIETY OF ANÆSTHETISTS.—The annual dinner *of this society was held at the Café Munico on Oct. 16th.*—Mr. C. Carter Braine, the President, received 52 members and guests, among the latter being several ladies, Dr. Urban Pritchard, Mr. Arthur E. J. Barker, Dr. C. J. Cullingworth, and others.—Dr. Cullingworth proposed the toast of "The Society." He said that Sir James Simpson, a gynæcologist, fought a hard fight for anæsthesia and won. Anæsthesia flourished for some time without science but was now on a scientific basis and advancing. He suggested that anæsthetists might sometimes be invited to give a lecture on their own experiences of, and views as to, operators. The former could institute useful comparisons between operators who, by the way, rarely saw each other operate. By publishing transactions the society invited criticism and its proceedings became permanent.—The President, in replying to the toast, avowed that the greatest honour to an anæsthetist was to be President of the society. It had existed now for ten years and started as a semi-social gathering for the discussion of cases. Then there was an influx of country and foreign members and later of practitioners interested in anæsthesia. The membership now was 91. During the present session there would be several clinical meetings. The presence of the lady members and their friends greatly helped to make the dinner a success.—Dr. Dudley W. Buxton proposed the toast of "The Visitors" in a witty speech.—Mr. Barker, in answer, acknowledged the debt of gratitude which surgeons owed to anæsthetists and emphasised the confidence which was placed in them.—Dr. Woollett proposed "The Health of the President" who suitably replied.—During the evening songs and recitations were excellently rendered by Miss Jessie Parker, Mr. Frederick Keel, and Mr. Patrick Kirwan.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ABRAHAMS, BERTRAM LOUIS, M.B., has been appointed Lecturer in Physiology to the Westminster Hospital Medical School.

ARNOLD, FRANK ARTHUR, M.B. Lond., D.P.H. Lond., District Medical Officer of Health, Eastern Transvaal, has been appointed Assistant Medical Officer of Health, Transvaal, Pretoria.

BLETCHLEY, G. P., M.B. Lond., has been appointed Certifying Surgeon under the Factory Act for the Nailsworth District of the county of Gloucester.

BOURKE, JAMES JOSEPH FITZGERALD, L.R.C.P. & S. Irel., has been appointed Medical Officer at Hughenden, Queensland, Australia.

BRIDGER, S., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Southend District of the county of Essex.

BROWN, R. C., M.B., Ch.B. Melb., F.R.C.S. Eng., has been appointed Honorary Anæsthetist to the Alfred Hospital, Melbourne, Victoria, Australia.

CRAIG, J., M.B., M.S. Edin., has been appointed Certifying Surgeon under the Factory Act for the Biddulph District of the county of Stafford.

DANIELL, G. W. BAMPFYLDE, M.R.C.S., L.R.C.P. Lond., has been appointed Instructor in Anæsthetics to the Royal Infirmary, Edinburgh.

DIXON, B. GODFREY, L.R.C.P. Lond, M.R C.S. Eng., L.S.A., has been appointed Medical Officer to the Walton Workhouse, Liverpool.

EDEN, T. WATTS, M.D. Edin., has been appointed Physician to the In-patients at the Chelsea Hospital for Women.

FORSTER, LUCINDA, M.B., B.S. Lond., has been appointed Medical Officer to the Quarantine Office, Suez.

HANSON, F. C, L.M. K.Q C.P.I. and R.C.S.I., has been appointed Certifying Surgeon under the Factory Act for the Bray District of the county of Wicklow.

HARBISON, W. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S G., has been appointed Medical Officer of Health for Wallaroo, South Australia.

HEBB, R. G., M.D. Cantab., has been appointed Lecturer in Pathology to the Westminster Hospital Medical School.

HEWLETT, J. E., M.B., M S. Edin., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

HOPE, EDWARD CULBERTSON, M.R.C.S., has been appointed Medical Officer at Winton, Queensland, Australia.

JOHNSTON, G. JAMESON, M.A., M.B., R.U.I., F.R.C.S.I., has been appointed Honorary Surgeon, Masonic Orphan Boys' School, Dublin.

KANE, ROBERT ENGLISH, L.R.C.P. and S. Edin., has been appointed Medical Officer at Taroom, Queensland, Australia.

LLOYD, W. GIBBS, M Sc., M.B., Ch.B. Vict., has been appointed Assistant Medical Officer to the Walton Workhouse, Liverpool.

LONG, S. H., M.D. Cantab., has been appointed Medical Officer of Health of Cromer.

MACKEY, CHARLES, M.B., Ch.B. Vict., has been appointed Junior Resident Medical Officer, Manchester Children's Hospital, Pendlebury.

MULLEN, W. L., M.D. Melb., has been appointed Deputy Medical Superintendent of the Kew Lunatic Asylum, Victoria, Australia.

O'MAHONY, JOHN J., M.B., B.S. R.U.I., has been appointed Medical Officer of the Goleen District of Schull, Bantry.

PENNY, W. R., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Greenodd District of the county of Lancaster.

RIVIERE, CLIVE, M.D. Lond., M.R.C.P. Lond., has been appointed a Physician to the Out-patients at the City of London Hospital for Diseases of the Chest.

ROBERTSON, MCGREGOR J., M.B., Ch.B. Edin., L.M., has been appointed Assistant Master of the Coombe Lying-in Hospital, Dublin [corrected notice].

ROE, WM. FRANCIS, L.R.C.P. Irel., L.R.C.S. Irel., L.M., has been appointed Physician to the Holloway and North Islington Dispensary.

STARK, A. CAMPBELL, B.Sc., has been appointed Lecturer in Biology to Westminster Hospital Medical School.

STEWART, C. P., M.B., M.S. Edin., has been appointed Certifying Surgeon under the Factory Act for the Perth District of the county of Perth.

WILSON, J. CLARK, M.D. Edin., has been appointed Clinical Assistant to the Samaritan Free Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, Kennington, S W.—Resident Medical Officer for six months. Salary at rate of £40 per annum, with board and lodging.

BIRKENHEAD UNION INFIRMARY, WORKHOUSE, AND SANATORIUM.—Resident Assistant Medical Officer. Salary £120 per annum, with board, washing, and apartments.

CANCER HOSPITAL, Fulham-road.—Supervisor of Electrical Arrangements. Honorarium £26 5s. annually.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Physician.

DARLINGTON HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary £120, with board and lodging.

GLASGOW UNIVERSITY.—Three Examiners, each in Anatomy, Medical Jurisprudence, and Midwifery. Salaries, Anatomy £80, Medical Jurisprudence £50, and Midwifery £50, with hotel and travelling expenses. Also Examiner in Botany. Salary £50, with hotel and travelling expenses.

GORDON HOSPITAL FOR FISTULA, &c., Vauxhall Bridge-road, S.W.—House Surgeon. Honorarium £40 for 12 months, with board and residence.

GRAVESEND HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence.

HACKNEY UNION WORKHOUSE AND INFIRMARY, Homerton.—Second Assistant Medical Officer, unmarried. Salary £120 per annum, with rations, apartments, washing, and attendance.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physician, for six months. Honorarium of £25.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—House Surgeon, unmarried, for six months. Salary £20, with board and residence. Also Honorary Radiographer.

HOSPITAL FOR WOMEN, Soho-square, London, W.—House Physician for six months. Salary £30.

INDIAN MEDICAL SERVICE, India Office.—Twenty Commissions.

LEEDS GENERAL INFIRMARY.—Resident Casualty Officer. Salary £100 a year, with board, lodging, and washing.

LONDON HOSPITAL, Whitechapel, E.—Physician to the Skin Department.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Cheetham-hill-road.—Honorary Surgeon for Children.

MELBOURNE, UNIVERSITY OF.—Chair of Physiology and Histology.

NEWCASTLE-UPON-TYNE UNION.—Assistant Medical Officer. Salary at rate of £150 per annum, with apartments, rations, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—House Physician for six months. Salary at rate of £80 per annum, with board, residence, and laundry. Also Assistant Physician. Also Resident Medical Officer. Salary £120 per annum, with board, residence, and washing.

NOTTINGHAM CHILDREN'S HOSPITAL.—House Surgeon, unmarried, for six months. Salary at rate of £100 per annum, with board and residence.

PORTSMOUTH ROYAL HOSPITAL.—Assistant Surgeon for six months. Salary at rate of £50 per annum, with board, residence, &c.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer for four months. Salary at rate of £50 per annum, with board, residence, and washing.

ROCHDALE INFIRMARY.—Resident Medical Officer, unmarried. Salary £100 per annum, with board, residence, and washing.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Assistant Physician.

ROYAL LONDON OPHTHALMIC HOSPITAL, City-road, E.C.—Senior House Surgeon. Salary £100, with board and residence.

ST. THOMAS'S HOSPITAL.—Resident Assistant Physician.

SALISBURY INFIRMARY.—Assistant House Surgeon. Salary £75 per annum, with apartments, board, and washing.

SOUTH UIST PARISH (NORTHERN DIVISION).—Medical Officer. Salary £70.

SUNDERLAND, COUNTY BOROUGH AND PORT OF.—Medical Officer of Health. Salary £520 per annum.

SUSSEX COUNTY HOSPITAL, Brighton.—House Surgeon, unmarried. Salary £140 per annum, with board and residence.

WESTERN DISPENSARY, Rochester-row, Westminster, S.W.—Two Attending Medical Officers.

WISBECH, NORTH CAMBS. HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with rooms, attendance, coals, gas, and washing.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Physician. Salary £100 per annum, with board, lodging, and washing.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies for Certifying Surgeons under the Factory Act at Wigton, in the county of Cumberland, and at Newtown, in the county of Montgomery.

Births, Marriages, and Deaths.

BIRTHS.

BENNETTS.—On Oct. 14th, at Bozeat, Northants, the wife of F. Bennetts, M.R.C S., L.R.C.P., of a daughter.

DEAN.—On the 19th inst., at Eversleigh, Banwell, Somerset, the wife of the late Andrew Buchanan Dean, M.B., C.M., of a daughter.

FOOKS.—On Oct. 17th, at the New Infirmary, Isleworth, the wife of W. Pemberton Fooks, M.A., M B. Cantab., of a son.

ROSE.—On Oct. 14th, at High Beach-road, Loughton, Essex, the wife of Percy Rose, L.R.C.P. Lond., of a son.

MARRIAGES.

PEARSON—JONES.—On Oct. 15th, at All Hallows Church, Ordsall, Retford, George Bruce Pearson, L.R.C.S., L.R.C.P., of Buckingham, to Maud Mary, only daughter of the late Samuel Jones and of Mrs. Jones.

WILSON—WRIGHT.—Oct. 14th, 1903, at St. Michael's Church, Markington, by the Ven. Archdeacon A. S. Aglen of St. Andrews, assisted by the Rev. S. A. Brooking, Vicar, Alex. Garrick Wilson, M.A. Camb., F.R.C.S. Eng., of Ranmoor, Sheffield, eldest son of J. Mitchell Wilson, Esq., M D., of Cottingham, to Mary Evelyn, third daughter of the late Dr. J. Hodgson Wright and of Mrs. Hodgson Wright of Kirby Leas, Halifax.

DEATHS.

HUTCHISON.—At Cradock, South Africa, on Oct. 13th, Robert Fergus Hutchison, M.B., C.M., D.P.H., aged 28, dearly loved son of Thomas and Nicola Hutchison, West Cults, Aberdeenshire.

STURGES-JONES.—On Oct. 21st, at The Willows, Chichester, Charles Sturges-Jones, M.R.C.S., L R C P., second son of the late Rev. Edward Jones, Rector of Milton Keynes, Bucks, in his 81st year.

TALLERMAN.—On the 17th inst., at the Langham Hotel, Portland-place, Lewis A. Tallerman of 50, Welbeck-street, aged 58.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE DIABETIC INSTITUTE AND THE DIABETES FLOUR COMPANY (INCORPORATED).

A CORRESPONDENT has forwarded to us a circular letter, a form of application for shares, and a prospectus which he received from the Diabetes Flour Company, the address of which is 15 and 16, St. Dunstan's-hill, London, E.C. The circular is marked "Private and confidential" but [illegible] contents public. [illegible] public but only [illegible] chemists. The subscription is offered not so much in order to procure by its means any additional capital for the sanatorium to be acquired but rather to make the members of the two professions, "on whose goodwill the success of our business entirely depends," profitably interested in the business and to secure their permanent coöperation by letting them share in the benefits to be derived from the growth and success of the company. As a special bonus, therefore, one founder's share of the value of £5 in proportion to every five debentures subscribed is offered. The circular goes on to state that the profits of the company have averaged during the last three years 23 per cent., and further the circular says that "the company, assisted by the coöperation of physicians and chemists, will, we are convinced, pay still larger dividends in the future." The prospectus gives an account of a mansion situated in Kent which is to serve as a sanatorium for the treatment of diabetic subjects. We consider this circular to be a direct insult to the members of the profession of medicine. It is neither more nor less than a bribe to induce medical men to tell their diabetic patients to buy the products of the Diabetes Flour Company; but yet worse remains behind. We have also received from another medical correspondent a letter in which he says: "The inclosed is the third communication from the same source that a patient of mine has received since obtaining starch-free foods from a London firm." The inclosure to which he refers is headed "The Diabetic Institute," of which the address is "St. Dunstan's-hill," the chief analyst is Professor Dr. E. D. Berghaus, the president is Henry S. Berry, the manager is E. E. Naegelen, and the secretary is W. Norris. Curiously enough the names of these gentlemen, with the exception of Mr. Naegelen, appear as holding the same offices in the Diabetes Flour Company, except that Mr. Berry instead of being called "president" is called "the chairman of the board of directors." This being so, we presume that the Diabetic Institute and the Diabetes Flour Company are one and the same commercial concern. Their telephone number is the same and their cable address is the same. The Diabetic Institute, however, boasts a chief consultant whose name is Dr. Aston-Davis and the letter which was sent to our correspondent's patient commences as follows:—"Dear Sir,—We have twice written to you calling your attention to the seriousness of diabetes and placing the services of the Institute at your disposal, but up to now have received no reply to all our communications." The letter goes on to say that advice is given gratuitously and finishes as follows: "What we have done for others we can do for you and any correspondence that may pass between us will be treated as strictly private and confidential. Will you please let us know what is the reason of your silence so that in case you do not need our services we may take you off our mailing list." This letter is signed "W. Fripp" or "Tripp," "secretary," although in the printed heading the secretary's name is given as "Norris." It is perfectly evident from these documents that the Diabetes Flour Company and the Diabetic Institute form a purely commercial speculation which endeavours to widen its business by attempting to bribe medical men and pharmaceutical chemists and by writing letters to patients suffering from diabetes which may frighten them into applying to the Institute for advice. Our contemporary *Truth* has already made some scathing remarks upon this concern and in its issue of Oct. 15th prints a copy of a postcard *which has been addressed to chemists throughout the country.* The postcard which is headed "The Diabetes Flour Company, 15 and 16, St. Dunstan's-hill," is as follows: "We pay 5*s.* for every address you may be able to procure us of persons suffering from diabetes. These addresses will be used for the mailing of our new catalogue and your information will be considered as strictly confidential. It is money easily earned." It would be interesting to know whence the Diabetic Institute obtained the knowledge that our correspondent's patient was suffering from diabetes unless it was communicated by someone in the employment of the diabetic-food-providing firm. Dr. Aston-Davis has, we presume, an American qualification; any way, we cannot find him in the current number of the Medical Register. Moreover, the factory of the Diabetes Flour Company is at Watertown, New York. Four of the directors are connected with New York firms and the fifth is a manager of the London branch of the Anglo-American Bank. American commercial methods may be "smart" but we do not like them as applied to medicine.

MOTOR-CARS FOR MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 10th you invite replies to your correspondent signing himself "General Practitioner" on the above topic. I therefore hope that the following observations may be of assistance to "General Practitioner" and others who are thinking of investing in a motor-car. For the last 13 months I have used a small petrol car with the greatest satisfaction [illegible] exceptionally hilly with a notoriously greasy surface after rain, the latter a most adverse factor in motoring. The pleasure of driving even a small car oneself is very considerable and the great saving of time effected by the use of a car and the fact that it is at all times instantly available are desiderata of much importance to medical men. As to reliability, a good modern car is at least as dependable as a horse. The cost of upkeep, including initial purchase money of a petrol voiturette, is probably less than that of a single horse and carriage. A plan I would recommend to "General Practitioner," if he be in the habit of keeping two or more horses, is to sell these and to buy two small cars of well tried make [illegible] With these [illegible] ther always [illegible] more than equal to any work he may require of it, it will occasionally happen that he is temporarily without a car owing to renewal of worn working parts, such as bearings, gears, tyres, &c. The cost of two small cars will not exceed that of a single car of twice the horse power with two or more cylinders, whilst they are as efficient for the purposes of a medical man as a larger car. Moreover, the cost of running a small motor is much less than one of medium or large power, pneumatic tyres largely accounting for the difference. Medical motorists may be grouped into two classes: (1) those without any mechanical instincts or inclinations—they will have to employ a skilled driver and this will, of course, add to their expense; and (2) those, at present by far the most numerous class I believe, who taking a keen interest in their [illegible] more often due to some oversight of themselves. The latter class will only need to employ unskilled labour in the form of a lad or former coachman to clean the car, accompanying them on their rounds, and start the engine after a stop. Some form of non skidding device attached to the rear or driving wheels is very desirable in winter. I am not an advocate of any special form of protection from the weather in the shape of a hood or screen. A good motoring coat which can, if desired, be worn over an ordinary top-coat is, as far as my experience goes, all that is required. This should be obtained from a firm who make a speciality of this particular garment, since the usual mackintosh by no means meets the requirements of a motorist. I think that all, or nearly all, those medical men whose circumstances and temperament enable them to be grouped into class 2 will bless the day that they adopted a motor-car. I am here obviously premising that class 2 will select their motor car with judicious discrimination, having regard to their individual requirements.

I am, Sirs, yours faithfully,

Torquay, Oct. 19th, 1903. GILBERT J. ARNOLD.

PLASMON TEA.

To the Editors of THE LANCET.

SIRS,—Your analytical report of this preparation suggests the query whether the tannin in ordinary tea prepared in the usual way is not more completely precipitated and rendered as physiologically inert by the addition of a small quantity of milk. This milk tea is very palatable to many people and is certainly more economical than plasmon tea.

I am, Sirs, yours faithfully,

Oct. 19th, 1903. SIMPLEX.

*** [illegible] red to have the same effect [illegible] to the tea, since plasmon [illegible] s weight of milk, and the separation of tannin in plasmon tea is undoubtedly more effectual and complete than when milk *alone is used.*—ED. L.

THE CIGARETTE CRAZE.

To the Editors of THE LANCET.

SIRS,—With regard to the letter of "Doubtful" upon cigarette-smoking in THE LANCET of Oct 17th and your comments thereon may I suggest that the quantity as well as the quality of the tobacco consumed by cigarette smokers may be a factor in such results as may follow? "Doubtful" writes of "excessive cigarette smoking" being responsible for nerve trouble and then goes on to say that a man who smokes nine or ten cigarettes in a day does not smoke half an ounce of tobacco. I should have thought that a man who smoked cigarettes to excess smoked far more than nine or ten in a day, but that a man who smoked half an ounce of tobacco per diem in a pipe was a fairly heavy smoker. To put it in another way, the tobacco that will make a good sized cigarette will amply fill a good-sized pipe, but if one man smokes cigarettes during the time that another *consumes one pipeful* of tobacco he will get through considerably more than one cigarette. There are reasons for this. The burning surface of a cigarette may be smaller than that of a pipe but the smoke passes through a tube (at all events where no mouthpiece is used) which is considerably larger than the bore of a pipe and the rapid burning is not diminished by the tobacco of a cigarette being usually very dry. The inhalation of a cigarette is almost irresistible. I doubt if confirmed cigarette smokers would derive any satisfaction from smoking if they were merely to take the smoke into their mouths, and I expect that in this you have named the principal cause of the effects produced by excessive cigarette smoking, but it would be interesting to know your views as to what amount of tobacco is consumed in cigarettes by those who suffer from its effects. I fancy that average sized cigarettes run to about 16 to the ounce and that this would be a moderate allowance to some smokers in the day. "Doubtful" speaks of very mild tobacco being hot in a pipe. Does not this depend largely on whether it is fine-cut or not? I smoke a very mild tobacco, which is coarse-cut, and to me, at all events, it is not hot, but a mild tobacco is often very fine-cut and consequently liable to get dry and to burn fast or, at all events, to burn hotly. In the same way fine coal, with a good draught, burns with great heat. I am, Sirs, yours faithfully,

Oct. 19th, 1903. E. A. A.

THE BY-LAW AGAINST SPITTING.

THE prompt enforcement of one of the London County Council's new by-laws at the Westminster police-court must have come as a severe shock recently to a man named Richard Donovan. He had persisted in spitting in a tram-car in the Wandsworth-road and had continued to do so upon being cautioned by the conductor, besides being abusive and refusing to quit the car. The evidence of the conductor was supplemented by that of a passenger who had had to move from his seat in order to avoid being spat upon. Two summonses were taken out by the County Council, one for spitting and the other for using obscene language, and Donovan was fined the full penalty, 40*s.*, on each, with costs, the total amounting to £6 2*s.*, with the alternative of a month's imprisonment. His fate should serve as a warning to others and as a protection to future travellers, while it will materially strengthen the hands of conductors of public vehicles and similar officials. An amusing story, by the way, has been told of a tram conductor in Dublin. An elderly lady from England travelling upon his car was much disturbed by the free expectoration indulged in by a passenger near her. Turning to the doorway she asked nervously, "Conductor, do you allow spitting upon your tram-car?" Mistaking her meaning the conductor, with bland politeness and a rich brogue which the reader must reproduce for himself, answered, "Certainly, madam; spit wherever you please."

PATHOLOGICAL PARLANCE.

THE Dean of Bristol, the Rev. Dr. Pigou, in a further volume of his reminiscences which has just been published, tells several good stories, amongst which is the following. A lady when leaving her house on the way to Divine service had omitted to take her reticule, or hand-bag, such as ladies carry. Her maid, in reminding her of this, said: "Please, ma'am, you have forgotten your appendicitis!"

SUBSTITUTION RAMPANT.

To the Editors of THE LANCET.

SIRS,—Your annotation headed "Substitution Rampant," in THE LANCET of Oct. 17th, p. 1104, seems to me to be of peculiar importance to those members of the public who are in the habit of purchasing the goods of well-known and old-established firms because their staple quality and permanence of value may be relied upon.

I have, rightly or wrongly, an old-fashioned prejudice in favour of being supplied with exactly what I ask for, whether it be a food, a drug, a sauce, or a wine. It is most annoying to be told by otherwise reputable retailers that their own produce is as good as, or better than, what you have asked for. The reason of this attempted substitution is doubtless the opportunity of greater profits, but this has nothing to do with me as a regular purchaser who consistently buys certain brands and has no desire to experiment with imitations.

Your suggestion in connexion with a recent case of a pair of so-called solid leather boots, which were found to contain cardboard soles, seems to me to be excellent. There ought to be some system of control over such a deliberate fraud. Perhaps an existing Act could be so extended as to cover this, or in default a new Act framed expressly to protect the purchaser from such deception on the part of the seller.

If the different trades could combine among themselves and each decide upon some mark of guarantee, answering to the hall-mark on silver, thereby insuring the honesty of their goods, I am certain it would be of immense service both to themselves and to the public. I inclose my card. I am, Sirs, yours faithfully,

Oct. 19th, 1903. F. S.

To the Editors of THE LANCET.

SIRS,—Your annotation under the above heading in THE LANCET of Oct. 17th, p. 1104, directs attention to, and very justly condemns, the vast amount of fraud which pervades a great deal of our present system of trading and which flourishes unchecked under the supine methods of control exercised by the authorities of the State. This deplorable and criminal lack of business morality, moreover, touches very closely a subject which is of the utmost interest and importance to the medical profession. I refer, of course, to the question of the purity of drugs and of accuracy and honesty in dispensing. There is no department of trading which calls for the exercise of more care and more scrupulous honesty than the manufacture and dispensing of drugs and there is no department of trading in which fraud is more difficult of detection. Yet I venture to suggest that substitution and adulteration are as rampant in this branch of commerce as in the others to which you have called attention. In these days of "store prices" and of "prescriptions carefully and accurately dispensed" the operation of the hall-mark you suggest would prove of inestimable service both to physician and to patient.

I am, Sirs, yours faithfully,

Upper Berkeley-street, W., Oct. 21st, 1903. E. H. COLBECK.

*** We may point out that our correspondent's view in regard to the accurate making up of prescriptions receives little support from an inquiry which we instituted upon this subject, the results of which were published in THE LANCET of May 2nd, 1903, p. 1251. Prescriptions, moreover, are subject to control under the Sale of Food and Drugs Act.—ED. L.

LIFE INSURANCE FOR HIGH RISKS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me as to assurance companies which would consider proposals on the lives of persons proceeding to the West Coast of Africa, Nigeria, &c.? I have tried four companies without success. I am, Sirs, yours faithfully,

Oct. 20th, 1903. CROSS.

A CONVENIENT SUBSTITUTE FOR A SAND-BAG.

To the Editors of THE LANCET.

SIRS,—Whilst casting about for a substitute for the weighty sand-bag I recently hit upon the following which may be useful to those of your readers who are called upon to perform operations which involve the use of a sand-bag The bag is similar in composition to the fenders of a yacht's boat—i.e., it is made of canvas and is filled with cork dust. The result is a bag which combines lightness, firmness, and cheapness. I have used such a bag while operating on the bile-ducts and have found it to answer admirably. A cylindrical bag 20 inches in length and 15 inches in circumference weighs 31 ounces and costs 1*s.* 9*d.* The bag can be covered with mackintosh as is frequently done in the case of the ordinary sand-bag. I am, Sirs, yours faithfully,

Plymouth, Oct. 19th, 1903. C. HAMILTON WHITEFORD.

◆

Nook.—We should think that our correspondent would find all the information which he requires in the volumes dealing with insects which form part of the Cambridge Natural History published by Messrs. Macmillan and Co.

Syntax.—We do not think that our correspondent need have any fear of the General Medical Council regarding his connexion with the dispensary in question in the manner which he suggests.

Mr. T. Laffan.—The Tallerman Institute, 50, Welbeck-street, W., and the Dowsing Radiant Heat Company, 24, Budge-row, Cannon-street, E.C.

A Student.—Our correspondent has omitted to inclose his name and address.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan [illegible] 2 P.M.), Soho-square (2 P.M.), R[illegible] Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.[illegible].M.), Westminster (2 P.M.), West London [illegible] College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.)

WEDNESDAY (28th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.) Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M).

THURSDAY (29th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat, (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SAT[illegible] P.M.), Middlesex
llege (9.15 A.M.),
'Iary's (10 P.M.),

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

M[illegible] AT BRITAIN (20[illegible]
The President:
Teeth from the

MEDICAL SOCIETY OF LONDON (11, Chandos street, Cavendish-square, W.).—8 30 P.M. Discussion on Purpura in Childhood (opened by Dr. A. F. V[illegible]elcker).

Dr. Edridge Green).

CHILDHOOD SOCIETY (Library of the Sanitary Institute, 72, Margaret-street, W.).—8 P.M. Lecture:—Mr. A. W. Newton: Psychology

[illegible] EOLOGICAL AND CLIMATOLOGICAL
W.)—8.30 P.M. General Meeting.
A. F. Street): Some Questions in

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

[illegible] London Hospital,
: Examination of

[illegible] London Hospital,
ole: Heredity and

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Tooth: *Anatomy of the Spinal Cord.*

WEDNESDAY (28th).—POST GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.).—5 P.M. Dr. Beddard: Practical Medicine. (Second Lecture.)

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Habershon: Bronchiectasis.

T[illegible] COLLEGE (West London Hos-
P.M. Mr. Baldwin: Practical

MEN (Marylebone road, N.W.).—
in
Gynæcological

CHARING CROSS [illegible] of
Medical Cases

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—4 30 P.M. Dr. R. M Leslie: Acute Inflammatory Affections of the Lungs and Pleuræ.

T[illegible] W.C.).—

FRI[illegible] Hospital,
Electro-
Therapeutics

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Tooth: Localisation in the Spinal Cord.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

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The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a m by Steward's Instruments.)

THE LANCET Office, Oct. 22nd, 1903.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
Oct. 16	29 70	W.	...	95	58	46	45	48	Cloudy
" 17	29 72	N.W.	0 01	76	56	48	48	51	Cloudy
" 18	29 99	S.W.	..	66	55	48	50	52	Overcast
" 19	30 03	S W	0·10	65	57	48	49	50	Overcast
" 20	29 91	S.W	1·03	66	56	50	52	54	Raining
" 21	29 69	S.W	0 07	68	57	53	55	55	Overcast
" 22	29·49	S.W.	0 22	77	56	49	52	53	Raining

During the week marked copies of the following newspapers have been received: *Daily News, Star, Lincolnshire Echo, Hertfordshire Mercury, Southern Times and Dorset County Herald, Highland News, Burnley and District Times, Staffordshire Sentinel, Westminster Gazette, Windsor and Eton Express, Manchester Guardian, City Press, Times, Walsall Advertiser, Herts Advertiser, Reading Mercury, Mining Journal, Midland Medical Journal, Surrey Advertiser, Yorkshire Post, &c.*

Communications, Letters, &c., have been received from—

A.—[illegible] Co., Lond.; [illegible] *de Laryngologie, &c.*, Paris; Mr. W. F. Armand, Lond.

B.—Mr. H. Montague Bates, Lond.; Birmingham and Midland Skin Hospital, Secretary of; Bovinine Co., Lond.; Barrauds, Lond.; *Birmingham Daily Post;* Mr. Arthur H. Bostock, Chichester; Dr. James Burnet, Edinburgh; Dr. J. Cunningham Bowie, Cardiff; British Automatic Aerators, Lond., Secretary of; Mr. C. L. Bedford, Birmingham; Dr. H. H. Borland, Glasgow; Mr. W. Bothamley, Lond.; Mr. S. H. Benson, Lond.; Mr. W. H. Brown, Leeds; Mr. S. William Beck, Lond.

C.—Cortland Wagon Co., Lond.; Messrs. Cassell and Co., Lond.; Messrs. E. Cook and Co., Lond.; Messrs. J. Cleave and Son, Crediton; Mr. H. W. Cox, Lond.; Croydon, Medical Officer of Health of; Dr. E. H. Colbeck, Lond.

D.—Mr. R. W. Doyne, Lond.; Mr. E. R. Dolby, Lond.; Messrs. G. L. Daube and Co., Frankfort; *Daily Mirror*, Lond., Editor of; Dr. Edward Deanesley, Wolverhampton.

E.—Messrs. Evans, Sons, Lescher, and Webb, Lond.; Eccles, Borough of, Medical Officer of Health of.

F.—Mr. E. H. Freeland, Lond.; Dr. Theodore Fisher, Clifton; Messrs. Finlay and Rutherford, Edinburgh; Dr. A. W. Fuller, Lond.

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H.—Dr. T. Whiteside Hime, Bradford; Mr. S. Godfrey Hall, Lond.; Dr. A. R. Henchley, Canterbury; Mr. Edwin J. Hinvest, Lond.; H. P. G.

J.—*Journal of Hygiene (The)* Cambridge, Editor of.

K.—King Edward VII. Sanatorium, His Majesty's Advisory Committee, Lond., Secretaries of; Messrs. R. A. Knight and Co., Lond.

L.—Mr. T. H. Littlejohn, Lond.; Local Government Board, Departmental Committee on Vaccination Officers' Expenses; Lafayette, Ltd., Dublin; Mr. J. Lawrence-Hamilton, Brighton; London Hospital Medical College, Warden of; Leeds General Infirmary, Secretary of; Dr. W. Gibbs Lloyd, Walton; Messrs. Lee and Nightingale, Liverpool.

M.—Dr. Rodolfo Marotta, Naples; Mr. J. McMurtrie, Glasgow; Messrs. C. Mitchell and Co., Lond.; Motor Mart, Ltd., Lond.; Mr. W. Boxer Mayne, Swindon; Manchester Medical Agency, Secretary of; Messrs. Mundy, Gilbert, and Co., Birmingham; Maltine Manufacturing Co., Lond.; M. O. W.; Middlesex Hospital Medical School; Mutual Life Insurance Company of New York, Lond., General Manager of; Mount Vernon Hospital for Consumption, Lond., Secretary, Medical Sub-Committee of.

N.—Mr. J. C. Needes, Lond.; Mr. H. Needes, Lond.; *Newcastle Daily Journal;* Nordrach-upon-Mendip Sanatorium, Blagdon, Secretary of.

O.—One Who Knows.

P.—Mr. E. Peacock, Nuneaton; Mr. Y. J. Pentland, Edinburgh; Messrs. J. and J. Paton, Lond.; [illegible] and Hadley, Lond.

R.—Reuter's Telegram Co., Lond.; Rochdale Infirmary, Secretary of; Messrs. Reynolds and Branson, Leeds; Royal Dental Hospital of London, Secretary of.

S.—*Dr. E. Schloesser, Wiesbaden;* Surgical Aid Society, Lond., Secretary of; Messrs. F. Stearns and Co., Detroit, U.S.A.; Mr. J. C. Soper, Lond.; A Student; Mr. J. Sheehan, Lond.; Sunderland Post Co., Secretary of; Dr. G. Stocker, Lond.; St. Mary's Hospital Medical School, Lond., School Secretary of; St. Thomas's Hospital Medical School, Lond., Secretary of; Dr. W. H. B. Stoddart, Lond.; Scholastic, Clerical, &c., Association, Lond.; Messrs. Squire and Sons, Lond.; Dr. Wm. Stirling, Manchester; M. R. F. P. Squibbs, Nottingham; St. Bartholomew's Hospital, Warden of; Mr. J. Lionel Stretton, Kidderminster; Society of Apothecaries, The Master and Wardens of; Status Ethicus; Messrs. Slack and Brownlow, Manchester.

T.—Dr. Owen Travis, Hampton; T. A. D.; Mr. J. Thin, Edinburgh.

U.—University of Durham College of Medicine, Secretary of; University College, Bristol, Dean of; University College, Sheffield, Dean of; University of Chicago Press.

V.—Vinolia Co., Lond.

W.—Dr. S. A. K. Wilson, Paris; Dr. C. Theodore Williams, Lond.; Messrs. J. Wright and Co., Bristol; Wyleys, Ltd., Coventry; Dr. Chalmers Watson, Edinburgh; W. H; Messrs. W. Wood and Co., New York; Mrs. A. E. Waterhouse, Lond.; Dr. R. T. Williamson, Manchester; Mr. G. H. Whitaker, Horwich; Mr. V. Wood, Lond.; Messrs. White and Co., Havant.

X.—X. Y. Z.

Letters, each with enclosure, are also acknowledged from—

A.—A. L.; A. H.; A. M. B.; Mr. E. Allen, Hawes.

B.—Dr. L. H. Bruce, Ferryhill; Mr. F. N. Brown, Frimley Green; Miss A. D. Butler, Lond.; Mr. C. L. Birmingham, Westport; Bradford Union, Clerk of; Bradford Children's Hospital, Secretary of; B. F. F.; B., Lond.; Dr. T. W. Brown, Hanley; Mr. W. H. Barrett, Chichester; Bruce's Drug Stores, Lond.

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D.—Mr. J. T. Davenport, Lond.; Messrs. Durant and Co., Lond.; Lieutenant-Colonel G. W. P. Dennys, I.M.S., Peshawar; D. R. M. A.; Mr. E. Davies, Chester.

E.—Mr. H. Evans, Lond.; Essex and Colchester Hospital, Secretary of; Messrs. Eason and Son, Dublin; Dr. E. Elsmere, Farndon.

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A Lecture

ON

THE MENTAL DISEASES OF THE CLIMACTERIC.

Delivered at the Medical Graduates' College and Polyclinic on March 12th, 1903,

By GEORGE H. SAVAGE, M.D., F.R.C.P. LOND.,
CONSULTING PHYSICIAN, IDIOT ASYLUM, EARLSWOOD.

GENTLEMEN,—The mental disorders of the climacteric constitute a subject which one would have thought would have been very largely and generally handled not only by the alienist but also by the gynæcologist. It has really been very imperfectly dealt with until comparatively recently. It has appeared to be a sort of No Man's Land not to be cultivated. Yet the more one sees of the influence of the climacteric the more is one impressed with the very grave importance of it, first as a cause, or one of several associated causes, of mental disorder and next, and perhaps this is more important from a practical point of view, as to its influence in prognosis. I have, I believe, mentioned elsewhere that of youth it is a common thing to hear the friends say: "Here is a young patient with mental disorder of one kind or another, but youth is on his side." And I have been obliged to say: "No; youth is not always on the side of the neurotic." There have been some, relying chiefly, I believe, upon general experience or what appears to be common sense, who have said: "Surely, with this climacteric case there will be a favourable prognosis." Certain patients have been nervous in development, they have been hysterical, they have suffered from puerperal insanity, they have had forms of insanity of one kind or another dependent perhaps even upon toxic causes, "Surely," it is said, "when these have passed the climacteric they will be all right." That is a common idea, especially in relationship to puerperal cases. Here is a woman having children, and having attacks of puerperal mania, suffering from attacks of insanity associated with pregnancy. When the period of childbearing is over surely there will be no more danger. Unfortunately that is not my experience I find that those who are predisposed to break down along nervous lines, who have perhaps had attacks of insanity, are much more likely to break down permanently at the climacteric. Another thing I shall have to point out is that with the climacteric you do not get, or you very rarely get, a clearing away of the nervous disorder. This fact has been, and is constantly being, brought before me: here is Mrs. So-and-so who has been more or less of an invalid nervously all her life; she has been suspicious and troublesome at home with her hypochondriacal symptoms: "I suppose," say her friends, "that as soon as she has passed the climacteric we may hope that the mental symptoms will pass off?" but they do not pass off.

Now to consider in detail the symptoms which may arise—that is to say, nervous or mental symptoms—in connexion with the climacteric. And I would say that we have to recognise a climacteric in men as well as in women, though it is not so evident. I have sometimes said that retiring from business and ceasing to menstruate seem to be equivalent in the two sexes, that the same sort of disorder that is seen in a man who has given up active work may be met with in the woman who has ceased to menstruate At any rate, the climacteric has a very definite influence, more particularly, of [illegible] ffect is clearly observable even [illegible] n who have had any general [illegible] are associated with it. Some of these symptoms and nervous exaggerations I shall refer to later, but under ordinary conditions you find that there are a fulness of the head, a sleeplessness, and a malaise. I sometimes say that just as we have morbid growth developing physically so we may have mental morbid growths developing just as clearly and that such symptoms may be accentuated or revealed by the climacteric. Even with the most ordinary symptoms there is a change—and a very material change—often to be observed at the climacteric and this is more marked in those with strong hereditary neurotic tendencies. No doubt the neurotic by inheritance are much more liable to break down at this period than those who are free from neuroses. Then, again, the climacteric is especially dangerous to those who have had previous attacks of insanity, whatever the cause of these previous attacks. Next, you may have neurotic disorders depending upon the on-coming climacteric. One may be asked for how long a period do you posit the influence of the climacteric and I am obliged to admit that the cases I have come across, and which I am about to describe and to group under the heading of climacteric cases, not infrequently occur a year or even more before the cessation of menstruation. Probably many of you know, much better than I do, that in some subjects the menopause comes on almost suddenly, while in others there is a warning for a year or two, or even for three or four years previously. It is a common experience of mine to find an irregularity of menstruation, excessive menstruation, perhaps, with flushing of the face and a feeling of heat and of sleeplessness, and dyspepsia, and general unfitness for some years before the menstruation ceases. Now and then there are neuroses starting at that time. Take an example. A woman, three or four years before menstruation ceases, has irregularity of menstruation. First there is a cessation; she gets into a dreadful state of alarm, thinking she is pregnant; she thinks there is a late pregnancy and she worries about it and becomes sleepless and out of health generally, often, indeed, hypochondriacal or melancholic. The menstruation reappears, this time rather profusely. She loses for the time her melancholia. Then when another year or two have passed her menstruation, which has been in the meantime irregular, now ceases and she recognises that it has gone, but there comes a disorder of a different type. She believes that she has changed, that she is unnatural, that her husband no longer cares for her, that her children look upon her with suspicion, and that her neighbours avoid her. Thus the first nervous symptoms are associated with the first irregularity in connexion with menstruation, and the fully developed insanity is usually associated with the completion of the menopause. Of course, in the majority of cases the insanity associated with the climacteric is coincident with the other symptoms, with the immediate cessation or the irregularity of menstruation, with, in fact, the ordinary symptoms of the climacteric. In other cases, which can scarcely be classed under the same head, we get the menstruation ceasing altogether and mental disorder following after a considerable interval. I saw a case recently in a woman who had ceased to menstruate. She had had the ordinary symptoms of a slightly exaggerated type; she had had nervous breakdowns before; she had been self-indulgent and hypochondriacal; she thought she could no longer do this and that and the other. She had ceased to menstruate for two years and it was more than a year after the cessation before the sleeplessness from which she had always been a sufferer became so marked as really to produce serious mental disorder. Then she believed herself to be no longer an agreeable person to her relatives and her friends; she regarded herself as a devil and concluded that the best way of getting rid of that devil was to take a considerable dose of poison. It was in those circumstances that she came before me.

I may now ask—At what age does one generally meet with persons suffering from climacteric insanity? Well, there are some cases which come on early and others later. I see cases occasionally in which the climacteric insanity comes on very early. Now and then one comes across a case of a woman who ceases to menstruate soon after she is 30 years of age and it has been my chance to see a case in which both ovaries were removed even at an earlier age than that, and in such cases the patient may develop a surgical climacteric disorder. In fact, you may find these disorders occurring after removal of the ovaries at almost any age. You may have insanity coming on in people who have ceased to menstruate prematurely but the majority of women cease to menstruate at between 45 and 50 years of age One can hardly say that there is any one particular time which is more dangerous in this respect than another as far as surgical interference goes. Another important question, Is there more danger with single or with married women or with widows? Looking through the records of many hundreds of cases which I have had under my observation I have found that the proportion of single women so affected is greater than that of married women and that, comparing the number of widows with married women in the population, there is undoubtedly an excess of insanity associated with the climacteric in the former. In fact, I have sometimes described it as a widows' disease or a widows' disorder. I shall have to refer to that again later.

Now as to collateral causes, it being assumed that the cases which we are considering have as their exciting cause the climacteric. We have seen that neurosis is a very important factor. We have seen that no actual age can be assigned as the culmination of the dangerous influence, that more single than married women suffer, and that more widows than married women break down in this way. But now comes a very important practical point—viz., the very large proportion of cases of climacteric insanity associated with alcohol. The number of women who take to alcohol and bring on alcoholic troubles at or about the menopause is quite astonishing. There is at that time this feeling of "sinking," this languor and inability to do what they would, and then there is the taking of a little "pick-me-up" occasionally. And in this way you find women at that time of life taking not only alcohol but drugs. Many a drug-taker has come before me who has taken chloral and even paraldehyde in large doses simply as the result of the restless, miserable feeling associated with the menopause. Alcohol is one of the most important collateral causes of mental disorder during the menopause.

To take the clinical forms of disorder which one is likely to meet with, it seems to me a natural way to take first the mere exaggerations of the ordinary clinical symptoms of the climacteric and also the exaggerations of the temper of the individual. With the climacteric you not infrequently get an insane interpretation of the physical symptoms. For instance, a woman who has got flushing associated with the menopause says: "I am blushing, and people look at me, and they think there is something I am ashamed of." There is nothing of the sort. She has simply got a feeling of flushing which she misinterprets and it slowly develops into delusions that people are watching and following her, looking after her and scandalising her and taking away her character, and the like. And so this simple symptom may tend to create an exaggerated susceptibility the foundation of delusions. In the same way there is a sensation of fulness in the head. The woman says: "There is something wrong with my brain; I have got cancer there." I recently saw a female patient who had had cancer removed from another part of the body. At the climacteric she complained of fulness in her head and she was sure that she had got a cancerous tumour there, another insane interpretation of what may be called an ordinary climacteric symptom. An unnatural feeling about the skin not infrequently gives rise to the idea that there is something wrong with it. One lady declined to shake hands because she vowed she had the itch; another declined to go near people because with these uneasy feelings about the skin she felt sure she had small-pox. In another, and a still more difficult case, the patient believed that these uneasy feelings in the skin, associated as they were in her case with hallucinations of smell, were associated with syphilis, syphilis which she felt sure her husband must have given to her. So you see the whole growth of a delusion which not only implicates herself but her husband also, there being no truth in the accusation. She knew that she had no other way of catching syphilis and concluded it must have come through her husband. With these sensations there is often a sense of change which is very marked and characteristic; the patients feel they are no longer human One said: "Look at the hair growing on my face. That is not womanlike—in fact, I do not believe I am an ordinary woman I think it is a disgrace; I cannot expect my husband to love a woman with hair on her face; I am no longer a woman, I am no longer attractive; my children no longer can like and love me. How can a child kiss a mother with a beard? It is disgraceful, and the sooner I am dead the better." I have known cases of that kind. I have also found myxœdematous conditions associated with the climacteric and this has given rise to a double set of symptoms of mental disorder, a somewhat parallel causation. First the individual, looking changed in aspect owing to myxœdema, says, "People make remarks about me and say there is something wrong with my face." Or others at the climacteric who develop myxœdema and get ideas that they are not like other people, that they are inhuman. With the climacteric you may get, as I have said, exaggerations of any one of these symptoms depending upon a collateral causation or upon the climacteric itself. I mentioned in my last two lectures that in relationship with sexual disorders of one kind and another you frequently get hallucinations of smell and that these conditions frequently give rise to more or less fixed delusions. I referred to "syphilitic" delusions and also to the ideas of being chloroformed and robbed. All these and many similar states are subject to the more or less considerable accentuation of the change occurring in the reproductive organs at the climacteric.

From the mere false interpretation of physical symptoms at the climacteric I shall now pass to the change or accentuation in the temperament of the individual. Take an example. It is a woman who has always been a careful, economical housekeeper. She arrives at the climacteric and becomes a terror to herself. Everything is exaggerated. A speck of dust becomes a mountain of mud. She is restless, she is here, there, and everywhere upsetting everything and everybody. I have had men come to me saying, "Is my wife mad, or what is wrong with her?" I say, "What is wrong?" "Well I go home and find all the servants have been discharged and all through the most trifling thing, too. She says this has not been properly cleaned and she appeals to another servant who says it has been cleaned and then she discharges the lot." The unfortunate husband suffers grievously under such conditions as these. I have seen such a woman who has been taken before a magistrate and sent to prison for bullying and ill-treating her servants. Such people are to be pitied and all those connected with them, for in the above case, for example, the unfortunate woman was without doubt suffering from an exaggerated dust and dirt consciousness, so to describe it, bullying her servants and losing her temper, striking them, and not feeding them properly. Such a woman will say, perhaps, "If you do not keep my house clean I shall not give you food." All this is an exaggeration of temperament, so to speak. In the same way one gets an exaggeration of self-consciousness—a real hypochondriasis. For example, an individual who has been pampered and allowed to do very much as she likes, who never dreams of getting up to breakfast, gradually gets more and more self-indulgent till she may, as in several cases I have seen at the climacteric, become a chronic hysterical paraplegic, or she loses her voice, or becomes so hyperæsthetic that the slightest touch makes her scream. She will not allow her hair to be brushed or have anything done for her. This is an exaggeration of the self-conscious feeling which has been part and parcel of her nature; the accentuation is due to the climacteric. Then you get another kind of case which often causes great trouble to the husband, nor is it such a very uncommon kind of case either. The woman thinks something is going to happen to *him*. One man appealed to me and said, "What am I do? I live so many miles out of town and I come to my office every day. In the middle of the morning my wife puts her head in at the door and says, 'Oh, it's all right is it? I got so anxious about you after you left; I thought some accident would happen to you.'" She may go home to luncheon and come back before the evening to be quite sure that all really was right. This woman had always been an anxious-minded person. Again, I have seen children positively injured through the exaggerated care of a climacteric mother or some change in her. Some women who have been quick-tempered, for example, become incorrigibly violent tempered. And one is not uncommonly consulted about cases in this way. A man says, "I do not know whether I ought to consult you or my solicitor." "Why?" "Well, my wife is simply intolerable; she makes my life miserable. I come home and I say, 'What are you going to have for dinner?' and she immediately flies into a temper and says, 'As if you cannot trust me to arrange that. You are always grumbling about dinner,' and then she rages and dashes out of the house. She turns up again an hour or so afterwards in a more reasonable frame of mind. But on another day the passion and rage come on again." Fortunately some of the symptoms may pass off with the climacteric or its waning influence. But in many cases, as I pointed out in the beginning, they do not; in some cases the excitement becomes so marked that it may lead even to homicide, infanticide, and suicide. The subject says, "I will not stand it any more" and she rushes out and drowns herself. I fear that is quite a common sequel. There is another, certainly most annoying, development which you will perceive to be a natural association with the function of reproduction—namely, amorousness. These cases are really dreadful. I had a medical man in my consulting room this morning with such a lady and her husband. The medical man applied to me by telephone to know what was to be done Here was this lady who had been pestering him for a considerable time and yesterday she appeared at his house, which is not very far from my own, and tried to get in. He on his part, knowing that she was about, kept a chain on the door. She raves at him through the door, a mob collects, two policemen are sent for, and I was going *to say the character of the gentleman is involved, there* being absolutely no ground for it. Then comes the husband: "It is not only Dr. So and-so," says he, "but if he is out of the way it is one of my hunting friends." The woman is 52 years of age and is passing through the climacteric and there is alcoholic indulgence as well. Such cases as those are very dangerous indeed. They make terrible accusations and their chief victims appear to be medical men and parsons I shall refer specially to them later Here I may *point out that correlated with amorousness* you get, and very naturally, jealousy. One of my favourite examples was that of a woman whose whole life was something of an idyll. An artisan of the good honest type falls in love with a milliner's assistant of good looks and capacity. They say: "When we have got just enough money we will marry. We will work together and keep no servants." He says: "I will have a little shop for you and I will do my mechanical work downstairs"—he was a mechanical engineer—"you will keep house, and we shall only want two rooms." They do marry. She, regarding herself and her feelings, gets up at four o'clock in the morning to clean the windows so that the neighbours shall not see her do it and know that she does not keep a servant. They are fairly successful and look forward to a house in the suburbs, where they will live and will then keep a servant. So eventually they get a pretty little house in a suburb with four or five rooms, nicely furnished *en suite*, gold and white being the characteristic ornamentation. The whole thing is ideal. But the husband becomes more occupied; he does not come home to lunch and he does not come back to tea, and later he does not come back till supper There is no family; she is a childless woman. At the climacteric there comes the idea: "My husband is neglecting me; he might come home. Which way does he come? He comes George street way, why should not he come John street way? That seems nearer." She inquires and finds that there is a woman who has had an illegitimate child in George-street and she is quite sure that her husband must be the father of that child She dwells upon this till she makes up her mind to put an end to it. I saw her husband after she had "put an end to it" She had destroyed his clothes, smashed the presentation clock, she had smashed everything which was smashable in the house; she had taken the carving knife and cut the *stair carpet from end to end,* and had *written on the* drawing-room paper, "Go to your whore!" She was sent to an asylum. On passing through the climacteric she got well.

I have before me a somewhat similar case in a professional man whose wife helps him, typewrites his letters, and so on. Here again the wife is a childless woman. With successful progress has come the need for employing proper assistants, clerks, and so on. His wife has no occupation now. *She is no longer wanted where she was before.* She develops jealousy, suspicion, and thinks there is somebody else replacing her. That is a very common form of disorder associated with the climacteric There is also the form of suspicion which is shown in what I may call the "blotting-pad cases," for I have not infrequently surprised persons by saying, "You wife looks at your blotting pads." It is one of the items of experience The woman is suspicious about her husband, thinks he is concealing things, and dealing *improperly where he ought not. She gets his blotting-pad* and puts it in front of the looking-glass She does this over and over again and at last she finds what she thinks is "My dearest" somebody, it is "dearest" with a blot, and she is satisfied. That is the tangible starting point of delusions of suspicion—the delusions of suspicion which not infrequently give rise to further perversion, for later comes the dominant idea, "He wants to get rid of me." A woman came to me some years ago. She was waiting in my room when *I arrived from dinner.* She *said,* "I *wanted to* see you very much." She had a black-bag and began bringing things out one after another. I knew what was coming. She said, "I want you to have this analysed. Look at my nose; do not you see the mercury coming through my nose?" I said, "No." "Well, then, take a magnifying-glass and look" She was sure that her husband had become tired of her. She "had a past" and she thought that her husband wanted to get rid of her and was poisoning her. The sequel was that he would not believe she was mad and later she cut his throat. It did not kill him but very nearly. He was not satisfied even then and next she burnt the house down That satisfied him and she is now in an asylum. In *all this bear in mind that I am referring to disorders* associated with the climacteric which are accentuations of the normal temper or temperament of the individual. Fortunately, a very large number of cases occur in which the symptoms are not so pronounced as those about which I have been speaking, but still serious enough to prevent any possibility of domestic happiness. I once wrote a paper mainly on such cases, entitling it "Marital Misfits" Unfortunately most of them do not settle down but remain incurable all *their lives.*

Now let us speak of more distinct forms of mental disorder to be met with about the climacteric First of all there are those associated with the defective control of which I have spoken, in which there are impulsive acts, passionate acts, or suicidal acts. Then come the defects of volition embodied in a state of doubt and inertia—that is to say, want of power. The contrast is striking and will bear repetition—viz, there are numbers of people at the climacteric who lose higher self-control and become passionate and impulsive, and so impulsive that they may be suicidal, while others lose the power of judgment and exhibit *folie de doute* in the most marked way, so that they can never make up their minds to do anything; they are thinking all the time what they *will* do and practically doing nothing. Some of these resemble a certain youth who was always trying to stimulate himself by good resolutions. He would say, "Now I will get up to-morrow morning at 8 o'clock and if not I will fine myself 5s" So one finds certain ladies who are going to begin "to-morrow" with their new method of management—and never do begin at all. The most serious cases of climacteric disorder are marked by defect of memory. One gets a certain number of these and it is noteworthy that among climacteric cases I have met 1 or 2 per cent. general paralytics in whom there is generally a marked progressive dementia as the chief feature indicating the onset of the disease as associated with the climacteric. Note also that with the climacteric you may have hallucinations of all kinds. Hallucinations of sight are very common; so are hallucinations of hearing, probably more common than those of sight. You have persons suffering from climacteric disorders who believe people are talking at or about them and they thus hear scandals about themselves, giving rise to further suspicions of one kind and another. As I have already mentioned there are frequently hallucinations of *smell and* taste and these may give rise to the idea of poison.

We are now beginning to see that there are various symptoms and delusions definitely associated with the climacteric We have seen that the suspicions relate more particularly to the husband, if husband there be. If the woman is single it is very common to meet with cases in which a woman conjures up an imaginary husband, she thinks that she has just been married, or that she has been *forsaken, or* that there is a man at the other end of the world who is being kept away from her. In the case of the widow you may find one of two very definite forms of delusion. One is that her husband is not dead. I have two at the present moment, both of whom decline to accept the statement that their husbands are dead. One was the widow of an officer and she declines to receive her pension because she believes that her husband is still alive. I have had one or two other cases of the same kind. *Such a patient* will say, "My husband has been taken away and they wish to make me take his pension so that I may acknowledge that he is dead and then they will bring him out of his hiding place and kill him." As a morbid development you get delusions of a sexual type that the husband is inconstant and neglectful. A woman will very frequently believe that someone is wishing to marry her and is prevented by foes, or she believes that she is married to improper people, demons, or Holy Ghosts. I have met cases of both. I see a fair number of spinsters at the climacteric who believe themselves to be on the point of bringing forth a Christ or some great prophet. There are also positive accusations of sexual offences. I suggest that you should always be on the look-out for dangers of that kind—false accusations, false confessions, and statements about syphilis, for at the climacteric it is not uncommon for a woman to say that she has been seduced by this or that person, and here also the extraordinary thing is that skeletons long lying dormant are galvanised into life. A woman of about 50 years of age, happily married, comes to the climacteric and says that she can only see me alone, that I must vow I will not tell anyone of her confession. Well, what is it? When she was 21 years old she was very much in love with a cousin and she rather thinks that she loves him still. At any rate, she is quite sure that she has been living for 30 years a life of moral adultery because of this penchant for her cousin. Confessions of that type are not infrequent and have to be taken with a very great amount of "salt." I should regard it as a case in point that if you have any reproductive organ disorder, or if you find a chance of that disorder, in hysterical girls with irregularity of menstruation, or suppression of menstruation, you often get statements that some old man has been taking advantage of them. We find the same sort of thing at the climacteric and wherever there is physical disorder of the reproductive organs there is the same risk. In the insanity which results you will find the same type of delusions, perhaps accusations against the husband in reference to syphilis and besides these disorders there may be moral perversions. I would refer in passing to the lying and tale-bearing which occur. Perhaps you will say that this feature also is only an exaggerated development of certain tendencies. It is, or it may be; assuredly one sees a certain number of those cases which cause infinite trouble by the development of the "lying spirit." Elsewhere when speaking of the insanities of development I pointed out that boys not infrequently, and girls often, took to lying naturally. There would seem to be a reversion type in some of these climacteric cases, a certain "romantic" lying associated with the confessions and accusations of which I have spoken. You will find a good deal of scandal-mongering, ingenious false letter-writing, sending of post cards, and so on. Every now and then I have a whole budget of post cards handed to me with, "What do you think of these?" They may be hysterical or they may be climacteric, they are commonly associated with one or other of these two states.

And now let us take from the medico-legal point of view one of the most difficult and interesting types—namely, kleptomania. Kleptomania is more commonly met with in the climacteric woman than in any others. In my younger days, when I was willing to appear in the police-courts, I not infrequently was asked to give evidence on behalf of kleptomaniacs—so-called. I should say that three out of four of them were women at the climacteric or women in whom there was some reproductive organ trouble if they were genuine cases of kleptomania. And I feel rather cowardly in not being still willing to attend these cases. But there is an odour about the police-court which one would prefer not to be in and one cannot help feeling inclined to avoid them, to say nothing of being looked upon as a bought witness and not only a paid one. Let me ask you, however, to remember that should you have to defend a woman who is accused of stealing uselessly or objectlessly, if she is at the climacteric it is a very important point in her favour. If there be hereditary neurosis or climacteric and drink in the case it is likely to be true kleptomania. But unfortunately drink, in the eyes of the court generally, had better be left out of the question. Among the moral perversions and lying commonly there are found all sorts of letter-writing persecutions, and here again unmarried women of from 40 to 50 years of age are the most common—I was going to say sinners, but I should rather say sufferers. I am speaking of individuals who write to parsons, who hunt parsons, who have hallucinations in regard to more or less conspicuous individuals. One unfortunate Nonconformist minister suffered a good deal. In two cases I had to take steps. In one case a lady was perfectly sure he wanted to marry her. I said, "He is married already." But she said: "No; that is all nonsense; he is going to marry me." She attends every Communion service on purpose to get near him. She goes to the Bible-classes to be near him. She watches at the hour he leaves the house and if he gets into an omnibus to go up to town she gets into the omnibus too. She writes amorous letters and makes this man's life practically intolerable. That is a type of disorder that is not uncommon. In one such case I got a woman sent back to her native country, but she came back to England again. Do not forget that these people go in for letter-writing without end and that no amount of persuasion or arguing is of the slightest use.

But I think you will have already perceived that disorders of the menopause are, in the greater proportion of cases, of a depressed type, melancholic, hysterical, with ideas of misery and persecution and watching. These are unhappy ideas and therefore it is not surprising to hear that it is very common to get as a result anything ranging from a simple lack of interest in life, a want of desire for life, to a feeling that they are in the way, that they cannot do as they like, that they do not feel as they should, that their husbands do not care for them, and that their children would be better without them, that they are avoided by their friends and acquaintances. All those ideas may coalesce and pass into a more definite and concrete melancholia. One has known a widow under such conditions simply to shut herself up and to decline to see anybody and to decline to have any but the plainest and simplest food—she said she was not worth more. A considerable number of these patients make an end of themselves, drowning perhaps being the most common means. On the other hand, one finds another type which is rather interesting from more than one point of view. With the expiry of the reproductive function there may be an accentuation of lust or desire or passion. It is not a very uncommon thing to meet with a climacteric-begotten child—that is to say, a case in which a child is begotten only a short time before the final cessation of menstruation. I have not infrequently seen women who have been pregnant just at that time become fearfully ashamed of themselves, they have sometimes committed suicide, or secluded themselves, or developed melancholia of the worst possible type, or they have accused themselves of being pregnant by the devil. They are quite sure it was an unnatural occurrence and that the offspring would be unnatural. Thus it is well to remember the wide diversity of melancholia at the climacteric and, remembering that with these patients you so often get a change in the physical state, you will find often a dry, harsh skin rather than that cold, clammy skin which you generally meet with in melancholia. And you may get a high-tension pulse I often wish I dared to bleed these patients; I find it is sometimes a good thing to reduce their diet and to give saline purges. They are sleepless and many patients do well with small doses of opium which seems to suit them better than anything else. One does not give opium as a rule in many cases of insanity, but in these cases especially, where there are melancholia and a restless agitated pulling and picking of the fingers, accompanied by a dry skin and rather full pulse, opium does very well indeed. As to the mania which is seen in climacteric cases it is generally a result of some abnormality in the reproductive organs and exhibits the eroticism, obscenity, lasciviousness, and various sense perversions of which I have given ample illustration. It is very common to find masturbation also. And you may find associated a period of loss of higher control, with eroticism accentuated and frantic masturbation followed by a reaction of extreme prostration and melancholia, with ideas of unworthiness and wickedness. These subjects will believe that they are very wicked and abandoned and no longer esteemed in respectable society because they have behaved so badly. In cases of this kind where there is considerable eroticism I give without hesitation large doses of bromide of potassium once or twice a day. I give a prescription of a drachm of the extract of salix nigra with half a drachm of bromide of potassium at night. That will often procure sleep and allay the erotic tendency. You do no good in these cases by local applications of cold. But I have found a sitz bath followed by applications of calamine powder to be useful. I have known cases in old days when the clitoris has been removed, but I cannot recommend this operation. In other cases it has been suggested that the ovaries should be removed, but in England we do not do this, though I believe it is done in America. Do not forget that in the cases attaining to mania also there is a great danger from drink. We have already seen that the climacteric is a period at which drink and drugs are most powerfully dangerous and are very readily taken to.

So far we have seen that there may be mania, melancholia, or progressive weak-mindedness, with loss of memory or general paralysis.. But next to melancholia probably the most common form, if not indeed more common than melancholia, is delusional insanity, with ideas of persecution. The self-conscious feeling associated with the cessation of the function of menstruation in patients leads to the idea that people are looking at them, that they are marked people, that people are saying something about them and following them about, watching them and saying something against them. One woman shuts herself up in her top room and covers all the windows with brown paper, completely shutting out the light, and she will allow her food to be admitted only through the door. I was shown into such a room and having struck a light I saw that there was no crevice through which light could come. The reason she gave for all this was that there were policemen at the opposite window watching her. Why? They said that she had been an immoral woman. Patients think their neighbours are taking away their character, they think they have procured men to stand outside their room or door to insult them, they think that these men are made to walk up and down opposite the house as decoys to get them out and then to say they have "spoken" to people in the street. A similar form of disorder is met with in widows. A youngish widow is left with an income of moderate amount and several children and has to live carefully and she has to be very jealous of her reputation and of what she does. When the climacteric comes she begins to think people are avoiding her. Her friends are dying; she seems not to be seeing so many people as she formerly did—which is a fact—and she is increasingly conscious of it She worries about this and thinks that her friends are constantly referring to her and that they are telephoning to one another about her. One finds these patients with delusions coloured by the latest invention and I have had some who think that others are sending Marconigrams through them or that they are being photographed while in their bath with x rays; in fact, that people are in every way annoying them under the belief that they are wicked. Unfortunately, a very large number of these delusional cases are unfavourable. Where you meet a woman with a fully organised idea of persecution which has lasted one or two years the patient will never get any better and the sense perversions on which such cases are built up may lead to all sorts of fancies about criminal assaults.

I must now say a few words about the influence of the climacteric on prognosis. Ordinarily one would say a case of acute insanity if the patient does not get well in a year, whether it is melancholic or maniacal, is a very unfavourable case. But there certainly are cases occurring at the climacteric about which you are justified in saying, "This case may last four or five years and yet get well." If the patient, however, has had attacks of hysterical or puerperal insanity, or, indeed, of any kind already, the prognosis is distinctly unfavourable and if the patient gets well she will probably be maimed intellectually and scarred morally. Then, again, as I pointed out at first, people will say, "Here my mother is suffering from insanity and has been for the last ten years but she is coming to the change of life; will there be any improvement?" I say, "No." What will be the result? Probably there will be no improvement and no change whatever. If the patient is showing signs of dementia at the climacteric it is almost certain that the dementia will become more pronounced afterwards than it was before. The climacteric in itself does not lead to, or tend to secure, recovery. Therefore you must not say here is a case of various attacks of insanity which is now entering or approaching the menopause and we are likely to have a period of rest and calm. It is not so.

The last thing I would say is this There is one problem which has never been solved I remember a case in which a woman at the climacteric committed adultery. I myself was perfectly certain that she was suffering from erotic mania associated with the climacteric. Is that plea a bar to divorce? The friends would not try it and so it still remains a question to which, as far as I know, no answer has been given.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The following members have been elected as officers and council for the forty-eighth session, 1903-04:—President: Dr. Robert E Scholefield. Vice Presidents: Mr. G. Chisholm Williams and Dr. F. S. Toogood. Council: Mr. F. Septimus Barnett, Dr. J. H. Bryant, Mr. Charles J. Heath, Dr. H. A. Munro, Mr. William Henry Payne, Dr. H. Bowen Williams, and Dr. H. Leonard Williams. Treasurer: Mr. John P. Purvis. Secretary: Dr. John P. Henry. Librarian and Assistant Secretary: Dr. H. B. Kitchen.

A Clinical Lecture

ON

CARCINOMA OF THE COLON.

Delivered at St. Bartholomew's Hospital on July 3rd, 1901,

BY THE LATE WILLIAM J. WALSHAM, M.B.,
C.M. ABERD., F.R.C.S. ENG.,
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GENTLEMEN,—In the wards there is a woman, aged 43 years, who was under my care something like 18 months ago with carcinoma of the colon. I removed that carcinoma and she made an excellent recovery. The specimen is in one of these bottles.[1] She then went out of the hospital and for about 12 months or so she was quite well. She has now got a recurrence in the pelvis and her case is rather hopeless. But it was an exceedingly encouraging case, because for 12 months she has been absolutely well without any trouble or any abdominal symptoms whatever. I thought this would be a good case to take as my text for a clinical lecture to-day and I therefore propose to talk to you upon the subject of carcinoma of the colon. And the better to put you into possession of the facts which I wish to lay before you and to emphasise I will treat the subject under the following heads and, like a sermon, I will divide it into three. My first proposition is that the common form of carcinoma of the colon—namely, the columnar-celled variety—is one of the most benign of the carcinomata. My second proposition will be this: that if the first proposition is correct the earliest possible diagnosis is of the greatest importance, so that the case may be dealt with while the growth is strictly localised. That will bring me to the third point upon which I wish to speak—namely, the treatment. The great point about the treatment is this: that I advise you when you meet with the disease in an advanced stage, as is so frequently done, to divide the operation into two stages rather than to treat the whole affair at once. Those two stages are, first of all to do a colotomy, so as to relieve the acute symptoms, and then when the patient is in the normal condition as regards physical strength to do an anastomosis.

First of all we will say a word or two upon the comparative benignity of the columnar-celled carcinoma. The structure of it I need say nothing about because you know that perfectly well. Its situation is either in the rectum or in the sigmoid flexure or in some part of the colon as a rule, the commonest being perhaps the rectum, next the sigmoid, after that the ascending colon, then the splenic flexure, the transverse or hepatic flexure, and then the descending colon or cæcum I have seen these cases where the whole lumen of the gut has become entirely obliterated. When one has come to turn it out of the abdomen one has found a little growth, perfectly moveable, completely localised in the wall of the gut, and when one has come to look for the lymphatic glands and the mesentery one has found them quite healthy. That is an experience which I have had over and over again, especially in former times when the condition was not so often diagnosed during life and when no surgical methods were taken to relieve the patient. On many occasions I have met with cases of this sort where there has been columnar-celled carcinoma of the sigmoid or of some portion of the colon, but it has been entirely localised; there have been no lymphatic enlargement of the mesentery and no obvious lymphatic glands. Then I can appeal to cases which I have treated. For instance, this specimen is a cæcum which I removed some years ago at the Bromley Cottage Hospital. You will see that it is a very considerable mass. Still, some six months ago I asked about this patient and she was brought to the Bromley Hospital for inspection eight years after the operation. She is still in excellent health; there is a little bulging of the cicatrix but that is nothing. There is another case which some of you who have dressed for me will remember very well—that of an old lady who had one of these columnar celled carcinomata which I removed and united the intestine above and below. With regard to this case we managed to trace her and found her in excellent health with no recurrence whatever. Therefore I say, whether I appeal to the post-mortem room or to cases which I have operated upon, I think my first proposition is borne out—that the columnar-celled carcinoma when confined to the intestines is at first a localised growth, that it may exist there for a very considerable time, that it may cause so much constriction that you can scarcely pass a stream of water through the stricture, but still there may be no general affection of the system.

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[1] The lecture was illustrated by specimens.

The specimens from the cases I have mentioned are in the museum and afford abundant evidence of what I have said. I think you may take it on my authority that the columnar-celled carcinoma is at first a purely localised growth and if got away early enough there will be no recurrence at all. But if it is allowed to persist you get secondary glandular affections, as in the poor woman now in the wards. In this woman at the operation the colon was apparently free, but since she has been out of the hospital she has developed a large mass in the pelvis and you can see it very plainly, a huge mass blocking up the pelvis and making pressure upon the bowel and the bladder. So, although it is comparatively benign at first, if it is left there is the tendency which is noticed in all carcinomata for it to become disseminated. You will thus see that it is most important to make an early diagnosis.

Here is the specimen from the case of a woman who was sent to me from the west of England. She had a columnar-celled carcinoma of the cæcum. A curious circumstance is that just as I was making up my mind to give a clinical lecture on the subject I received a letter from her husband saying that she has had no trouble since and that she is in the best of health. The operation was done 12 months ago. She has no sign of constipation, her bowels are acting well, and she has put on flesh. That is a third case.

Now about the early diagnosis. First, the diagnosis of stricture of the colon. Given a well-marked case there is no great difficulty. The symptoms are these. The patient will tell you that he has had constipation for some years and perhaps 12 months ago he had what he called a bad attack of constipation, the bowels were confined for three or four days, or it might have been a week, and he felt a little sick, but not much; perhaps there was only retching but no actual vomiting. There will have been a good deal of pain and rumbling in the abdomen. Then perhaps he sent for a medical man and after having a number of enemata and castor-oil and purgatives a huge liquid motion was passed; some will say it was a pailful and then the patient has become apparently quite well again. Perhaps matters went on all right for three months and then at the end of that time a similar attack was experienced, only a little worse. Still, by repeating the medicine and treatment it was recovered from. Finally, the patient will probably come to hospital because of an attack which did not yield to the ordinary treatment which was successful previously. With such a history as that one should always think of a stricture of the colon. Then you will most likely find this: that the constipation gradually increased notwithstanding that the patient took his favourite pills and that the case had gone on to complete obstruction, perhaps even without flatus having been passed or only a little passed from time to time. The tongue is furred, there has been some retching but perhaps no actual vomiting, and the abdomen is distended considerably and most likely larger on the right side than on the left. At the same time the patient does not look so bad as if he had a stricture of the small intestine or some acute mischief there; indeed, in many cases he walks to the hospital With such symptoms as I have sketched you may be sure that there is stricture somewhere in the colon. Then, if the distension is more on the right side and there is some particular swelling over the cæcum that does not point to the cæcum so much as to the sigmoid, because when you get stricture of the sigmoid the bowel becomes distended. It is always the cæcum which becomes most distended and we know from post-mortem experience that when death occurs it is not as a rule immediately above the stricture that the bowel gives way but somewhere about the cæcum; ulcers form there and peritonitis ensues. Most practitioners would recognise a case where the disease was advanced like this, and if, on putting your patient under chloroform you feel a lump in the region of the cæcum and the patient is about 60 years of age or over and has been losing weight, you might with great certainty say that we are dealing here with carcinomatous stricture in the colon. Of course, that presumes you have examined the rectum and have found nothing there Those are the main symptoms.

What are the early symptoms which would lead to the diagnosis? Because when it has reached this stage you may have got a glandular affection with lymphatic involvement As far as I know the symptoms are these. Where I have cross-questioned the patients freely I have generally found that before these attacks of constipation came on the symptoms may be divided into the following four or five. First of all there are indefinite symptoms of abdominal disturbance, there will be uneasiness after food but not altogether referable to food. Sometimes the symptoms come on after food, sometimes before it. You question the patient and see if the symptoms are like those of carcinoma of the stomach—that is to say, the pain coming on four or five hours after food, or whether it comes on immediately after food like ulceration of the stomach. You find that that is not so. Then the patient probably says that he suffered from flatulency, and then there is pain referred to the heart from distension of the stomach. In addition to these indefinite symptoms there is nearly always a history of constipation, often with eructations, which are generally attributed by the patient to "indigestion." That is what I have found. Close questioning of these patients shows they have had the symptoms of indigestion continuing for some months or even years. Of course, when you get into family practice you will find many patients with these symptoms and of course they have not all got stricture. But I say that when these symptoms have existed for some time after the ordinary drugs have been tried and the patient has had change of air and scene, after he has been judiciously dieted, I say if they still continue you should be suspicious of stricture. Then, secondly, there are attacks of pain and spasm referred to the colon, with no reference to food. Those I have found to have very frequently occurred before definite symptoms have come on Thirdly, there are nearly always liquid stools. Still later the patient says: "I rarely have a solid motion," or "I only occasionally have a solid motion but very often liquid ones." Fourthly, there is a slowly progressive loss of weight; it is a symptom of great importance. Fifthly. there is a constant desire to defecate. With these indefinite symptoms of indigestion, loss of weight, and a tendency to liquid fæces, and with a history of constipation, one should always make a careful examination, especially if the symptoms have persisted notwithstanding drugs and dieting. You are first of all to look at the rectum. I was impressed with this only two years ago when I was coming home from my holiday. I was asked to see a patient who had symptoms of that sort. He had seen several physicians. Some had called his complaint gastritis, others said it was enteritis, but none of them examined his rectum. I passed my finger into the rectum and there found a columnar-celled carcinoma, high up, just within reach. Another case I remember very well in a medical friend who had these same symptoms and I said, "I am afraid you really have got stricture." He said, "No; nonsense; I have piles and a small fistula." He asked me to treat his piles. I said: "I do not think piles are at the bottom of this trouble " He saw an exceedingly well-known physician and he called it reflex spasm, the result of stricture. As a surgeon I am not acquainted with reflex spasm of the bowel above as the result of piles or of fistula; I am unfamiliar with it and I could not take such a diagnosis. Meanwhile, my poor friend went on getting worse and worse. One day when I saw him he said: "I am continually in the water-closet"—he was in a good consulting practice—and he had this most inconvenient constant desire to defecate. He would not let me do anything, but he got an attack of acute obstruction and another surgeon performed colotomy and two carcinomata were removed and the patient died afterwards. I am sure that if my poor friend had taken my advice two years earlier he might have been living now.

Those are the signs which I think should lead you to suspect carcinoma of the colon. I would digress at this point and say that if these signs which I have narrated are present you should examine the rectum and if you find nothing in the rectum put your patient under an anæsthetic and palpate the abdomen and then you may discover a tumour in some region. Failing that, what should you do? I advise you to do this: to have the patient weighed weekly, still persevere with your drugging and careful dieting, and then if the signs do not clear up make an exploratory incision; I am sure it is *justifiable*. When *symptoms such* as I have described do not clear up with the ordinary routine treatment, do not let the patient go until a definite tumour forms or acute obstruction supervenes, for it will then be too late to do much good.

That brings me to the third point—namely, treatment. What are my reasons for taking two bites at the cherry of treatment? *Why perform the operation in two stages?* Think for a moment of the condition the patient is in who has acute obstruction supervening upon a stricture of this character. *Some of you may ask, How* do you *account for the acute obstruction coming on?* You may account for it in several ways. Here is a stricture which has gone on steadily increasing despite purgatives and enemata, but a little fæces ooze through and perhaps you get some hard fæces through, and from some cause or other, such as massage, the portions of bowel get invaginated and the stricture may thus become blocked. And then from some of these causes the patient has got acute obstruction grafted on to the chronic. What is his condition? The bowel above is distended—let us take the local condition first—and below it is contracted. If you perform the operation then you have a huge bowel above to unite to a small bowel below, and that adds to the difficulty. What else have you got? The parts above have become inflamed, we will say, and are softened and therefore are not in a good condition for holding the stitches. And then look at the difficulty of the operation. There is this huge and *distended* bowel. *If any of you have* seen colotomy performed you will have noticed that as soon as the bowel is opened, by a little movement of the patient the fæces come out, and as soon as you have cleaned that little away more comes; and when you try to unite the bowel more fæces come out and there is danger of getting the peritoneum soiled. Therefore there are many local objections to the procedure. You have the whole of the small intestine above full of fæces and sometimes gallons of fæces will come out after you have done a colotomy and you have to get rid of this before you can make an efficient suture, and this danger of soiling the peritoneum is a very real one Then look at the general condition of the patient, how unfit he is for operation. Perhaps he has been constipated for a week or he may have been vomiting for two or three days; his tongue is furred, his breath foul; he is exhausted from lack of food, or, as is too often the case, he has been fed with nourishment injudiciously and the food has been vomited and his condition is as bad as it can be, for he is the subject of ptomaine poisoning, or, at any rate, absorption. His local conditions, then, are about as bad as they possibly can be for making an anastomosis.

Another objection is, supposing you do not feel the carcinoma when you open the abdomen you have to search for it and there again you know what a serious thing it is to search among overcharged intestines, for a scratch of the gut in such circumstances may injure the peritoneal surface and so allow the bacillus coli communis and other cocci which may exist in the fæces and which have perhaps already invaded the mucous and submucous coats to invade the peritoneum. So everything is against it. To my mind the best thing to do is, supposing you have made up your mind as well as you can that it is probably in the sigmoid flexure that the trouble is, to open the sigmoid, because it is a much better operation to open the sigmoid than to open the cæcum, for if you open the cæcum a quantity of liquid fæces comes away afterwards and the patient is not comfortable. One patient on whom I performed an operation on the cæcum some years back said: "I am like a walking water-closet; it is difficult *to keep out of the water-closet." Therefore it is much* better to open the sigmoid and it is much more common to have the growth in the sigmoid than in any other part of the colon. If you are in doubt, therefore, the first thing to do is an inguinal colotomy; then put in your fingers and draw a little piece of the sigmoid into the wound If it be distended it is quite clear that the stricture is below. If it is not distended the stricture is above. If with one finger put down you come at once upon a growth I have no he [illegible] out on to tl [illegible] You simply [illegible] that it shal [illegible] above. *It all bulges out as soon* as *you have it out* on the wall of the abdomen and then you put in a Paul's tube with a piece of indiarubber. Open the part and then send the patient back to bed and let it drain. If you are lucky you can do *that operation in a quarter of an hour and it cannot do the* patient any harm. You have now drawn the carcinoma on to the abdominal parietes, you have put in the Paul's tube, and you have relieved the patient of his constipation and sent him back to bed, and he gets straightway well. The fæces drain away and there will be a gallon or two. He recovers from his ptomaine absorption, the abdomen becomes flat, and then you can effectually deal with him. He is now in a very different condition for having an anastomosis done in comparison with what he was before when his bowel was overcharged with fæces.

So much for when you can feel the carcinoma. But if you cannot feel it what should you do if the sigmoid is distended? I think that the best plan then is to perform a colotomy. Simply draw out a piece of sigmoid and put in a Paul's tube and open it as before and allow the fæces to drain away. After that is finished and the patient's abdomen has become flat, as it will in ten days' time, you may search for the stricture. How would you search for it? Would you open the abdomen in the middle line and put your hand in and feel for it? Not at first. The first thing is, having got rid of the Paul's tube and having got further adhesions formed round the colotomy wound, to pass your finger into the lower end of the bowel, and the chances are that you will find it, as I did in the second case mentioned in this lecture. When the patient's abdomen became flat I passed my finger down the colotomy wound and four inches down I found the carcinoma. *She was rather an old woman and I did not do in her* case what I have done in others: I made a separate incision here and I brought the carcinoma on to the abdominal parietes The intestine above was emptied because it was drained by a colotomy wound and it had been washed out through her anus. I pulled the bowel out and I had healthy bowel above and below united by a Murphy's button and all went perfectly well. Then I had the colotomy wound to deal with. Why I left that wound open in her case was, as she was an old woman and moderately feeble, if anything went wrong with the button I should have had the fæces passing out and should not get soiling of the peritoneum. After I felt she had good union of the intestine, the carcinoma having been taken away, I closed the colotomy wound and let her pass her motions the right way.

If you find the sigmoid empty what should you do? I think in the text-books we are told to turn the patient over and to perform an operation on the opposite side. I would not do that at first; I should first of all search carefully with [illegible] there you may [illegible] flexure, say. I [illegible] Mr. Willett had a case of that sort, as his case came on immediately after one of mine. I came at once upon the sigmoid in mine; I found it distended, put my finger in and felt the growth, brought it out on to the abdominal parietes, and left it there for the time being. In Mr Willett's case the symptoms were very similar and he did the same thing, but he found the sigmoid collapsed and empty; he passed his fingers up and asked me to pass mine. We felt there a carcinoma in the splenic flexure and that was drawn out of the wound in the same way, left on the parietes, and a Paul's tube was put above the growth. If you cannot feel it the next best think is to turn the patient over and to perform a right inguinal colotomy, to place a Paul's tube in, and to let it drain from the right side. Again, when you have the abdomen flat, examine with your finger through the colotomy wound, passing it up the bowel and seeing if you can come upon the carcinoma in the hepatic flexure, and if you cannot make an incision in the middle line and pass your finger or your hand in and search the transverse colon.

As to the method of union I use a Murphy's button; others use sutures for the same thing. I think the advantage of Murphy's button is that by its aid you can perform the operation so quickly, and as most of these patients are elderly and their tissues not very resistant I think it is better to get the operation completed as quickly as possible rather than to run the risk of a long operation on the table. A Murphy's button, as you know, can be put in very quickly.

What would the operation be? Let us take a case of this sort, the first stage being when you have got the cancer out on to the abdominal parietes. Here is the intestine discharging fæces, here is a huge mass of carcinoma. Of *course*, you give purgatives and enemata so as to have this part of the bowel thoroughly empty. Then you take a piece of iodoform gauze and pass that well into the upper tube, so as to plug it up, and having done that make an incision round the wound, dissecting very carefully between the intestines, and if you are lucky you may sometimes succeed without opening the peritoneum. Sometimes the visceral peritoneum has become adherent to the parietal peritoneum; you will only avoid wounding that where the growth is a small one. If you cannot do that you cut the edge of the peritoneum and pull the bowel well out, cutting quite clear of the carcinoma, and then unite the two ends together by a Murphy's button or by the sutures, as you may prefer. Having done that drop it back into the peritoneal cavity. If you have not discovered the growth then the operative procedure is somewhat similar. The best plan, if it is in an elderly patient, is to enlarge the colotomy wound and to draw the bowel out. Or if you have a difficulty as to how the patient will stand operation, make a separate incision, having the colotomy wound sealed with collodion gauze; cut out the carcinoma and unite the divided bowel by a button.

In cutting out the carcinoma there are certain things to do. How are you going to deal with it? If you make your incision over the intestines you can either take out a wedge-shaped piece from the mesentery which I do not altogether advise, or you may cut along the course of the bowel, tie off the vessels at each spot where they are cut and then bring the gut together and put a few sutures in the fold, for it is thrown into folds like a fan. What is the objection to cutting out a wedge-shaped piece? You might be unlucky enough to cut the nutrient vessels and then you interfere with both parts of the bowel. If you cut along the edge of the mesentery you can only destroy the small vessels which come up to this part of the colon. It is safer not to cut out a wedge-shaped piece.

Those are the points that I wanted to bring out in connexion with this subject and I will recapitulate them. First of all columnar-celled carcinomata are one of the most benign forms of cancer that exist. At first the carcinoma is localised to the bowel; it has not affected the lymphatics and if you cut it away early enough you may cure your patient or you may give him eight, four, or three years of relief. For all I know some of the cases I have mentioned to you may be cured for there has been no recurrence in one of the cases for eight years and you cannot have anything very much better than that. I really wish you to think of these symptoms which I have mentioned to you when you meet with a patient. Go thoroughly into the case and please do not put it down to indigestion but watch and weigh the patient from week to week and if he does not get better examine the rectum and the abdomen under an anæsthetic. If the patient does not improve make an exploratory incision, for such an incision will do no harm and may do a great deal of good by discovering the carcinoma at an early stage. And if you are driven to perform an operation in a patient in whom undoubted symptoms have come on, if you take my advice you will do it in two stages for the reasons I have given; it is much safer than doing the whole operation at one time.

ABSTRACT OF

The Harben Lectures.

Delivered before the Royal Institute of Public Health, London, in the Lecture Theatre of King's College, in October, 1903,

BY FERDINAND HUEPPE, M.D.,

PROFESSOR OF HYGIENE IN THE GERMAN UNIVERSITY OF PRAGUE.

LECTURE I.

Delivered on Oct. 8th.

GENERAL VIEWS ON THE ETIOLOGY OF INFECTIOUS DISEASES.

THE lecturer began by referring to the fact that both scientific researches and practical measures in modern hygiene were influenced and determined by their knowledge or conceptions of the mode of origin of diseases. A want of agreement existed as to what constituted the cause. On the one hand, as in tuberculosis and leprosy, the individual constitution played a considerable part; on the other hand, external causes might operate chiefly in such diseases as cholera and plague. The study of the latter class of diseases led to an exaggeration of the importance of external causes alone as against the constitutional causes, for in both groups of disease specific disease-producing germs were found. The work of Pasteur and Koch led many to hold the germ as the sole cause, in opposition to the teaching of Goodsir and Virchow, who claimed that the diseased cell constituted the disease entity. A third view was that associated with the names of Simon, Parkes, and others in England, and Pettenkofer in Germany, this view being that other external conditions, defined as "predisposition of place and time," played a very considerable part, this being notably the case in typhoid fever. He (Professor Hueppe) had tried since 1888 to lead others to recognise the importance of all the three views above described, the one or the other of which had been held too exclusively. They all knew of persons who escaped a disease to which they might be exposed whilst others were attacked. This common observation led to the conception of "predisposition" in disease, a factor which had been denied by Koch and others. There was now a greater inclination to accept "predisposition"—it was a fact which must be reckoned with to-day. He (the lecturer) did not consider predisposition as something negative as opposed to the (positive) immunity which might be acquired after an attack of a disease. He considered predisposition as positive as immunity to which it was correlated. Chemical methods had not led them to an understanding of the constitution of the protoplasmic molecule, they had had to resort to biological methods "through impulses which correspond to the atomic groups of the protoplasm." He referred to such an impulse as a stimulus, and this stimulus could only be exerted if, let us say, the germ from which it emanated possessed side-groups such as were found in enzymes. He regarded this as the meaning of the specificity of disease-producing bacteria acting as stimuli. In normal physiological assimilatory stimuli they had, so to speak, to deal with a good key, whilst pathogenic bacteria might be compared to a false key fitting into, and possibly destroying, the lock which represented, figuratively speaking, the cell protoplasm of the animal body. This conception also applied to the processes of immunisation. Immunisation proved the existence of predisposition, increasing as it did the faculties which pre-exist as predisposition. They knew in the case of man that predisposition might alter according to age and that it might be affected by such external conditions as cold, heat, by hunger, alcoholism, &c., which might render an individual susceptible who might otherwise have resisted the inroads of a disease. Other diseases might also lower resistance. He (Professor Hueppe) believed that the descendants of mixed races might show an altered predisposition, citing in support of his opinion the observations made in Italy by Kruse with regard to the distribution of cancer; in southern Italy they had a relatively pure Ligurian population, in northern Italy a mixed population of Germans, Ligurians, and Turanians, with cancer prevailing in the north. The opinion that disease germs were the only cause, the "specific entity" of the disease, was a dogma which could not be accepted for the reason that they might at times be harboured by healthy individuals without producing disease, as had been proved for the germs of diphtheria, pneumonia, tuberculosis, and cholera. These germs might live outside the body, as saprophytes, and were consequently not compelled to lead a parasitic life. What was more, their disease-producing power might vary and they did not affect different animals alike. Different germs might produce similar effects. Different individuals of the same species behaved differently to infection. These facts did not permit of their recognising either the disease germ or the diseased body cells as an entity in the process. The cellular pathologist made a mistake in only considering the structure of the animal mechanism, the bacteriologist also fell into error by concluding that his laboratory infection experiments with pure cultures were equivalent to what took place in naturally acquired infection. In proof of the last statement they had only to cite the instance of the guinea-pig which was highly susceptible to laboratory infection with tubercle bacilli but was practically never infected naturally.

In diseases which were conveyed by air, water, and food they might in certain instances succeed in avoiding infection by these means, but there remained the "genius epidemicus" of Sydenham, that was the fact that certain infectious diseases did vary in different epidemics with regard to extent and intensity, a variation which was attributable to the influence of environment as a stimulus in the Darwinian sense. They knew that the pathogenic power of a germ might become modified so that it behaved like a harmless saprophyte when introduced into the body. He (Professor Hueppe) accepted this as evidence in favour of the origin of *all infectious diseases being phylogenetically traceable to* putrefactive processes. According to the degree of adaptation to parasitism he distinguished germs which were facultative parasites, facultative saprophytes, and obligatory parasites. Disease he regarded as a function of three changeable factors—viz., predisposition, stimulus, and condition, each of which might vary from 0 to infinity. He represented this by an equation such as *follows, in which I stood for illness,* P for predisposition, S for stimulus, and C for condition, thus I = f (P, S, C). If the factor C was constant or negligible it might be dropped from the formula. Each of the factors might be composed in turn of factors; thus P could be due to p (inherited predisposition) and p' (acquired predisposition) in which case they had. I = f (p + p', S, C). The factors could be examined separately; thus the relation between P and the quantity of pathogenic germs introduced was studied by Ammon and a curve was plotted according to Gauss. The different factors concerned in disease would have to be studied by many different means. The object of hygiene would be to decrease their *predisposition and to increase their resisting power against* disease. Professor Hueppe concluded with the words: "Practice alone brings us into a groove from which there is no outlet, but practice combined with scientific research guarantees progress in public health."

LECTURE II.

Delivered on Oct. 12th.

Hygiene and Serum Researches.

In the previous lecture it was stated that specific pathogenic germs only represented a specific stimulus, other factors, notably predisposition, being concerned in disease. In the earlier work on disease Metchnikoff's phagocyte theory was hailed by pathologists, but viewed in the light of this theory as then expressed predisposition constituted something entirely negative, an inability of the phagocytes to cope with the invading germs. Metchnikoff referred an important function to the cells, whereas others inclined to the so-called humoral theory according to which the presence of bactericidal substances in the body fluids constituted the means of defence. The divergent views were united by subsequent researches which showed that bactericidal substances were produced in cells. It was shown that cell-free blood could destroy germs, that this power could be increased in specific immunisation. There were two groups *of diseases in which*, on the one hand, as *in cholera* and typhoid fever, the acquisition of immunity was shown by the presence in the blood of specific bactericidal substances; on the other hand, as in tetanus and diphtheria, the growth of immunity led to the formation of substances in the blood which were capable of destroying the poisons which were given off by the specific germs. A condition might, however, exist in acquired or inherited immunity where both bactericidal and antitoxic substances appeared in the blood. By separating the germ from its toxin they were able to obtain either antimicrobic or antitoxic substances in the blood during the process of immunisation. Antitoxins, as they knew, were used therapeutically, they cured but they did not immunise; in fact, they cured because they did not immunise. Habituation or tolerance to a poison did not depend on antitoxins, according to the lecturer, for antitoxin-formation was only accessory to toxin-immunity. Toxin-immunity depended upon toxin serving as a stimulus to susceptible cell protoplasm. The lecturer agreed with the main conception of Ehrlich's theory regarding the mode of interaction of toxin and cell protoplasm through haptophors and receptors, &c. The following passages contain his main views. He considered natural resistance, artificial habituation, and susceptibility to toxins to be correlated and that a similar correlation existed in immunity due to bactericidal substances. Professor Hueppe explained the familiar views of Ehrlich, Bordet, Pfeiffer, and others with regard to the *mode of action of bactericidal sera*. Already in 1895 he wrote: "The property of specificity may not unreasonably be conceived of as a quantitative variation and as dependent upon the bringing into action of normal powers by appropriate stimuli." This conception had since been accepted by Ehrlich and others. Immunisation was only the augmentation of faculties which were performed as disposition. Predisposition was something positive but it did not suffice to protect the body against infection.

LECTURE III.

Delivered on Oct. 13th.

Tuberculosis.

Whereas tuberculosis was formerly considered to be a constitutional disease by the majority of physicians the belief that it was an infectious disease grew and culminated in the discovery of the tubercle bacillus by Koch in 1881. Sanatorium treatment, begun by Brehmer, demonstrated the curability of the disease by raising the resistance of the individual affected Consequently they had the specific bacillus and predisposition to deal with as factors in the causation of the disease. The erroneous view of some bacteriologists who ignored predisposition was based on laboratory experiments where large numbers of bacilli were introduced into the body, this in a manner which never took place in natural infection. That tuberculosis was frequently cured was shown by the records of necropsies. Virulent bacilli *had been found in the air passages of healthy persons* who had associated with the tuberculous. Tuberculosis was so general that every individual had an opportunity of becoming infected; the majority, however, remained healthy. Formerly the tubercle bacillus was regarded as an obligatory parasite, a view which had had to be modified since its successful cultivation upon glycerinated media, especially at temperatures beneath that of the body. The bacillus might become attentuated in cultures and it showed variations in virulence in the animal body. *Professor Hueppe opposed the famous* dictum of Koch with regard to the intercommunicability of bovine and human tuberculosis, on the grounds that different races of cattle had been found to possess different predispositions to infection and that numerous investigators had succeeded in infecting cattle with bacilli of human origin. Behring found human tubercle bacilli which did not at *first infect cattle to be capable of doing so* after passage through the goat. Anthropoid apes had been infected with human and bovine bacilli, as had also human beings. Cattle had been rendered immune to bovine tuberculosis by treatment with bacilli of human origin. Human and bovine bacilli must therefore be regarded as but varieties of one species of micro-organism. These varieties might show morphological differences and necessarily, in consequence of adaptation, they would show differences of virulence when obtained from the bodies of different species of animals. Similar observations had been made with regard to other bacteria—viz., the bacteria of septicæmia hæmorrhagica and the streptococci. Bacilli of avian *origin* had also been modified and they were forced to conclude that these also were but varieties of the mammalian bacillus. Opinion with regard to the mode of infection had undergone a change since Koch claimed that pulmonary tuberculosis indicated that the port of entry for the bacillus was through the respiratory passages. Several observers, including Professor Hueppe, had shown that pulmonary infection might also follow when the bacilli entered the lungs through the lymphatic and blood circulation, and Grawitz had pointed out the possibility of infection through the tonsils. Experiments made in Professor Hueppe's laboratory showed that if rabbits were fed with tuberculous material some developed intestinal and others pulmonary tuberculosis. Baumgarten produced pulmonary tuberculosis in rabbits through incoulations into the bladder and bacilli might be carried to the bronchial glands and lungs *from the submaxillary glands*. A special susceptibility of certain organs appeared to determine which organs should be affected. This was an entirely different view from that originally advanced by Koch. According to Professor Hueppe the *locus minoris resistentiæ* was to be found in the lungs in the adult and in the intestine in childhood. That a specific inherited predisposition existed was indicated by the fact that in certain families the children became tuberculous in succession on attaining a certain age. *In some cases the parts attacked* were often the same in the different members of a family. The fight against the bacilli alone would not suffice as a practical measure of prevention; they must also resort to hygienic measures which would increase the powers of resistance against infection. It was too early to form a judgment regarding the value of immunisation experiments against tuberculosis such as had been conducted by Macfadyen and von

LARGE BILE CYST OF THE LIVER; JAUNDICE WITHOUT CHOLELITHIASIS; INCISION AND DRAINAGE; RECOVERY.[1]

BY ALBAN H. G. DORAN, F.R.C.S. ENG.,
SURGEON TO THE SAMARITAN FREE HOSPITAL.

DR HALE WHITE considers that cysts of the liver not hydatid are very uncommon, seldom give rise to any symptoms during life, and are obscure in their mode of origin. Langenbuch, Waring, and Rolleston seem to be of the same opinion. On that account I think that the present case, where operative interference was necessary, is worth recording.

The patient was a married woman, aged 42 years, who was admitted into the Samaritan Free Hospital under my care on March 4th, 1903, suffering from deep jaundice and great enlargement of the liver. She had never been strong but had not suffered from any malady more severe than two attacks of influenza, the last being in December, 1902, when the jaundice was already marked. She had been pregnant seven times, bearing five children to term. Six years before admission she aborted at the second month through a shock caused by seeing a man carried to hospital after a street accident. No jaundice was observed as the result of the shock. The second abortion also took place at the second month. It occurred three years before admission and its cause must be dwelt upon. The patient slipped in her backyard and fell forwards, striking the right hypochondrium against the edge of a washing tub. A few hours later she aborted. She did not feel much pain in the hypochondrium after the smarting caused by the blow had subsided and certainly was not jaundiced. The last normal pregnancy ended by spontaneous delivery in April, 1901, and from that date the patient's health began to deteriorate. About four months before admission she noticed that her face began to grow yellow. Ten days before admission she suffered for the first time from a very violent attack of pain in the upper part of the abdomen, lasting for a few minutes. Several other such attacks followed and she felt gnawing pains across the epigastrium. She was troubled with diarrhœa, passing abundant semi solid white stools.

When I first examined the patient she appeared to be a somewhat emaciated woman, deeply jaundiced, the conjunctivæ being of a bright yellow colour. Itching was severe and kept her awake. She was naturally cheerful and quite free at the time from any depression, a point of interest in relation to an episode during convalescence. The abdomen was considerably distended and to the right of the umbilicus there was a large fluctuating swelling which I noted at the time as in the situation of the gall-bladder; it reached to a little below the umbilical level and was very prominent, bulging under the skin. Hepatic dulness reached to the fourth rib in the line of the nipple The edge of the left lobe of the liver reached the umbilical level; it was thin, easily grasped, but very tender. The pelvic viscera seemed to be healthy; the catamenia had become scanty during the present illness but remained regular. The pulse was 84, small, hard, and regular; there was no œdema of the legs or of any other part, nor were there hæmorrhoids. The heart and the lungs were healthy. The temperature was 100° F in the mouth on the night of admission but fell to normal after rest in bed. The appetite was fair. The urine was always turbid and deep orange-brown in colour, the specific gravity being 1022 to 1024; it cleared on boiling, becoming light olive green; on adding nitric acid, or boiling after the addition of the acid, a precipitate, deep purple in colour, appeared. There was no sugar.

I operated on March 10th with the assistance of Mr. A. C. Butler-Smythe; Major P. Carr White, I.M.S., worked the aspirator and Mr F. W. Collingwood administered ether and chloroform. I made an incision along the outer border of the right rectus over the prominent fluctuating swelling. There was no oozing; one vessel required ligature. A large cyst appeared with semi-opaque greenish-brown walls. I took it at first to be the gall-bladder. A pad was slipped into the kidney pouch and another below the liver; then the aspirator was used and two pints eight ounces of pure deep green bile were removed. When the cyst collapsed I found the gall-bladder perfectly healthy behind and below it The cystic, hepatic, and common ducts were plainly visible; they were quite normal and empty. The pancreas was soft and supple and there were no omental or intestinal adhesions. The right lobe of the liver was enlarged, the surface was not irregular but opaque from perihepatitis; the left lobe was of a uniform rich orange brown colour, with the capsule quite free from opacity. No calculi or any more cysts could be felt in the liver. The great cystic cavity occupied the lobulus quadratus and apparently the whole of the left half of the right lobe to the diaphragm and the back of the abdominal cavity. The gall-bladder was about three inches long, thin, and flaccid; it contained a little fluid, presumably clear, and was very moveable; the cyst had pushed it away from its groove. Its walls were healthy and no calculi could be felt. The right kidney was healthy and mobile. I inserted a quarter-inch red rubber tube into the cyst and sewed the edges of the opening, which I made around the aspiration puncture, to the peritoneum at the upper angle of the wound. The rest of the peritoneum was united with a continuous No. 1 silk suture and the sheath of the rectus (I had not divided the lateral muscles) in the same manner; the wound in the integuments was closed with interrupted silkworm gut. The patient slept well a few hours after being put to bed; I withdrew on the same evening 16 ounces of pure green bile. Dr. Cuthbert H. J. Lockyer examined the bile removed at the operation; it contained no trace of clot or hydatid elements.

The temperature during convalescence never exceeded 100°; the pulse was 96 for several days. The itching disappeared within 24 hours. The area of hepatic dulness was found to be reduced to its normal limits; the left lobe became less and less tender to touch. During the first week the dressings were saturated with green bile and about a pint of bile was removed through the tube daily by the aid of a syringe. The rubber tube was gradually shortened but was not entirely removed until the seventeenth day. Early in the third week the patient was depressed, as is often the case in jaundice, but the complexion continued to clear. On April 3rd the nurse informed me that the motions passed in the morning were coloured. On the next day I examined them; they were of a medium brown colour. The patient was once more cheerful; the conjunctivæ had become pearly white Henceforward till April 17th, when the patient left the hospital, 38 days after the operation, the motions remained dark and the discharge from the fistulous track left after removal of the tube diminished. An ounce or two of purulent bile were removed every morning through the track; the cyst was occasionally washed out with chinosol. The patient came to the hospital occasionally after her dismissal to have the wound dressed, but the cavity was syringed out daily at home with Condy's fluid On Oct. 19th, when I last saw her, she was in very good health though pus was still discharged from the fistula.

Pathology —Rolleston, Waring, Hale White, and others who have written on simple non-hydatid cysts of the liver admit that they are exceptional, obscure in their mode of origin, and rarely give rise to any symptoms during life They further imply that such cysts are usually small. Kilvington states that very large cysts of this class are nearly always single. None of these writers finds that simple cysts contain bile Specimens in the museums of hospitals in London do not throw much light on the present case. On inquiry I have been informed by the curators and pathologists of these institutions that no example of a large cyst which contained bile is to be found in these museums. Of the specimens in the museum of the Royal College of Surgeons of England the only one in any way akin to my case is No. 2757B which I find is figured in Waring's treatise (Fig. 22) That author observes that it is of about the size of a walnut and attached to the anterior surface of the liver immediately above, and to the right of, the gall-bladder. It seemed to me to be connected with the gall-bladder and only separated from its cavity by a thin septum; it may therefore represent a congenital malformation of the gall-bladder itself; it held an albuminous fluid. The cyst in my case contained pure bile and was quite unconnected with the gall-bladder.

Reported cases of la [illegible] In several instances cysts of the liv[illegible]ting from the surface of that organ [illegible] oved more or less completely by operation. Langenbuch refers to cases reported by Müller of Aix-la-Chapelle, Berg, and Hueter; other cases have been reported by Kaltenbach and Ward Cousins. Five cases where a unilocular, not hydatid, cyst lay inside the liver have been reported by Kilvington (operation by Frederick Bird of Melbourne), Bayer of Prague, Winckler, North, and Mayo Robson. In the cases reported by Bird, Bayer, and Winckler there was neither jaundice nor cholelithiasis; in Winckler's alone was there any trace of bile in the contents of the cysts. In North and Mayo Robson's cases there were jaundice and obstruction from calculi in the common duct, very definite in North's case. The contents seemed to consist more or less of bile in North's case, whilst in Mayo Robson's case bile flowed from the cyst after it was opened. In my own case there was marked jaundice but no trace of cholelithiasis; the cyst contained pure green bile.

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[1] A paper read at a meeting of the Royal Medical and Chirurgical Society on Oct. 27th, 1903

Quite recently Miller of Washington opened and drained a cyst containing five pints of bile in a girl under three years of age; the abdomen was enlarged at birth. The motions were pale and jaundice was absent; after the operation the motions became coloured. Miller considers that the tumour was a congenital dilatation of the gall-bladder and bile ducts, but the tumour occupied part of the liver, the round and suspensory ligaments being attached to its upper surface. Thus Miller's case may be of the same character as my own. I shall refer to it presently in reference to heredity.

Cavities in a liver containing gall-stones.—In the cyst which I opened no gall-stones were found nor did any come away through the fistula. In Case 22 in Mayo Robson's text-book the gall-bladder was opened and a number of gall-stones were removed; many more calculi were then found lying mixed with semi-purulent fluid in a cavity in the liver substance itself, "having evidently ulcerated through from the gall-bladder." But in the present case the gall-bladder was free from calculi, disease of its coats, or adhesions to the liver. Knowsley Thornton once removed a number of calculi from a cavity in the liver but I cannot ascertain whether the gall-bladder was in any way involved.

Having made some mention of other cases of bile cyst in the liver I will now dwell on certain more or less essential features in my own case.

The cause: injury or pregnancy?—The history of a blow on the right hypochondrium nearly three years before the jaundice set in is, to say the least, highly suggestive. It was severe and abortion followed in a few hours. This blow might have caused the rupture of a duct inside the liver followed by very slow extravasation of bile into bruised liver substance around it. A cystic cavity could thus be formed and ultimately all the bile secreted in the liver might be poured into the cyst. The pressure of the cyst in some way prevented the passage of the bile into the hepatic ducts; possibly, however, a small calculus blocked each of the main ducts which unite in the transverse fissure to form the hepatic duct. The evidence gained during the operation almost proved that the original seat of disease was entirely inside the liver. The cyst occupied a great part of that organ; [illegible] the right lobe was thick and opa[illegible] structure and over the left lob[illegible]ansparent. There was absolutely no trace of inflammatory changes around the hepatic, cystic, and common ducts, the gall-bladder, and the lesser omentum.

Against the theory of injury in my case it may be urged that blows on the right hypochondrium are common and seldom appear to cause damage to the liver; whilst when they do that damage is generally rupture involving the fibrous and serous coats. There is, of course, no absolute proof that the liver was damaged when the patient fell against the washing tub. I must dwell on the fact that pregnancy occurred and went on to term between the date of the accident and the appearance of the jaundice.

Congenital disease and heredity.—The pathologist may suggest that there was some congenital malformation or disease in the intrahepatic ducts, the results of which did not for some reason develop until adult life. There was no way of getting at any proof of such a condition in my case. The patient's children and near relatives seem never to have [illegible] symptoms of cholelithiasis. [illegible] patient was 50 years of age [illegible] the age of three weeks, her [illegible]ce, when a month old, had severe epistaxis (a complication from which the jaundiced mother had always been free), and died in the fifteenth week "with a mottled black and yellow skin." In a case reported by me of very chronic jaundice which dated from early girlhood the patient's eldest child, aged 11 years, had suffered from a severe attack with no symptoms of gall-stones. The patient had four or five attacks, all unaccompanied by pain, before she was 18 years old; then for 15 years there were no hepatic symptoms; at length cholelithiasis set in. In Miller's case the cyst existed at birth and was drained before the patient was three years old. It is easy to conceive that a congenital cyst of this kind might lie latent until adult life. These remarkable clinical facts suggest that overlooked heredity was possible in the present case, whilst local pre-natal or infantile disease with unusually tardy results was quite probable.

The contents of the cyst.—At the operation the cyst contained over three pints of pure olive-green bile, two and a half pi[illegible] later. [illegible] normal [illegible] abov[illegible] cavity discl[illegible] clear and [illegible]mmon duct.

Jaundice.—This symptom was marked in my case, but why it appeared suddenly four months before operation I cannot explain. It began to subside when the bile flowed freely out of the drainage track after the operation, but the bile did not colour the fæces until the fourth week. Thus some obstruction must have existed till that date, although the pressure of three pints of bile had been removed at the operation. The cyst probably pressed on the ducts or set up catarrh in them, as has been observed when jaundice is associated with hydatid cysts (Waring). Perhaps catarrh existed in my case and did not subside until the fourth week; but the three ducts looked very healthy at the operation, so that it must have been the radicles of the hepatic duct that continued to be obstructed for a while by catarrh or some other cause. *The experiences of Bayer and Winckler,* as well as the familiar instance of hydatid disease, show *that large intrahepatic cysts are not necessarily associated* with jaundice.

Hæmorrhage into the cyst.—No trace of blood could be detected in the bile removed during the operation and little, if any, in the bile which drained away from the wound afterwards—in short, there was no hæmorrhage into the cyst. It is evident, however, that a patient who walks about with [illegible] pints of fluid is liable to that [illegible] Kilvington's case.)

[illegible] disease.—The total absence of hydatid membranes in this large cyst and the fact that the pure green bile which it contained was free from any trace of microscopical elements of hydatid cysts make it highly improbable that the cyst was a product of hydatid disease. Even supposing we assume that the cyst was hydatid and that an intrahepatic duct burst into it how could we make out that the bile or some other agent cleared away all traces of acephalocysts, hooklets, &c.?

Menstruation.—The catamenia had been regular during the existence of the jaundice but more scanty than before the illness. They appeared on the second day after the operation; the show of blood was distinct but slight. Cocking's case shows that a woman may menstruate regularly and bear *children although subject to jaundice from infancy. Jaundice* clearly does not necessarily cause menorrhagia, nor does amenorrhœa seem to be the rule; when present it is most likely the result of ill-health or anæmia.

Treatment.—The drainage of the cyst was clearly indicated nor did any further procedure appear to be called *for when I operated. The result was most satisfactory.* By the fourth week, when bile began to pass into the bowel, the chances that a second operation to establish a communication between the cyst and the bowel would be necessary became remote. It is not remarkable that suppuration has occurred in the track which is not likely to become obliterated for some time as the hepatic tissue cannot readily close in around a cavity so capacious. In Bayer's case an abscess developed a few months after the operation; probably the drainage track was allowed to close too soon. Infection from sutures is difficult to avoid when a big liver cyst is drained.

We must agree with Kilvington that the curette should never be used; there is usually no epithelium lining big [illegible] cysts that could secrete so as to fill the cyst again. That writer recommends that a simple cyst should be dropped back when all the fluid has been allowed to escape, but he adds that when calcareous plates are present or when there is any bile in the fluid drainage is necessary. Of course, dropping back the cyst, or rather the liver with the big cystic cavity inside it, would have been out of the question in the present case.

In conclusion, I think that the total absence of any symptoms of shock after this operation is instructive. The common opinion that an operation on the upper part of the abdominal cavity necessarily involves shock is quite untrue. The alarming symptoms sometimes observed seem distinctly due to prolonged handling of the pancreas, the duodenum, the great vessels, and the nerve plexuses. In the days when incisions were made very short the operator's fingers, working in the dark, must often have bruised these important structures. Now that the parts are freely exposed to the operator's eyes much less handling is needed. In this case I could see everything and the parts involved in chronic cholelithiasis were all free from disease. The liver itself bears handling very well.

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ON THE GREAT IMPORTANCE FROM THE POINT OF VIEW OF MEDICAL SCIENCE OF THE PROOF THAT BACTERIA AND THEIR ALLIES ARE CAPABLE OF ARISING DE NOVO.

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THE intimate relations that have been proved to exist between micro-organisms and so many of the contagious or communicable diseases, and the discovery that in many cases the organisms in question act as the veritable contagia by means of which such diseases are spread from person to person, have exercised such an enormous influence over the minds of medical men that they have led to the almost universal establishment of ultra-contagionist views in regard to all these diseases. Just, it is thought, as organisms are propagated only and do not arise *de novo*, so the reigning doctrine in medicine has been for some time, and still is, that contagious diseases are propagated only and never arise *de novo*. The breaking down of the prejudice in regard to organisms by showing that they can originate independently of pre-existing micro-organisms of like kind would of necessity exert a powerful influence over medical doctrines and would pave the way for the admission that contagious diseases may also arise *de novo* instead of being only disseminated by contagion. Short of a proof of this kind there seems less chance of any such widening of doctrine being brought about.

To show the kind of feeling that exists I may recall the fact that one of the most distinguished physicians in this country not very long since said[1]: "If I can trace contagion in a very large number of the so-called specific diseases I consider it more reasonable to assume contagion in the minority than look about for another cause." And he went on to say that as many of these diseases are associated with the growth and multiplication of "living specific organisms" a belief in the *de novo* origin of these contagious diseases would "imply also a belief in spontaneous generation." This latter notion is undoubtedly very common and has been one of the principal causes that has stood in the way of a belief in the possibility of the *de novo* origin of a contagious disease. On this account, therefore, the proof of the heterogenetic origin of bacteria becomes a matter of very great importance for medical science. Still, the conclusion above drawn, notwithstanding its prevalence and great influence, does not of necessity follow, as I shall hope to show.

We all know that common bacilli and micrococci are constantly making their entry into the body through the intestinal and the respiratory mucous membranes and thence are gaining access to the lymphatic system. So that for the origin of this or that specific disease it may not be at all necessary that a *de novo* origin of micro-organisms should take place. Under the influence of unhealthy local or general conditions the common micro-organisms thus entering into the body may possibly be made to take on new properties and be, in fact, converted into one or other of the so-called "specific" or "pathogenic" micro-organisms. It is needless for me to cite in support of this latter possibility the vast array of facts now known concerning the variations and interchangeability of form that may be brought about in these micro-organisms by changes in the media and conditions to which they are subjected, and the still more important variations in function and in the chemical processes associated with their growth and multiplication that may be similarly induced. This is so notoriously the case that many writers, such as Billroth, Nägeli, Warming, Cienkowski, Ray Lankester, Zopf, and others have regarded these micro-organisms as mere developmental phases or varieties, modified by external conditions, of one and the same or but a very few distinct species. Many facts of importance in this relation in connexion with pathogenic bacteria and their possible derivation from non-pathogenic forms are matters of common knowledge.

There is one case, however, so pertinent to the present inquiry and of such great importance in itself that some details will prove most useful. I allude to our present knowledge concerning certain experimentally produced diseases in lower animals included under the name septicæmia. Two of these forms of septicæmia have been investigated experimentally with the greatest care.[2] One of them, known as "Davaine's septicæmia," may be originated in a previously healthy animal by injecting two or three drops of putrid blood (bullock's or that of any other animal) into the subcutaneous tissue of a rabbit. The animal dies in from 23 to 25 hours, bacilli in myriads and of a distinctive kind existing, even during life, in its blood. This constitutes the origin of a disease which proves to be contagious, and so much so that it can be propagated from animal to animal by even the millionth part of a drop of blood and thus on indefinitely. The other form is known as "Pasteur's septicæmia" and it is produced at will in this fashion. Let two or three drops of putrid bullock's blood from the same stock be this time injected into the peritoneal cavity of a rabbit rather than into its subcutaneous tissue and now a different form of the disease is established, though one which is also contagious and equally constant in its characters. In this case the animal does not die so rapidly, and while bacilli swarm in the fluids of the peritoneal cavity within 24 hours they are not to be found at the time of death in the blood though they appear there and throughout the body in the course of a very few hours after death. Another difference between these two varieties of septicæmia is that though the latter form of the disease is also contagious and capable of being propagated indefinitely by the inoculation of a *minute quantity of the peritoneal fluid, yet this fluid* contains a contagium which is nothing like so virulent as that contained in the blood in "Davaine's septicæmia." Instead of one-millionth of a drop, which is adequate for contagion in this latter case, it is found that about a drop of the infecting peritoneal fluid is needed in the case of "Pasteur's septicæmia."

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[1] Letter from Sir Samuel Wilks, Brit. Med. Jour., Dec. 23rd, 1893.

[2] See Report on Experimental Investigations on the Intimate Nature of the Contagium in certain Acute Infective Diseases, by G. F. Dowdeswell, Brit. Med. Jour., July 19th, 1884, pp. 101–8.

But now another and even more important point has to be mentioned. It is this. We are told that absolutely no difference can be detected between "Pasteur's septicæmia" and that which is initiated after the manner of Burdon Sanderson by injecting a small quantity of a germ-free chemical irritant into the peritoneal cavity or into the subcutaneous tissue of a rabbit. Difference in the site of introduction of the mere chemical irritant produces no difference in the disease. Its action in either situation is to set up a most virulent inflammation the fluids of which *speedily teem with bacilli*, and in every particular the malady so induced has been shown by other pathologists exactly to resemble "Pasteur's septicæmia." Burdon Sanderson's words concerning the actual *de novo* production at will of this contagious disease are as follows[3]: "If a few drops of a previously boiled and cooled dilute solution of ammonia are injected underneath the skin of a guinea-pig a diffuse inflammation is produced the exudation liquid of which is found after 24 hours to be charged with bacteria. ...... Other chemical agents will lead to the same results and *always under conditions which preclude the possibility of the introduction of any infecting matter from without*." Elsewhere[4] the same investigator refers to experiments which were made about the same time in order to throw light upon the cause of the appearance of bacteria in certain peritoneal exudations and to ascertain whether or not their presence was to be considered as "a mere result of the intensity of the peritonitis." He says: "To determine this experiments were made *during the following month (May, 1871) which consisted in inducing intense peritonitis* by the injection not of exudation liquids but of chemical irritants, particularly dilute ammonia and concentrated solution of iodine in hydriodic acid. As regards the ammonia, precautions were taken to guard against contamination by boiling and cooling the liquids as well as the implements to be used immediately before injection. In the case of the solution of iodine this was, of course, unnecessary. In every instance it was found that the exudation liquids, collected from 24 to 48 hours after injection, were charged with bacteria, whence it appeared probable [illegible] was dependent, not on [illegible] which the inflammation [illegible] *the inflammation itself*."

The organisms in the cases where germ-free chemical irritants have been employed have therefore come from the previously healthy body of the animal experimented upon—either by way of heterogenesis or by the waking up of previously "latent germs" of common micro-organisms, instead of being, as in the other experiments, modified descendants of the common putrefactive organisms contained in the bullock's blood. *But the point of importance is that* in either case, under the influence of local inflammatory processes of great intensity, such common organisms have been converted into specific or "pathogenic" micro-organisms, capable henceforth of preserving their specific characters and of "breeding true" in suitable media.

Dowdeswell, who has many times repeated these experiments for the production of both varieties of septicæmia, points out that the form named after Pasteur corresponds with what Koch has termed "malignant œdema" and that the bacillus which characterises it is an extremely common form often found in the outside world. Still, when the germ-free chemical irritants are used he declares his belief that infection from without is precluded and that the bacilli "originated from within the animal organism."[5] In regard to the production of the form named after Davaine it appears that putrid blood sometimes fails, especially in winter. Some particular stage of the putrefactive process seems necessary. Nothing more than this is proved, though Dowdeswell assumes, without adducing a vestige of proof, [illegible] *form of the disease in* [illegible] blood owing to "atmo- [illegible] nce tends to show that *it is one of the many forms developed at a certain stage* in the putrefying blood which is capable of infecting the system through the subcutaneous tissue but not when introduced into the peritoneal cavity. This bacillus of Davaine's septicæmia is, according to Dowdeswell, a so-called "specific organism" whose characters he has minutely described;[6] and it is not known to exist in the outside world apart from putrid blood in certain stages of change.

This production of two different forms of septicæmia by the inoculation of some of the same putrid material into different sites is a matter of the greatest importance. The putrid blood under the skin gives rise to one form of specific micro-organism and contagious disease, while two or three drops of the same putrid blood introduced into the peritoneal cavity of a similar animal give rise to swarms of a different organism and the development of another contagious affection. *The differences in the inflammatory processes in the* two situations are capable, that is, of transforming some common micro-organisms into two quite different specific bacilli, while the germ-free chemical irritants, with even more certainty, give rise to one and the same contagious affection whichever may be the site of their introduction. These are all facts the importance of which can scarcely be over estimated. They afford a sort of beacon light capable of illuminating the obscurity surrounding the origin of many other contagious diseases. A few examples will suffice to show the mode in which they may prove helpful in over coming difficulties which are commonly thought to stand in the way of a belief in the *de novo* origin of other of these contagious diseases.

In typhoid fever we have one of the commonest of contagious affections about the possibility of whose *de novo* origin the greatest difference of opinion has long existed, though of late the ultra-contagionist view has been decidedly gaining ground here as in other directions. *But there are, perhaps, some still who, while admitting contagion and the common spread of the disease through con*taminated water or milk or by other agencies, would be inclined to agree with Rodet and Roux that this disease may originate *de novo* and that the typhoid bacillus of Eberth is merely an altered and virulent form of the common bacillus of the colon.[7] The researches of these observers have tended to show that this latter bacillus, which commonly exists in the human intestine without harmful results, can become highly virulent and infective, under certain conditions, when introduced into water. Hence they conclude that not only typhoid dejections but simple fæcal pollution of water may produce typhoid fever in those who drink it. This is undoubtedly a very important point and one which hitherto has not been adequately taken into account by those who have attempted, as they thought, to trace the source of contagion in many cases of typhoid fever. Because there has been pollution of a water source by a man suffering from diarrhœa, and typhoid fever has been produced in persons drinking such water, it must not be assumed without proof that the man who polluted the water was suffering from typhoid fever. As bearing upon this view of Rodet and Roux it is interesting to note that typical enteric lesions in the small intestine have been artificially induced in lower animals by R. Row[8] of Bombay by intoxicating them with the products of the bacillus coli communis; and that the lesions thus produced have been even more marked than when similar animals have been intoxicated with the products of the more specialised bacillus of typhoid fever—though in the latter case death was produced with more pronounced general symptoms and also more rapidly than in the former case.

While one mode of origin of the disease may be brought about in the manner indicated by Rodet and Roux (that is, in a manner only too likely to be ascribed to a spread of the disease by water-borne contagia) it is well known that another quite different mode of origin of the disease was advocated by Murchison in his celebrated work on "Continued Fevers."[9] He believed that the toxic cause of typhoid fever might originate in pent-up decomposing fæcal matter and that in these cases the mode of entry of the poison into the system was through the air rather than by means of water taken into the alimentary canal.

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[3] [illegible] Society, 1872, pp. 306-8. (The [illegible]

[4] [illegible] al and Chirurgical Society, 1873, [illegible], p. 104.

[5] Journal of the [illegible] II., p. 310, and the Quarterly [illegible] 6.

[7] As to the degr[illegible] s and the frequent difficulty [illegible] ee Crookshank's Bacteriology and Infective Diseases, fourth edition, 1896, pp. 344-46.

[8] Transactions of the Bombay Medical and Physical Society, vol. iv., No. 5.

Others, again, hold views closely related to this. Instead of supposing that the general health is lowered and the system poisoned by breathing the emanations from choked drains and cess-pits (causes to which isolated or small groups of cases of typhoid fever seem often traceable) they lay stress upon widespread pollutions of the soil beneath houses and upon variations in the height of ground water of such a kind as to facilitate the entry of emanations from such soil into houses and the production thereby of slowly poisonous effects upon many persons simultaneously. They would thus account for the endemic and epidemic visitations of typhoid fever in particular towns and for their special autumnal prevalence. Speaking on this latter subject in a lecture on "Some Points in the Etiology of Typhoid Fever" Sir Charles Cameron,[10] the medical officer of health of Dublin, said: "Localised outbreaks of typhoid fever can frequently be directly traced to the use of a particular supply of polluted water or milk, but the widespread epidemics of this disease, and even its persistent occurrence in so many towns, must be due to some other cause or causes. For example, in Dublin it was epidemic in 1891-92 and in 1889 it appeared in all parts of the city and adjacent districts." These epidemics, Sir Charles Cameron feels assured, could not be traced to contamination of the water-supply, for in his view "there are few cities in the world with such good water as Dublin fortunately possesses." On the other hand, there is very poor natural drainage owing to the low-lying situation of the city and the soil in very many parts is foul and saturated with decomposing organic fluids. The main cause in Dublin and in other cities of these epidemics of typhoid fever is, Sir Charles Cameron thinks, to be found in these very impure states of the soil. He says he has carefully investigated the subject and is "convinced that typhoid fever is often caused by underground air entering our dwellings" from such polluted soils.

Some years since I received a letter from Dr. Angus Mackintosh,[11] then medical officer of health of Chesterfield, in which, as a result of his experience, he professed his strong belief in the *de novo* origin of typhoid fever. He said: "If not how can those who believe otherwise explain the mystery that enteric fever decreases in proportion as the sanitary condition of any district is improved and that as a direct consequence and in every case. ...... I say, from a lengthened experience in one of the most fever-stricken districts in England, and after carefully investigating 500 cases of that disease, in my capacity of medical officer of health, that 90 per cent. of these could not be traced by me or anybody else to a previous enteric case. The sanitary authority for which I act have borrowed £100,000 from the Loan Commissioners during the last four years for drainage works and water-supply, and by alterations and arrangements in regard to these important items they have reduced enteric fever already in the district to a very small proportion indeed." The moral would seem to be that purity of soil is almost as important as purity of air or water; that bad drainage may pollute both air and water; and that some cases of non-specific fæcal contamination of the latter—and not only pollution by typhoid dejections—may act as causes of typhoid fever. I feel assured that these are safer and sounder doctrines than the narrower views promulgated by ultra-contagionists.

If we look to another disease or rather group of morbid conditions—namely, pulmonary phthisis and tuberculous affections of other organs and parts—a group so common and fatal as to constitute one of the scourges of the human race—there is room for the same uncertainty as to the proportional limits between their *de novo* origin and their spread by means of contagion, though the tendency of late has been to believe in contagion only. The great change of view that has been generally adopted by the medical profession in regard to this matter within the last few years is most remarkable and unprecedented. This change, too, has developed, not so much by reason of fresh and conclusive evidence as to the frequency of contagion in the human subject, but almost entirely upon theoretical considerations and upon unwillingness to believe that a disease caused by a bacillus and capable of being freely propagated experimentally among lower animals inoculated therewith can also arise *de novo*. At the present time it is regarded as quite heretical to think it possible that phthisis can arise independently, while as late as 1896 we find Crookshank in his "Bacteriology and Infective Diseases" (p. 387) writing as follows: "Whether the disease in man is contagious is an open question, though numerous cases of supposed communication between husband and wife, brothers and sisters, have been reported, and Ransome showed that tubercle bacilli were present in the breath in phthisis. On the other hand, the experience in consumption hospitals does not support this view, there being no evidence of the communication of the disease to nurses and hospital attendants." Such, then, have been the remarkable discrepancies in the common view entertained upon this question within a brief period of less than ten years.

At present there is a beneficent enthusiasm for "sanatoriums" in this and other European countries for the relief or the cure of patients who are afflicted with this common and very fatal affection. Phthisis is unquestionably capable of being mitigated—and even cured in many cases where it is not too far advanced—by plenty of fresh air and the best hygienic conditions.[12] This seems to me rather to lend favour to the view that it is commonly an affection produced *de novo* and altogether apart from contagion, as we formerly believed. If good hygienic conditions and improved vitality will lead to the cure of the disease, then low vitality and bad hygienic conditions may have sufficed to produce it. But, it will be said, you forget the presence of the tubercle bacillus. To which I would reply, Have not the experiments made for the artificial production of "Pasteur's septicæmia" almost completely got over this difficulty? The injection of a small quantity of a germ-free chemical irritant into the subcutaneous tissue of a healthy rabbit has made it plain that pathogenic micro-organisms may either be produced by heterogenesis in the focus of inflammation thus caused or else that the germs of common bacilli existing in the healthy animal on which the experiment has been made have been roused, rendered extremely virulent, and have been converted, in fact, into pathogenic bacilli henceforth capable of acting as contagia for the indefinite propagation of this form of septicæmia. Here we have had, over and over again, in the plainest way, the *de novo* production of a contagious disease in which, as in phthisis, bacilli act as the contagia. Why, then, should not an analogous process be similarly possible in the case of phthisis and other tuberculous affections? A bacillus just as specific in its characters as the bacillus tuberculosis makes its appearance also when "Davaine's septicæmia" is produced experimentally. Half a century ago, and less, many conditions now termed "tuberculous" were then spoken of as "scrofulous"; and scrofula was recognised as a condition of low vitality in which inflammations of skin and mucous membranes were common, in association with enlargements of lymphatic glands in the neck and axillæ, and not infrequently chronic diseases of the joints. Now, discarding the old term, we speak of tuberculous joints and tuberculous lymphatic glands, because it is known that the specific bacillus tuberculosis is to be found in the tissues affected, though perhaps nowhere else in the body.

But how, it may be asked, in accordance with present ultra-contagionist views as to the mode by which tuberculous affections are disseminated, are we to explain the isolated occurrence of the tubercle bacillus within the tissues of joints, in the lymphatic glands of the axillæ, or within some of those in the neck? The two generally admitted channels for the entry of such micro organisms into the system are through the mucous membrane of the air passages and that of the alimentary canal, but entry by either of these routes would not satisfactorily account for *their isolated presence in the glands of the axillæ, or in some* of those not infrequently involved in the neck, or within the tissues of the knee or hip-joints.

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[9] The Continued Fevers of Great Britain, 1862, pp. 437-456.

[10] THE LANCET, June 11th, 1892, p. 1285.

[11] Letter dated August 26th, 1876.

[12] Sometimes, too, even a simple surgical operation, such as drainage of the abdomen in a case of tuberculous peritonitis, will lead to a cure of the patient notwith[illegible] the presence in his tissues of untold l[illegible] to the British M[illegible] o Robson says (Brit. Med. Jour., August 1st, 1903, p. [illegible] seen patients reduced to the last extremity of weakness, where the mesentery was standing stiff with tubercle and the abdomen was swollen to an enormous size, recover completely and be thoroughly restored to perfect health from a condition apparently completely hopeless."

It has for a long time seemed to me that chronic inflammations of lymphatic glands in certain cachectic states of the system (such as we formerly labeled "scrofulous") may be of such a nature as necessarily to produce therein the little nodules which we recognise and name "tubercle." And this same view was very ably set forth in some detail by Mr. (now Sir) Frederick Treves[13] at the International Medical Congress of 1881 in a communication entitled "Tubercle: its Histological Characters and its Relation to the Inflammatory Process, as shown in Tuberculosis of Lymphatic Glands." He points out that all the characters of the nodule known as "tubercle," apart from the bacillus which had not then been discovered, can be referred to a chronic inflammatory process. He says: "The so-called tuberculous process in the external lymphatic glands can often be traced to some simple inflammatory process that implicates the radicles of the gland. Here the first change communicated to the gland is essentially inflammatory and as that change develops in the organ it begins to assume peculiar features." Of course, it would now be said, Yes, what you say may be true, but the irritative or inflammatory influence, the effects of which you recognise, is really due to, and caused by, the presence of the tubercle bacillus. To this it may fairly be rejoined that such a view ignores the real and often obvious cause of the irritation of the gland; that it ignores the general state of the system which pre exists and coöperates; and that it postulates infection without proof as the initial cause of the whole phenomena. But in the absence of any rational or even plausible means of accounting, in accordance with contagionist theories, for the presence of tubercle bacilli in certain lymphatic glands and in these alone, or in some joint and nowhere else in the body, it is, I think, most in harmony with existing knowledge to suppose that this particular bacillus is a product rather than a cause of certain inflammations occurring in lowly vitalised subjects, in just the same way that the appearance of the bacillus of "Pasteur's septicæmia" seems, as Burdon Sanderson put it, dependent "on the intensity of the inflammation itself." The adoption of such a view would go far to explain many difficulties; and the question of the etiology of tuberculous affections would be greatly simplified and brought again more closely into accord with former views.

Quite recently von Behring has been advocating a very different hypothesis.[14] He believes that infection takes place in the main in infancy, through the intestinal canal, and that thereafter the infecting agents lodging in different parts of the body commonly remain latent for years, perhaps for a long series of them He relies in part upon recent investigations showing the high percentage of cases in which tuberculous lesions of some kind are to be found at *necropsies or demonstrated* during life by *tuberculin and* other means; and in part upon his own researches demonstrating that tubercle bacilli can, in infancy more especially, easily pass from the intestine into the lacteals and thence into the blood. He discredits the now commonly accepted views as to the frequency of infection through the lungs. It seems true that he has proved the possibility of infection with tubercle or other bacilli in the manner he indicates. I, on the other hand, have proved the possibility of their *de novo* origin. He postulates long periods of latency after systemic infection, hard to be believed; and ultimately requires agencies for waking the tubercle bacilli into activity, just such as I suppose may be adequate for calling them into being—namely, malnutrition and conditions of lowered vitality howsoever produced, though among such factors impure air and inadequate or improper food must take an important place.

It would, of course, be an easy step to recognise the extreme probability that the conditions which had sufficed for the appearance of the characteristic bacilli in the glands and in the joints might also obtain in the lungs. We might then return to something more like the sober views that prevailed concerning the etiology of phthisis only a few years ago when the affection was freely recognised as generable in the individual, altogether apart from contagion, and contagion was supposed to take only a limited share in the production of the disease. This seems the more rational and most warranted view to take. It is one which would tend to *lay stress* upon the need for prevention as well as cure, but it would not encourage the view that the disease could be exterminated, or even very largely diminished, by the provision of "sanatoriums" and by efforts to minimise the risk of contagion. I merely mean to imply that, in my opinion, contagion is as much overrated as genesis is underrated and that our notions concerning prevention must not be too much centred upon the mere elimination of contagion.

I will only briefly refer to one more disease, but to one having several points of agreement with the affections last considered and concerning which much discussion has been taking place of late. I allude to that terrible affection leprosy which is generally admitted to be contagious only in a low degree and under the influence of very special conditions. Being an affection so slightly contagious and yet so widespread in different countries the question naturally arises, Is it not also generable *de novo?* It was in the past freely believed to be so, but since 1874, when Hansen discovered that a bacillus was always to be found in the tissues affected, there has been a growing antagonism to this view owing to the yearly increasing importance of bacteriological work and the ultra-contagionist views that bacteriologists seem invariably to favour. Formerly the malady was commonly ascribed to the conjoint influence of bad hygienic surroundings, poverty, and exposure, together with deficient and improper food, more or less putrid. Of these conditions it would seem quite possible that some peculiarities in food may have been, and may still be, most potential in favouring the development of the disease. It seems to me that Mr. Jonathan Hutchinson has distinctly strengthened this view and brought forward some valuable evidence in support of his own position that badly preserved and semi-putrid fish is one of the most important factors pertaining to this category. At all events, whether his conclusions are to be accepted as correct or not, his personal researches in South Africa and in India in collecting evidence on this very important subject, involving as they must have done so great an expenditure of time and labour, are surely worthy of the highest praise.[15]

The conclusion to which he has come in regard to the relative frequency of the spread of the disease by contagion and its *de novo* origin is very similar to that arrived at by the leprosy commissioners in India. Their verdict, given in 1890–91, was that the influence of contagion was "as small as, or even rather less than, in the case of tuberculosis,"[16] and that in the great majority [illegible] *de novo.* This I regard as a [illegible] one quite explicable in accord [illegible] it would be absolutely repudiated by many, perhaps by most, ultra contagionists, as may be gathered from an article on Leprosy in the *Quarterly Review* for April, 1903, from the pen of a medical writer. Referring to this verdict of the commissioners in India and reflecting perhaps the prevailing medical opinion of to-day this writer says (p. 397): "But *did any one* of the commissioners or does anyone with knowledge of the subject contend that tuberculosis arises *de novo?* What induced the commissioners to come to the conclusion as to the *de novo* origin of leprosy is a psychological puzzle and it is difficult to see how the supporters of such an hypothesis account for the presence of bacilli in the leprous patient. Are we *to suppose that these micro-organisms* arise spontaneously?"

In the debate which took place at the Royal Medical and Chirurgical Society Mr. Hutchinson met with the same kind of intolerance and there was a similar ignoring of facts which would have permitted his critics to find less difficulty in accounting for the presence of the bacillus in a case in which leprosy had originated *de novo.* They should not have forgotten the specific bacillus of "Pasteur's septicæmia," which can be produced at will by skilful investigators with the aid *not* of semi-putrid food but of a few drops of putrid blood It was not even absolutely necessary, as I have shown in this communication, that they should believe in a *de novo* origin of the bacillus itself; it was still less necessary that they should require its presence to be demonstrated in the bad fish or other food; and it was absurd, as I take it, gravely to attempt to shunt the real question by the gratuitous statement that "the origin of the germs of disease was probably in the remote geological past." It is a pity the able author of this sentiment did not give us some hint as to the mode of production of these germs in the past and what his warrant was for using the word "probably" in such a connexion.

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[13] Transactions of the International Medical Congress, vol. i., pp. 293–303.

[14] Deutsche Medicinische Wochenschrift, Sept. 24th, 1903.

[illegible]

slight in tuberculosis.

What I have said in regard to the possible *de novo* origin of tuberculosis would, in fact, with slight variations be applicable in regard to leprosy. It cannot be denied that the disease is to a slight extent contagious but there is much evidence to show that in the main it arises *de novo*. There is certainly nothing unreasonable in the supposition that putrid fish, or other bad food of like kind, may carry into the system bacteria and the toxic products which they have formed, and that the continued influence of such bodies may in some persons act as irritants and either engender or awaken organisms in this or that tissue having the characteristics of the leprosy bacillus, just as the boiled dilute liquor ammoniæ injected into the subcutaneous tissue of a guinea-pig or a rabbit produces, even within a few hours, swarms of the bacillus met with in "Pasteur's septicæmia," or as two or three drops of putrid blood in the same situation may give rise to the appearance throughout the body of swarms of the more distinctly specific bacilli which suffice for the indefinite propagation of "Davaine's septicæmia."

In any case the importance of diligently seeking after the cause of leprosy must be admitted and Mr. Hutchinson[17] is obviously right when he says: "It cannot be necessary to insist that the prevention of leprosy is a work of far greater beneficence than is the mere provision for the care and comfort of the leper. ...... Not only in India but in South Africa, the West Indies, and many other of our colonies, the saving in money as well as the mitigation of human suffering would be immense if the leprosy question were once settled. Large sums are now benevolently devoted to asylums for lepers. My conviction is strong that one-tenth of the sums thus annually expended would, if devoted to discovery of the cause, render these establishments unnecessary and save their cost for all time."

Manchester-square, W.

THE TREATMENT OF PULMONARY TUBERCULOSIS BY HIGH-FREQUENCY CURRENTS (LOW POTENTIAL) AND INTRALARYNGEAL INJECTIONS OF ANTISEPTICS.

BY J. CUNNINGHAM BOWIE, M.B., C.M. GLASG., D.P.H. F.P.S. GLASG.

HAVING been for some years interested in the treatment of phthisis it occurred to me to try whether electricity could influence the toxicity of tuberculin or the toxins of the micro-organisms usually found associated with tubercle bacilli in the pulmonary lesions. I found that the passage of a current of electricity through the toxins considerably modified or annulled their toxicity and that the greater the volume of electricity used the more quickly this was accomplished. From this I concluded that electricity might be of value in the treatment of phthisis or of other diseases where bacterial toxins had to be contended with and it appeared to me that the volume of electricity was an essential factor. In order to pass this volume of electricity into the body I relied upon the high-frequency current. Further, I believed that pathological changes in the tissues must necessarily bring about a difference in their resistance to the current and that a low tension would obviate or lessen any danger which might arise in consequence. To meet this difficulty it was essential that in the working of any high-frequency apparatus it should be possible to regulate frequency, voltage, and ampèrage, and accordingly with the aid of an electrical engineer I designed a machine possessing these advantages and a description of the apparatus which I have used in my experiments appeared in THE LANCET of May 2nd, 1903, p. 1247.

In the administration of the current the electrodes are applied directly to the thoracic walls and are made to embrace the situation of the lesion and the pulmonary tissues around it. Having concluded that the subject is a victim of phthisis pulmonalis it is essential to consider, not only the clinical history of the case and the nature and extent of the lesion, but also the effect which the disease has produced upon the general health of the patient. One must also take into consideration the physique, temperament, and habits of the subject. For instance, chronic alcoholism is in itself almost a barrier to successful treatment. By taking these into account it is possible to form a more accurate estimate of the patient's powers of resistance to the tubercle bacilli and their toxins and to the toxins of a mixed infection. To appreciate this will materially assist in giving a prognosis upon the case. This will become more evident when it is considered that some cases of phthisis pulmonalis which at first might appear to be hopeless will respond favourably, while others of apparently less grave nature will not be so amenable to treatment. Some consumptives have a greater toleration to the toxins of the tubercle bacilli than others and as a consequence it is often found that with an extensive lesion the body has suffered comparatively little, while another case with a more limited lesion will have suffered to a greater extent. When the disease has assumed a chronic character it might be concluded that the case would be more amenable to therapeutic measures than one which is running a more acute course, but this is by no means always the case, because in the more chronic form of phthisis the toxic products absorbed from the lesion have had a longer time in which to damage cell metabolism.

If 28 or 48 cubic centimetres of almond oil containing six centigrammes of iodine, 24 centigrammes of thymol, 0·5 gramme of menthol, and 1·5 cubic centimetres of beechwood guaiacol be injected intralaryngeally we apply to the lesion and the toxins, to the bacilli and the other micro-organisms of the mixed infection, a solution of antiseptics of the above strength. These antiseptics with the oil are partly absorbed by the lymphatics of the lungs. That portion which becomes volatile saturates the residual air of the lungs.

By the combined action of high-frequency currents and antiseptics I believe it is possible to bestow upon the organism a stronger power of resisting the toxins of the tubercle bacilli and other micro-organisms which may be associated with them, with the result that the vital powers of the organism become raised and the pulmonary tissues approximate to their original degree of resistance. That the tubercle bacilli lose their virulence is evident from the changes which occur in their morphological characters—i.e., they become thin, attenuated, and stain but feebly. Thus the body can be given a more or less complete immunity to the toxins of the lesion for the greater part of the 24 hours every day. The under-mentioned cases are cited as examples in which the patients were submitted to the combined treatment by intralaryngeal injections of antiseptics and low-tension high-frequency currents. The injections were administered twice daily and the electricity once. The ampèrage of electricity passed through the pulmonary structures varied from 300 to 800 milliampères at a pressure of from 50 to 70 volts, and the time of each application was from ten to 20 minutes. The arrest of the lesion is brought about more quickly by this combined treatment than by the use of antiseptic oils alone, and my experience shows that the high-frequency currents promote its healing.

CASE 1.—The patient was a female, aged 35 years, married, and the mother of five children, the youngest being eight months old. For over a year she had been troubled with a cough and expectoration (the latter especially in the morning), night sweats, and loss of flesh and vigour. The sputum contained tubercle bacilli. The family history was tuberculous. There were a pulmonary lesion on the left side in the supra- and infra-clavicular regions, dulness, and increase of vocal fremitus. The respiratory murmur was harsh and jerky, a few clicking and moist râles were audible, and the voice was husky at times. The larynx was congested but there was no paleness to indicate a tuberculous process. The temperature was 99° F. On alternate days 250 milliampères of electricity were passed through the larynx and the voice quickly regained its normal tone. The patient was under treatment for eight months and now feels quite strong. Her gain in weight was ten pounds. The temperature is normal. Physical examination of the chest points to arrest of the lesion.

CASE 2.—The patient, a male, aged 19 years, complained of cough with expectoration, hæmoptysis, and loss of flesh and vigour His height was 6 feet and his weight was 10 stones 6 pounds The thorax was well formed, there was restricted movement on the right side The family history was tuberculous There were a pulmonary lesion on the right side immediately below the middle line of the clavicle, dulness, and increase of vocal resonance, the respiratory murmur was harsh and hesitating and mucous râles were audible, the sputum contained a few tubercle bacilli The patient was under treatment for nine months, but some time prior to the expiration of this period the cough and expectoration had ceased Physical examination of the chest does not reveal any evidence of the lesion The patient feels quite strong, his gain in weight is 20 pounds

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[17] The Times, May 25th, 1903.

CASE 3 —The patient was a male, aged 31 years He complained of cough, with expectoration, night sweats, loss of flesh and strength and impaired appetite His evening temperature was 102° F He attributed his condition to an attack of influenza 18 months previously His family history was tuberculous There were a pulmonary lesion on the right side in the supra and infra clavicular regions flattening and dulness There was increase of vocal fremitus, bronchial breathing, clicking and mucous râles were audible The sputum contained tubercle bacilli, numerous and vigorous The patient was under treatment for ten months At the expiration of six months the expectoration had ceased and there was but little cough whilst the temperature was normal He now feels quite well, has gained in weight 18 pounds and from physical examination of the chest it is difficult to indicate the lesion

CASE 4 —The patient, a female, aged 19 years, complained of irritating cough and slight expectoration which often contained traces of blood, she attributed her condition to an attack of influenza nine months previously Her family history was tuberculous There was a pulmonary lesion in the right side, movement was restricted in the infra clavicular region, there was perceptible dulness and the respiratory murmur was rough and halting, in the inter scapular regions a few mucous râles were audible The sputum was centrifugalised and a few tubercle bacilli were detected The duration of treatment was seven months and at the end of this period the patient had no cough or expectoration The temperature was normal She feels quite well and has gained in weight ten pounds Physical examination of the chest does not reveal any evidence of the lesion

Cardiff

SOME CASES OF DILATATION OF THE BRONCHIAL TUBES AFTER MEASLES

BY THEODORE FISHER M D, M R C P LOND

PHYSICIAN TO OUT PATIENTS TO THE BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN PATHOLOGIST TO THE BRISTOL ROYAL INFIRMARY

IN the post-mortem room from time to time one meets with dilatation of the bronchial tubes in children The dilatation may be widely distributed through both lungs or it may affect only one lung, or perhaps only one lobe of a lung which may be the upper or the lower lobe In other cases one lobe in each lung may show marked dilatation of the bronchial tubes, in which case it is generally both lower lobes that are affected Occasionally when the dilatation of the bronchial tubes is limited to one lung or to one lobe of a lung a definite local cause in the form of some obstruction to the bronchus or one of its main divisions may be found For example an enlarged caseous bronchial gland may in rare instances give rise to obstruction I have met with one case but only one of marked character due to this cause In other cases a foreign body may be found and possibly such a cause for dilatation of the bronchial tubes is more common than the evidence of the post mortem room might lead one to suppose The fact that a foreign body is not found at the necropsy does not prove that such a body was never present For example, in a case recorded by Mr O A Morton[1] which I saw clinically and in the post mortem room there was a history of a small steel body having entered the air passages three years before and the child's illness had dated from that event, yet at the post-mortem examination no trace of the foreign body or other cause of obstruction could be found in the bronchus of the affected lung the bronchial tubes of which were dilated from apex to base The steel body must either have rusted away or have been expectorated without attracting attention In other cases where sweets or portions of nuts enter the air passages solution or disintegration may possibly occur In connexion with the mention of sweets, an illustration may be given of the difficulty of obtaining a trustworthy history, even from intelligent parents, of the entrance of a foreign body into the air passages In a little girl brought to the Bristol Royal Hospital for Sick Children and Women for chronic lung trouble I found what I considered to be obvious evidence of dilatation of the bronchial tubes in the lower lobe of the left lung, yet careful questioning of the mother failed to elicit any facts suggesting the entrance of a foreign body into the air passages On the next visit, however, the mother apologised for having forgotten that about nine months previously when the child was sucking an "acid drop" the sweet had gone the wrong way" Violent fits of coughing followed which left the child very exhausted A medical attendant was called in four days later who found the child feverish and decided that it was necessary to keep her away from school for a week The troublesome cough from which the girl suffered had dated from that time

While some cases of dilatation of the bronchial tubes in children are due to pressure upon a bronchus or upon one of its divisions by a caseous gland and others to blockage of the bronchus or of one of its divisions by a foreign body, some cases undoubtedly occur as a sequel of broncho-pneumonia Curiously enough the last four instances of dilatation of the bronchial tubes of this character met with by myself have apparently been occasioned by broncho pneumonia occurring as a complication of measles In all the cases the children were said to have been free from any symptoms of disease in the chest until they were attacked with measles Within a few weeks or months of the onset of measles death occurred and dilatation of the bronchial tubes in varying degree was found

The first and least marked case occurred where death took place earlier than in the other cases This case was met with at the Bristol Royal Hospital for Sick Children and Women when I was taking the work of the senior physician, Dr C Elliott

CASE 1 —A girl, aged three years, was brought to the hospital with broncho pneumonia four weeks after an attack of measles and was admitted The child was obviously very ill, the pulse was 170, the respirations were 72 and the temperature was 100° F Numerous sharp râles were heard over both sides of the chest but especially over the right side, and we were doubtful whether we had a case of broncho pneumonia or of acute tuberculosis Nine days later the child died At the necropsy the greater part of the right upper lobe was found to be solid and the bronchial tubes everywhere were slightly but definitely dilated giving a sieve like appearance to the lobe Patchy consolidation was present in the middle and lower lobes and the affected areas showed similar dilatation of the bronchial tubes In the left lower lobe there were very small scattered areas of broncho-pneumonia but no obvious dilatation of the bronchial tubes was present

In the next case the dilatation of the bronchial tubes was very much more marked

CASE 2 —A boy aged one year and eight months, was brought to the out patient department of the Bristol Royal Hospital for Sick Children and Women on Jan 26th, 1903 The child had the pale puffy face not uncommonly seen in children with chronic lung trouble The fingers were slightly clubbed and the breath was offensive. The physical signs of the lungs showed a somewhat dull note over the whole of both lower lobes and marked bronchial breathing was present On inquiring into the history it was found that the child had suffered from measles at the age of eight months and had been affected with cough since that time This fact, together with the aspect of the child and the clubbed fingers and offensive breath led me with some confidence to enter in my notebook 'dilated bronchial tubes after measles' with recent broncho pneumonia. The child died four days later and the necropsy was performed by Dr Bertram Rogers Both lower lobes were found to be adherent to the chest wall and somewhat contracted On section of the lungs the bronchial tubes were seen to be everywhere greatly dilated and their walls to be thickened. Some of the cavities were large enough to hold a medium-sized pea. The upper lobes showed no dilatation of the bronchial tubes but small patches of broncho-pneumonia were present On microscopical examination the lower lobes showed no general fibrosis. There was considerable increase of fibrous tissue with destruction of alveoli immediately around the dilated bronchial tubes but for the most part the intervening lung substance was unaffected except that recent broncho-pneumonia was present. A very noteworthy feature of this case, which I have seen in other cases of dilated bronchial tubes in children, was great thickening of the blood-vessels, mainly of the external coats

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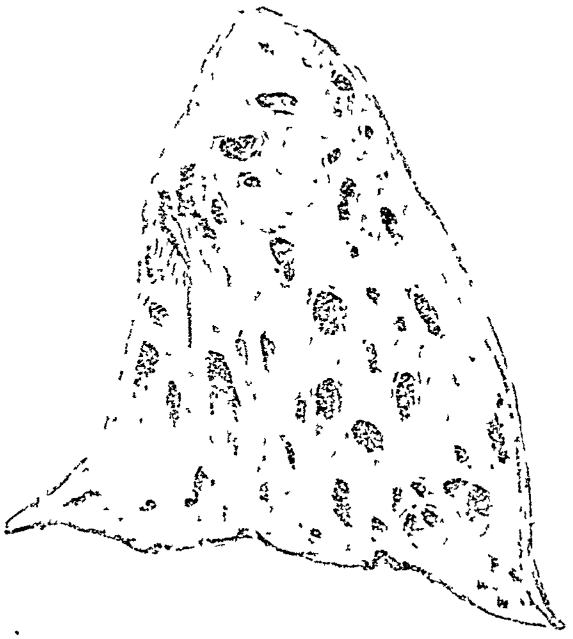
[1] THE LANCET, July 14th, 1894 p 78

FIG. 1.



Section of the right lower lobe in Case 2. The left lower lobe was similarly affected.

The two next cases were met with in the post-mortem room of the Bristol Royal Infirmary.

CASE 3—A boy, aged one year, was admitted into the Bristol Royal Infirmary on Nov. 21st, 1902, under the care of Dr. J. E. Shaw. The patient had suffered from an attack of measles four months before and since that time a cough had always been present. He had been worse during the week before admission. Widespread bronchophony was present on the right side of the chest, but loudest over the upper lobe, where cavernous sounds were also present. The temperature oscillated between 100° and 102° to 103° F. The child died 15 days after admission. At the necropsy marked dilatation of the bronchial tubes was present in both lungs, but chiefly in the upper lobe of the right lung and to a less extent in the lower lobe of the left lung. The cut surfaces of the lungs were dotted over with cavities of various sizes, some of which were large enough to hold a good-sized pea, and cavities of this size were situated even close under the pleural surface of the right upper lobe. Some patches of consolidation were also present.

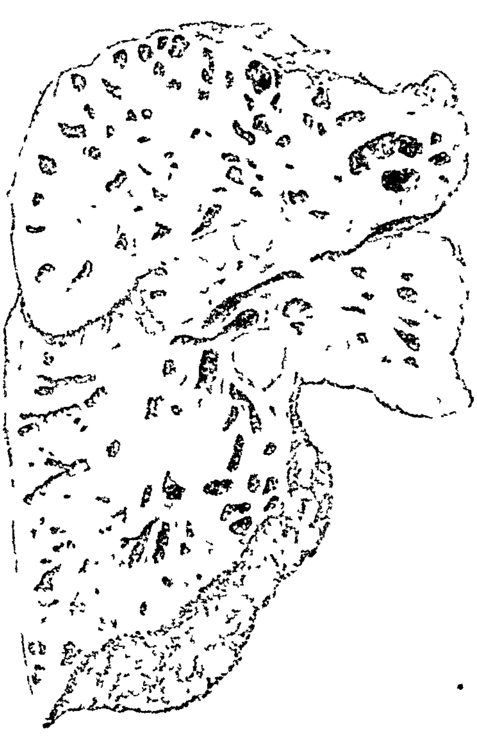
In the following case the dilatation of the bronchial tubes was of the same character but much less extensive.

CASE 4—A boy, aged 17 months, was admitted in the Bristol Royal Infirmary, under the care of Dr. H. Waldo, with raised temperature and rapid respiration and pulse, and he died a few hours later. He was said to have been ill since an attack of measles three months previously. At the necropsy the left lower lobe was found to be adherent to the chest wall and the pleura was greatly thickened where the lung was adherent to the diaphragm, measuring in some places fully a quarter of an inch in thickness. The bronchial tubes throughout the lobe were markedly dilated and their walls were thickened. In some places thickening of the smaller blood-vessels could also be seen. Amongst the dilated tubes were patches of recent consolidation The rest of the lung and the whole of the right lung were quite healthy and free from dilatation of the bronchial tubes.

Earlier in the year 1902 I had met with another very marked case of dilatation of the bronchial tubes in the lower lobes of the lungs of a boy aged 14 years On looking up the clinical notes I found that it was merely stated that the boy had been ill for nine years. I therefore paid a visit to the parents in order to obtain further information. After I had mentioned in the form of a question that the notes said that the boy had been ill for nine years I received the reply "Yes, and he had measles five times." Further questioning seemed to show this to be true, since the attacks of measles occurred either when friends or his brothers or sisters were suffering from the disease and also when measles was prevalent in the school he attended.

In the only other two well-marked cases of dilatation of the bronchial tubes occurring in children met with by me in the post-mortem room during recent years in which no local cause for the dilatation could be found an attempt was made by me to find the parents and to question them Measles had not been mentioned in the clinical notes in one case but an attempt to find the parents showed that they had left Bristol and no further information could therefore be obtained. In the other case nothing more definite in the way of history could be obtained from the mother of the child than that he had been delicate from birth and had always had a cough. The mere history that either of these children had suffered from measles would, it is scarcely necessary to remark, have been of no value. It is only when chronic or subacute pulmonary trouble definitely dates from an attack of measles and dilatation of the bronchial tubes is found that we can reasonably attribute to measles any share in the causation of the dilatation. In the cases which have formed the subject of this paper a connexion between measles and the dilatation of the bronchial tubes seemed to be clear. That the observation of this connexion is a new one I do not pretend to suggest. The fact that broncho-pneumonia which follows measles may occasion dilatation of the bronchial tubes has been recognised for some years. It has been the occurrence of four, I think I may say five, successive cases of dilatation of the bronchial tubes in which the cause appears to have been measles that has seemed to me to be worthy of note. Perusal of the papers of Carr[2] and Sharkey[3] would seem to show that my experience is exceptional. But exceptional experience sometimes emphasises facts which otherwise might have escaped our notice.

FIG. 2.



Section of the right lung in Case 3.

Clifton.

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[2] Practitioner, vol. xlvi., p 87.

[3] Sharkey. St. Thomas's Hospital Reports, vol. xxii., p. 33

FOUR CASES IN WHICH A CYSTIC OVARIAN TUMOUR, WHICH WAS NOT MALIGNANT, DEVELOPED AFTER A SIMILAR GROWTH OF THE OVARY ON THE SAME SIDE HAD BEEN REMOVED.

BY JOHN D. MALCOLM, M.B., C.M., F.R.C.S. EDIN.,
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CASE 1.—*In February, 1893, I showed to the Obstetrical* Society of London a cystoma which I successfully removed from a woman, aged 48 years. Fifteen years earlier Mr. J. Knowsley Thornton removed from the same patient two very adherent ruptured ovarian tumours. These had papillomatous growths both inside and on the outer surface of the cysts and the peritoneum was red and granular. A small flat growth in the peritoneum to the right of the abdominal incision was removed. Another similar growth just below the inferior angle of the wound had an irregular piece hanging down into the peritoneal cavity and the pendulous part of this was removed. The patient was in good health for 13 years after the operation, although not so strong as before. She menstruated regularly until she was 40 years old—that is, for nearly seven years after the first operation. The periods then ceased and did not return. In 1891 the patient began to suffer from flatulence and discomfort. In the following year the abdomen enlarged whilst the rest of the body emaciated and there was constant and increasing nausea. I operated on Jan. 14th, 1893, and removed a multilocular cystic tumour. There were extensive and close adhesions deep in the pelvis and the uterus was so embedded in the neoplasm that there was great difficulty in defining and separating it. The whole tumour was removed and some of the cysts contained papillomatous growth but there was no sign of papilloma outside the tumour. The patient recovered and was alive and well three years later, being then 51 years old. A letter sent to her lately has been returned by the postal authorities.

CASE 2.—In the second case Mr. Knowsley Thornton *performed a double ovariotomy for cystomata* in November, 1889, much deep enucleation from the broad ligaments being necessary. The patient recovered and was in good health for nearly six years, after which she again showed symptoms of an abdominal tumour with emaciation. After the first operation the periods, which had always been scanty, appeared at long intervals, from six to nine and, on one occasion, 12 months. There was never more than a show. The last was nine months before the second operation and the patient's age was then 52 years. On Jan 28th, 1896, I removed a multilocular cystic growth. It was covered in part by adherent omentum and there were many adhesions to adjacent tissues. The lower part of the mass was embedded in the broad ligament but the enucleation was not very deep. Many ligatures were required to arrest hæmorrhage and a drainage tube was inserted but was removed on the next day as there was then no discharge escaping. At the end of a week, Feb. 3rd, the temperature was 99° F. in the vagina in the morning. Three days later it rose to 102° in the evening and there was tenderness at the lower end of the wound which was quite healed superficially. Early on the 7th the wound opened and there was a discharge of thick red blood to the extent of half a pint or more. The discharge within 24 hours became insignificant in amount. The temperature at once fell to normal and the patient gradually regained her health and went home six weeks after the operation. The wound did not finally heal, however, until many ligatures escaped. The last came away after nearly a year and the wound then quickly closed. During the greater part of this time the wound was either closed or had only a very minute opening. The patient was alive and well nearly six years after the second operation and her age was then 57 years. In this case also a letter of inquiry sent recently has been returned.

These are the only cases of the kind that I have seen in my own practice[1] or that I remember having seen in the practice of those with whom I have been associated until I operated in December, 1901, and January, 1902, on the two patients whose histories are related below. A case in which I removed a multilocular cyst from an attachment to the left side of the fundus of the bladder differs from the others in important details. The growth was quite separate from the left ovary, which was healthy, and from the right broad ligament, from which an ovarian tumour had been removed 20 years before.[2] The case is unique in my experience.

CASE 3.—In this case Mr. Knowsley Thornton removed a cystic tumour of the right ovary in 1895 On that occasion a very deep enucleation from between the layers of the broad ligament was necessary. In January, 1898, I *examined the patient and found nothing abnormal. In* December, 1901, Dr. James Alexander of Paignton asked me to see her again. She was then 63 years of age and was a short, very stout woman, with a small, feeble pulse. A few weeks earlier she had a slight discharge of blood from the vagina with some serous fluid which stiffened the linen. The discharge continued for a few days and then ceased but it returned after a short time. On making an examination I found a tumour of the size of a fœtal head at term to the right of, and closely attached to, the uterus, the whole being firmly fixed in the pelvis. The uterus was high up on the left side, being almost out of reach of the finger. Its cavity was three inches in length and the sound passed easily except that it was difficult to get at the os. There was no pain. I expressed the opinion that the tumour was malignant and that its removal was impossible. I was not quite certain about it, however, and I requested a consultation with Sir John Williams who saw the patient with me on the following day. In the interval the bowels were cleared by a laxative and an enema, with the result that at the second examination the tumour was much more mobile and the uterus was lower down so that it could be more easily examined. Sir John Williams thought, and I agreed, that the tumour might be non-malignant and that an exploratory operation should be performed. The possibility of the coexistence of malignant disease of the uterus and an innocent tumour was discussed but there were not sufficient grounds for making such a diagnosis and both of us had seen cases in which the development of an ovarian tumour after the menopause was associated with the return of a red uterine discharge although no malignant disease existed. On Dec. 16th, 1901, I opened the abdomen in the presence of Sir John Williams. There were no adhesions to the back of the scar. A tumour was exposed deeply buried in the broad ligament on the right side, the side from which Mr. Knowsley Thornton had removed an ovarian tumour. There was an adhesion, about two and a half inches in diameter, of small intestine and omentum to the upper part of the peritoneum covering the growth. After letting out some of the fluid contents of the tumour *by means of a trocar and cannula I cut through its* peritoneal covering and enucleated it with difficulty, having to divide many bands of tough tissue which fixed the growth deeply in the pelvis and to the uterus. When the tumour was removed it was easy to bring the opening of the cavity in which it had been contained to the lower end of the incision in the abdominal wall, where it was secured, the sac being packed with iodoform gauze wrung out of corrosive sublimate solution and the upper part of the abdominal incision being closed in the usual way. The adhesions of intestine and omentum to the peritoneum covering the tumour were not divided. During the operation the patient's pulse was very feeble and Mr. Henry Davis, who gave the anæsthetic, had to be careful not to push it. The patient rallied well and there were no alarming symptoms during the first 24 hours. Flatus passed freely from the rectum and the abdomen was soft and not distended. The temperature rose to 101·6° F. in the vagina and the highest pulse was 90. There was some vomiting during the afternoon and a good deal of fluid escaped from the wound. At first it was bright red but very soon it became a light pink serum. On the day after the operation the abdominal condition continued good and flatus passed downwards well. Towards the evening the patient became very restless and in the night the temperature rose to 103°, the pulse rising to 124 and becoming very feeble. On the second morning after the operation the iodoform gauze was removed from the wound and two drainage-tubes were inserted. There were a few small healthy blood clots on the gauze and evidently there had been no hæmorrhage of importance. The plug smelt strongly of iodoform. During the second day after the operation the temperature rose to 104°, the rate of the pulse increased, and its volume was very small. The breathing became rapid towards evening and the patient gradually sank and died.

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[1] These two cases were shortly referred to in a paper on 26 cases in which a second abdominal section had been performed. Transactions of the Medical Society of London, vol. xx.

[2] Transactions of the Obstetrical Society of London, vol. xli., p. 266.

There was no examination of the body and it is difficult to say exactly what was the cause of death. The operation was a severe one but death was not from shock and there certainly was not enough blood lost, either during the operation or afterwards, to account for the fatal issue. In many respects the conditions seemed like those due to septic infection. I do not think the capsule round the tumour extended so near to the rectum that the wall of the latter could be damaged or so thinned that septic matter would pass from the bowel to the sac packed with gauze. But there was a considerable adhesion of small intestine to the upper part of the capsule and although the peritoneum was taken off the tumour with the adhesions undisturbed it is possible that septic contamination may have taken place from the adherent bowel. I do not think, however, that septic infection occurred in this way nor do I think that iodoform poisoning had any influence in bringing about the death of the patient. It seems to me that one of the chief causes was cardiac debility. The extreme stoutness of the patient and her age and feeble condition made me anxious beforehand as to her power to withstand the effects of surgical treatment. After the operation it was impossible to place her in any position except on the back and nearly flat, because every attempt to raise her pressed the abdomen and chest together and at once caused respiratory distress. On the other hand, the dorsal position together with the feeble heart action tended to produce congestion of the bases of the lungs, and difficulty in breathing was a very urgent symptom on the second day after the operation. The onset of this difficulty was quickly followed by the death of the patient.

CASE 4.—This patient was operated on 11½ years before I saw her by the late Dr. A. W. Edis on June 29th, 1891. He removed both ovaries on account of a cystic tumour of the left one "of the size of a child's head" and a papillomatous growth like a small wart on the right ovary. Dr. Edis's representatives kindly placed his notes at the disposal of Dr. J. W. Browne of Holland-park avenue, to whom I am indebted for many of the details of the patient's history. At the first operation "some suspicious villous-looking spots" were left owing to the collapsed condition of the patient and Dr. Edis stated at the time that he feared they might give trouble. The patient was very well for five years after the operation and had no uterine hæmorrhage After five years she suffered from irregular red discharges with pelvic pain and a small hard tumour was discovered close to the uterus The patient was seen from time to time by Sir John Williams, Dr. Browne, Dr. J. C. Uhthoff of Brighton, and others, but operative treatment was not advised because the growth was quite small and seemed to be closely incorporated with the uterus. Towards the end of 1901 there was a rapid increase in the size of the tumour, its cystic nature became obvious, and the patient began to lose flesh. It was thought necessary to attempt its removal and Sir John Williams asked me to see the patient with him and Dr. Browne on Jan. 9th, 1902. The patient was a stout, rather short woman, 62 years of age She was thus only one year younger than the patient whose operation proved fatal but she was more active, looked younger than her age, and had a fairly good action of the heart. The abdomen was distended by a large cystic growth and there was a hernia of the scar nearly eight inches long by about four inches wide standing quite one and a half inches out from the level of the adjacent abdominal wall and much more prominent when the patient stood up The hernial sac contained bowel which evidently came round the right side of the tumour, the abdomen being dull on percussion all over the left side as high as the ribs, which were pushed out, whilst on the right side of the scar the note was resonant In the pelvis the tumour was felt behind, and to the left of, the vagina, pushing it forwards and to the right. Sir John Williams passed a sound into a fairly small uterus a year before, but the womb was drawn up quite out of reach of the finger when I saw the patient. I operated on Jan 16th, 1902 The hernia was opened and some bowel and omentum which were adherent to the opening into the sac were separated, one large patch of raw surface on the small intestine being carefully sewn over. The tumour was still covered by a broad band of omentum which was adherent to the peritoneum over the cyst and over the bladder. When this was separated the growth was exposed and tapped. Some large cysts were evacuated and then it was fairly easy to enucleate the growth from under the peritoneum in the upper part of the abdomen, but in the pelvis the connexions with neighbouring structures were very close, especially those to the back of the uterus and vagina. The whole growth was got out and the mouth of the cavity from which it was removed was fixed to the lower end of the abdominal incision, a rent in its upper part being first closed by means of a silk suture. Before fixing the mouth of the sac and closing the abdomen I pared the edges of the hernia so as to expose the muscle on each side, and the greater part of the wound was sewn up with a single layer of sutures. In dealing with a hernia I generally bring the parts together in several layers, but as the operation was prolonged and severe I used one layer in this case in order to save time. An opening was left in the lower end of the wound and the sac which had contained the tumour was packed with iodoform gauze. After the operation the patient had some difficulty with the bowels, and the bladder, which had been a source of irritation from the date of an operation on the urethra 25 years earlier, continued to give trouble. Before the operation the skin over the sacrum was very tender and a bedsore formed and required much attention. The packing was taken out of the sac on the third day and two rubber tubes were put in. These were gradually shortened and finally removed on the twelfth day after the operation. The patient gradually recovered and the bedsore healed. When she was able to walk the bladder and bowel conditions rapidly improved and the patient's health became very good. I saw her with Dr. Browne on August 14th, 1903; the wound showed no stretching of the skin, but the fascial edges were not together, especially at the lower end. By keeping the parts well supported, however, the patient has no trouble from the wound. The urethra, which required frequent dilatation before the second operation and which occasionally discharged pus freely, was quite comfortable after the patient was able to walk about until July, 1903. There was then some pain on micturition. In August there were two small tender red spots just inside the meatus urinarius and I found a stricture about three quarters of an inch higher up the urethra. There were two slight hæmorrhages in June and July, 1903. The patient's health has much improved in the last few months.

In these cases the tumours removed were not to be distinguished from ovarian cystic growths. They were, in fact, cystic growths of some portions of ovarian tissue which were left behind at the first operations. In Cases 1 and 4 there was something of the nature of a secondary deposit which was not removed but it is almost certain that this shrivelled up and did not give rise to any trouble. The new growth in all the cases developed in the broad ligaments where the ovarian tissue would be if any were left behind. Such cases are rare. Sir John Williams has kindly permitted me to state that Cases 3 and 4 are the only instances of the kind he has seen. But perhaps the really remarkable point about them is that they are not more common. When a surgeon enucleates a tumour deeply embedded in the broad ligament he has no guide to the direction in which he must divide the tissues except the outline of the tumour, and although in the great majority of cases by removing the tumour completely the whole ovary will be taken away also, yet it would not be surprising if minute pieces of ovarian tissue were occasionally left behind and if new growths developed in them. The fact that this does occasionally happen is important and a recollection of the possibility of it may help the surgeon to a correct diagnosis in circumstances pointing strongly to the view that a malignant recurrence exists. In all of the foregoing cases malignancy was suspected and the operations were undertaken with the understanding that it might not be possible to remove the tumours.

Cases 3 and 4 illustrate another somewhat rare point—namely, that an innocent growth developing in the neighbourhood of the uterus after the menopause may bring about discharges of blood from the endometrium, just as ovarian tumours growing before the menopause may induce a very free menstruation which may lead to an erroneous diagnosis of uterine fibroma.

There are other cases somewhat analogous to those recorded above in which also the conditions can be explained only by assuming that a minute portion of ovarian tissue is inadvertently and perhaps unavoidably left in the body when the surgeon secures and divides the broad ligament or separates adhesions between an ovary and adjacent structures

That it is sometimes impossible completely to remove an ovary is demonstrated by a case in which Mr Alban H G Doran removed both ovaries and the uterus for fibroma [3] Dr Cuthbert H J Lockyer examined the specimen and "found a distinct piece of ovarian tissue or 'accessory ovary' in one ovarian ligament close to the uterus," so that if an attempt had been made to cure the patient by removal of the ovaries the "accessory ovary" would have remained in the pedicle and probably the development of the tumour would have gone on unchecked as in the following case

On Oct 30th 1897, I performed hysterectomy for the removal of a fibroid tumour after the arrest of its growth had been attempted by the extirpation of the ovaries I found a piece of ovarian tissue attached to the left cornu of the uterus quite easily recognisable by the naked eye The surgeon who operated first is a well known man and a skilful operator and I was surprised that he had apparently overlooked a very obvious piece of ovarian tissue in the course of an operation in which the complete removal of the ovary was essential to success Recently a case occurred in which I did both operations I thought at the first that I had completely removed both ovaries on account of inflammatory mischief and adhesions Menstruation did not cease, however, and on reopening the abdomen for the cure of a hernia I found a body of the size of a filbert nut in the right broad ligament The greater part of this consisted of a Graafian follicle and there was no doubt as to its nature When the follicle burst a small firm body was still felt This piece of ovarian tissue was not very close to the uterus It was left because I did not tie and divide the broad ligament low enough It occurred to me that a very minute portion of ovarian tissue, if left in the body, might enlarge to some extent by the development of ova in it Whether this is possible or not, the case proves conclusively that a very small piece of ovarian tissue may become a mass of considerable size when a follicle develops There must be many cases similar to this last for it is often very difficult to tie and to divide a broad ligament sufficiently low down to insure complete removal of the ovary

The following case seemed to me to show that in separating adhesions portions of ovarian tissue may be detached and left in the body Both ovaries were inflamed and very adherent After separating them from adjacent structures I exposed the broad ligament on each side and removed the ovary and tube by a method recommended by Dr Charles B Penrose, professor of gynæcology of the University of Pennsylvania [4] By this plan the surgeon ties and divides each broad ligament close to the uterus and also as far out in the pelvis as possible. This secures the principal vessels and there are not any of any size in the part of the broad ligament still unligatured so that it may be cut without fear of serious hæmorrhage I pointed out to the onlookers at the operation how completely I was able to remove the ovaries by this plan Nevertheless, the patient menstruated regularly and only recently at the age of 44 years, eight years after the operation, the periods have shown signs of stopping I thought that in this case I must have separated some portion of ovarian tissue whilst dividing the adhesions and so left it in the body, but Dr Lockyer's observation shows that even by the plan adopted some ovarian tissue might remain close to the uterus In another case in which I thought that I had removed completely two small but very adherent and inflamed ovarian tumours menstruation persisted In still another case a patient was brought to my house suffering so acutely from a swelling in the right side of the pelvis that I advised her to go straight to a nursing home I diagnosed an extra uterine fœtation but thought it possible that an abscess had formed in connexion with the Fallopian tube A few days later I removed the right ovary and tube a gestation sac being found in the latter The left ovary and tube were swelled and matted together by old inflammation and they were removed also The uterus was heavy and congested and much of its surface was raw from separation of adhesions I thought it might be wiser to remove it also, but the operation was already a long and severe one and in consultation with Mr J Kingston Barton, who brought the patient to me, it was decided to leave the uterus I thought that I had removed the ovaries and tubes completely in this case, but in order to do so I had to tie the tissues very near to the left cornu of the uterus and there was considerable difficulty in arresting hæmorrhage there The periods continued after the operation, at first irregularly, but after a time they became regular The uterus remained large and heavy and there was a white discharge between the periods I found also after a time a small painful swelling far out on the left side of the pelvis A year later it was decided to remove the uterus and to examine the tender part. The abdomen was opened and the swelling consisted of a thin walled cyst of about the size of a cob nut closely resembling a hydatid of Morgagni and completely buried in adhesions There was also some membranous tissue which I have no doubt was part of the inflamed ovary or tube incompletely removed a year earlier, although at the first operation I was not aware that any portion of either of them was left behind

In the Transactions of the Obstetrical Society of London for 1902 [5] Mr Doran recorded a case in which he removed a cystic tumour of the right ovary 14 years after Dr Robert Barnes removed a cystic adenomatous growth of the left ovary A deep enucleation of the base of the neoplasm was necessary when Mr Doran operated and he was not sure whether the Fallopian tube was removed or not It was thought that all the ovary had been removed and Mr Doran was surprised to find that the patient continued to menstruate Two years later she bore a child Mr Doran concluded that "some ovarian tissue must have been left behind free from any trace of cystic adenoma which is almost certain to recur if not thoroughly extirpated " Mr Doran quoted several other cases in which pregnancy occurred when it was supposed that both ovaries had been excised I have no doubt that it is impossible sometimes to be sure that the ovaries are completely removed, so that from time to time other cases will crop up in which a new but not malignant growth of the ovary develops after an operation in which it is supposed that complete extirpation has been effected In the majority of such cases the fact that the ovary has not been completely removed will be shown by a continuance of menstruation This indication was absent in the third and fourth cases I have recorded probably because the patients had passed the climacteric being respectively 57 and 51 years old at their first operations I have already noted that the return of the discharge which occurred in these case may tend to mislead the practitioner But such a return of the discharges is not to be expected in every case of this kind For instance it did not occur in Case 1 in which the periods ceased about halfway between the two operations In Case 2 the periods did not cease but the intervals were greatly prolonged between the operations

Portman street W

AN ADJUNCT TO UTERINE IRRIGATION IN PUERPERAL FEVER

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THE treatment of the septic uterus by irrigation is attended with certain dangers which induce many practitioners to adopt it with hesitancy and it frequently happens that during the first few days of a puerperal fever the uterine douche is withheld in the hope of being able to do without it Meantime the septic process may become more deeply seated and beyond the reach of antiseptic solutions in the uterine cavity It is in the early stages that irrigation is most likely to be useful, hence the importance of being able to adopt it with confidence immediately that its use is indicated One of the dangers is associated with the poisonous character of the solution employed, as the uterus post partum presents a surface capable of rapidly absorbing any watery solution coming into contact with it Professor O R Marshall, Dr W McGregor Young and others have pointed out the danger of mercurial poisoning, the danger of carbolic acid is not less obvious and on this account when these antiseptics are adopted the usual practice is to complete the douching with plain boiled water. But the danger which I believe to be most imminent does not depend on the antiseptic used but on the fact that watery solutions are employed and the uterus is left wet. This water may act prejudicially in two ways: (1) by dissolving the toxins and so promoting their rapid absorption into the circulation; and (2) by assisting the growth of micro-organisms. Washing out a septic uterus is not uncommonly followed within an hour or two by a rise of temperature with or without a rigor and other symptoms of increased toxæmia and this can be prevented by the removal of all trace of water from the uterus after the douche. To expose the cervix and to swab out the uterus with dry gauze (as is my practice in curetting) would be inconvenient and the method I adopt is, after expressing as much of the douche solution as can be got rid of in that way, to inject into the cavity of the uterus one ounce of glycerine containing 3 per cent. of formalin. This solution is quite innocuous and unirritating and in addition to its powerful antiseptic action it removes all water from the uterus and its use prevents any rise of temperature following the douche. To inject the glycerine all that is required is a glass syringe of one ounce capacity with a small piece of rubber tubing attached to its nozzle for connecting with the Budin or Bozeman catheter which has meanwhile been left in the uterus. Needless to say, the whole procedure is carried out with the strictest aseptic precautions. The following two cases show in a marked way the benefit of this treatment.

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[3] Harveian Lectures THE LANCET Feb 7th 1903 p 352
[4] Annals of Surgery July 1896
[5] Vol xliv

CASE 1.—A woman had a normal labour and an uneventful convalescence until the eighth day when the nurse of her own initiative and without reason gave a vaginal injection by means of a faulty enema syringe. On the evening of the ninth day the temperature was 102° F. and the patient was flushed and restless On the tenth day at 12.30 P.M. the temperature was 101°; the uterus was douched with a weak formalin solution. The patient had a rigor at 3 P.M.; her temperature was 103°. From the eleventh to the thirteenth days the temperature was 99·5° in the morning and 101° in the evening. On the fourteenth day the patient was not so well: her morning temperature was 100·2°. She was douched with perchloride of mercury solution, 1 in 3000, followed by plain boiled water; then one ounce of glycerine and formalin (3 per cent.) was injected into the uterus and a vaginal tampon of wool saturated with the same glycerine solution was left *in situ* for three hours. The temperature 20 minutes after the injection had fallen to 99·2°. Her evening temperature was 99·8°. On the fifteenth day her morning temperature was 99·8°. A tampon of glycerine and formalin was inserted which was removed in three hours and her temperature was then normal. Thereafter the uterine condition gave no trouble but in spite of preventive measures abscesses formed in the breasts. On opening and packing these with iodoform gauze recovery was uninterrupted.

CASE 2.—This patient was confined on June 11th, being attended by a midwife. On the fourth day the midwife was sent for on account of abdominal pain, restlessness, and delirium. She gave the patient four pills (opium?). At 8 P.M. when seen by me the patient had great flatulent distension, pain and tenderness in the lower part of the abdomen, and a temperature of 101° F. and a pulse of 144. She was ordered a purgative and four grains of quinine every four hours. I gave her a uterine douche of perchloride of mercury, followed by plain boiled water. Her temperature three hours later was 103°. On the fifth day at 10.30 A.M. her temperature was 103°. I gave her a uterine douche as before and followed it with one ounce of glycerine and formalin. At 1.30 P.M. her temperature was 103°. At 8.30 P.M. her temperature was 103° and her pulse was 132. (The best result was not got from this injection through my neglect to express from the uterus the retained water before injecting the glycerine.) On the sixth day, at 12 noon, her general appearance was much brighter; her tongue was clean and moist; her temperature was 99·8° and her pulse was 98. At 7 P.M. her temperature was 100·2° and her pulse was 100. On the seventh day the patient was restless and delirious during the night; her temperature after midnight was 101·2°. At 12 noon her temperature was 100° and her pulse was 108 I gave a douche and injection as before but was careful to empty the uterus before injecting the glycerine. Immediately after the douche her temperature was 99·8° and her pulse was 88. At 8 P.M. her temperature was 99·6° and her pulse was 84. On the eighth day her temperature was normal and her pulse was 86. The patient described herself as feeling perfectly well. Her further progress was uninterrupted.

Both of these were clinically severe cases. In Case 1 the rigor and rise of temperature following the first douche made me hesitate to use it again unless this risk could be minimised. The same effects following the first douche in Case 2 confirmed my former observation but having the glycerine at hand next day I had no hesitation in proceeding again to wash out the uterus. The injection when properly carried out has an immediately good effect but the benefit is still more evident on the day following. With regard to the use of vaginal tampons of wool saturated with the glycerine and formalin they seemed to have an effect in lowering the temperature but my experience in Case 2 indicates that they are unnecessary and there is the risk of their insertion forcing matter from the vagina into the cervix. If used they would require frequent renewal. In conclusion, I would suggest that after douching a septic uterus the uterus should be emptied by expression and one ounce or more of glycerine, with 3 per cent. of formalin, should then be injected into the cavity with the double object of extracting water from the uterus and of applying a strong, but unirritating, antiseptic to its surface. When this precaution is taken one need have no hesitation in having recourse to washing out the uterus whenever there is evidence of its septic infection, with considerable hope of cutting the process short after two or three injections.

Glasgow.

A CASE OF

CUTANEOUS NEURO-FIBROMATOSIS IN WHICH NEWLY FORMED NERVE FIBRES WERE FOUND IN THE TUMOURS.

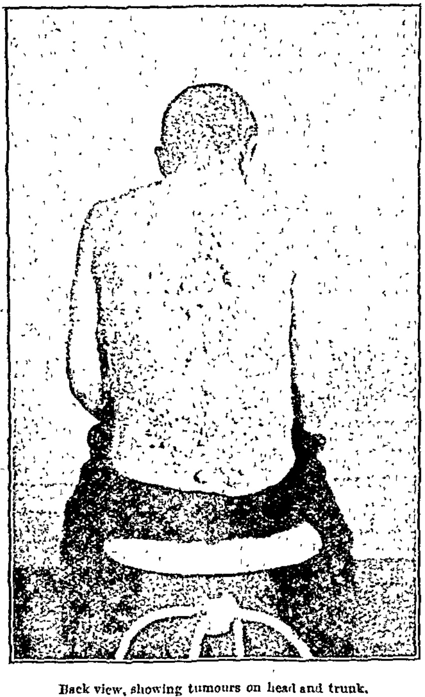
BY ARTHUR WHITFIELD, M.D., M.R.C.P. LOND., M.R.C.S. ENG.,

ASSISTANT PHYSICIAN IN CHARGE OF THE SKIN DEPARTMENT, KING'S COLLEGE HOSPITAL; PHYSICIAN TO THE SKIN DEPARTMENT, GREAT NORTHERN CENTRAL HOSPITAL.

THE group of rare morbid conditions to which this case belongs was first collected by von Recklinghausen in 1882. Before this time the several forms of lesion found were kept apart under different names. Thus the single, large, pendulous, circumscribed or diffuse tumours of a limb were known as "elephantiasis" (one form only), the multiple small tumours of the skin were called "molluscum fibrosum," while those on the nerve trunks were termed "false neuromata" Von Recklinghausen showed that all these conditions were different phases of the same morbid state and from his classical description of the generalised affection, characterised by the presence of tumours on the nerves, tumours on the skin, and patches of pigmentation, it is often termed "von Recklinghausen's disease." It is, however, not invariable for all these cardinal symptoms to be present and one finds cases in which the development of the cutaneous tumours is well marked while none are to be found on the palpable nerve trunks; almost invariably the pigmentary changes are present but these also may fail in a certain proportion of cases. It then becomes a question whether one can be certain of the diagnosis of neuro-fibromatosis from the cutaneous tumours alone. Several observers of cases in which this was the only symptom have expressed doubt as to the connexion of the tumours with the nerves in all cases but there seems to be reason to believe that the failure to find this connexion results rather from faulty technique. The case related and investigated here was that of a male patient in the wards of St. Mary's Infirmary and I am greatly indebted to my friend Dr. A. H. Robinson, the superintendent of the infirmary, for placing the case at my disposal.

The patient, aged 50 years, was a short and rather badly developed man but with no thyroid deficiency. He talked indistinctly and was slow in answering, apparently rather from feeble intelligence than from deafness. He walked with a rather spastic gait, especially marked in the right leg, and while in the wards he had several slight epileptiform attacks. Little could be obtained from him in the way of history but he volunteered the fact that his father had one similar large lump on the back of his shoulder. There was no consanguinity between his parents. As regarded himself he was certain that the tumours were not present when he was born but that they had developed in his youth and he thought that new ones still occasionally appeared—at any rate, they had done so recently. The scalp, face, and trunk were thickly covered with softish tumours varying in size from that of a pea to that of a walnut, and there were also a few on the right side of the tongue and beneath the mucous membrane lining the cheeks. A few were scattered about the arms and legs and one or two on the backs of the hands, but the fingers and toes and the palms and soles were free. It was not possible to trace any arrangement in the tumours suggesting their running on the course of nerves and there were none to be felt on the palpable nerve trunks. There were no areas of elephantiasis nor were there any pigmented patches, but there were two patches of white hair on the scalp of long duration. The tumours were all more or less adherent to the skin over them but were freely moveable over the subjacent structures and many could be pushed backwards and forwards through a kind of hole in the skin giving the sensation of reducing a small hernia. The colour was of a darkish red and in many instances very large sebaceous openings, occasionally blocked with comedones, could be seen on their surface. There was no pain felt at any time during their formation or existence and they were not especially tender on pressure. The illustration (see Fig. 1) shows the distribution sufficiently well to render detailed description unnecessary further than stating that the front aspect resembled that of the back.

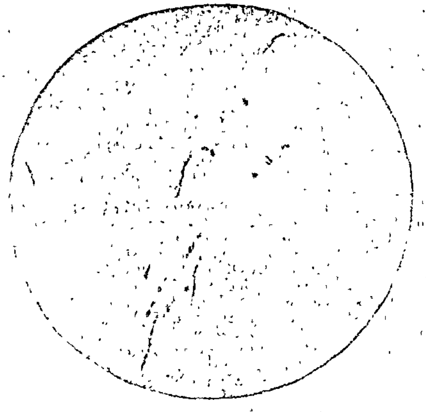
FIG. 1.



Back view, showing tumours on head and trunk.

The patient readily consented to allow me to excise one of the tumours for examination and for this purpose I selected a small one on the back. On section the tumour was of a reddish-brown, translucent appearance and was well defined both on its superficial and on its deep aspects, so that it had a tendency to separate from its surroundings during the process of hardening. It was immediately dropped into Müller's solution and sections were made on completion of the fixation by freezing the piece in the Müller's fluid itself. By this method it was thought that all danger of interfering with the subsequent staining reactions by the various fluids used in embedding in celloidin would be avoided. The sections thus obtained were treated with a reliable specimen of the Kultschitzky-Wolters stain kindly given to me by Dr. J. Purves Stewart, some of them being also stained for ordinary histological details. The tumour was found to consist of a feebly fibrillated matrix in which were embedded very numerous spindle and branched cells; it was extremely vascular and showed the occasional inclusion of sebaceous and hair follicles. In places definite concentric arrangements were seen, and in those sections stained specially for nerve fibres these were always found to occupy the centres of the whorls thus formed. In every section of the tumour which was suitably stained fairly numerous nerve fibres were found, usually rather widely separated from one another as if by proliferation of the endo- and peri-neurium themselves. A point of great interest was that these nerve fibres in most instances showed a very well-marked beading exactly similar to that described by Purves Stewart as characteristic of newly developing nerve fibres, and on showing them to him he at once corroborated my opinion that they were such in reality (see Fig. 2). The tumour was therefore more than a simple overgrowth of the nerve sheaths and actually gave evidence that a true new formation of nerve fibres was taking place.

FIG. 2.



Microscopic appearance of tumour.

On searching the literature of this rare disease I find that there is only a limited number of cases in which nerve fibres have been demonstrated within the cutaneous tumours, in most cases their connexion with the nerve being inferred from the presence of similar tumours on the palpable trunks.[*] On this account cases in which tumours have not been felt on the nerve trunks have been separated off and ascribed to proliferation of the sheaths of the epidermic appendages. Westphalen found the nerve fibres in more than one case, Kyrieleis found them in three cases, Hürthle in four cases, and Kriege in two cases with Weigert's method but not with osmic acid. The last observer states that there was hypertrophy of the primitive fibrils but no true hyperplasia. Soldau in examining ordinary skin nævi or moles found a very rich supply of nerve fibrils supplying them and would class all nævi as neuro-fibromata, an absolutely untenable position in my opinion, as Unna, Gilchrist, and I have shown that these are undoubtedly epithelial structures, though of course they may be dependent on some nerve abnormality. Payne, Rolleston, and Alexis Thomson apparently did not find any nerve fibrils in the cutaneous tumours and Payne was of opinion that in his case the tumours were not related to nerves. There seems to be a general consensus of opinion that the tumours, even granting that they are growths of the nerve sheaths, are not accompanied by any new growth of nerve fibre itself, but I think in the light of this case that this opinion will have to be modified. I am quite aware, of course, that this contention must stand or fall by the accuracy of Purves Stewart's work and deductions, but having seen a good number of his specimens demonstrating what he claims to be various stages in the development of the new fibre I certainly regard his work as completely convincing.

Bentinck-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF PURPURA HÆMORRHAGICA.

By WALTER H. HAW, M.R.C.S. ENG., L.S.A.

THE case of purpura fulminans reported in THE LANCET of June 20th, p. 1740, appeared just at the close of a case of the above disease which had occurred in my practice, unfortunately with a fatal result. In my case the history pointed clearly to the causation—namely, a combination of immersion in cold sea-water, fright, shock, and sea-sickness Which of these antecedents is to be regarded as the *fons et origo mali* I cannot presume to determine, but fright and shock appear to have been present in greatest degree. The very interesting part of the case is that the patient, who was a boy, was looked upon by his parents as possessing the very essence of good health; he was of sturdy build, strong, hearty, and had never had an illness in his life until the onset of this his fatal attack immediately following the accidents which will be mentioned.

On June 13th, 1903 the patient was brought to me by his father who stated that he could not make out what was wrong with his boy, as he seemed to be "falling to pieces." He had been in his usual good health until 14 days previously, when while in a canoe on the bar at the entrance to the harbour he was capsized and in addition to a very cold wetting he had received a great fright, for it is a very dangerous spot He appeared none the worse, however, and a week later, while descending a hill on a bicycle, he ran into a herd of cattle and had a fall, hurting himself rather severely but only to the extent of bruises. Apparently he recovered from this without ill result and some days later with his father he crossed the bar of the harbour for the first time in his life in an ordinary fishing boat, a feat which requires unlimited confidence and nerve. His father said that he suffered severely from fear and later from sea-sickness during the whole time they were at sea. After this final experience he was not himself and suffered first from cramps and then from epistaxis. When I first saw the patient he was pallid, waxy-looking, and had a peculiar flush on the cheeks, and there was a blood clot blocking the left anterior nostril. On his neck, chest, abdomen, arms, and thighs there were numerous discrete purpuric spots, the largest seen not being greater in diameter than a buckshot. He also suffered from insomnia, fatigue after slight exertion, a constant shivery sensation, tachycardia, anorexia and a slimy feeling in the mouth. The tongue and conjunctivæ were pale, the temperature was normal, and there was dulness in the splenic area as far forward as the edges of the cartilages. On the next day epistaxis commenced and I plugged the left nostril with a petticoat plug The motions were black. On the 15th the spots were more marked on the abdomen and the chest The plug had at once stopped the hæmorrhage and I did not remove it until the next day, when the bleeding began again and the plug had to be re inserted. On the 17th there had been no further bleeding. On the 18th epistaxis began from the right nostril which was successfully plugged. Both nares were now blocked and breathing had to be accomplished by the mouth. The anæmia was profound. On the 19th matters were going on well and continued so until July 3rd when epistaxis again started and necessitated plugging. At this time I first noticed puffy œdema of the face, the hands, the legs below the knees, and the feet, but there was no albumin in the urine. I may mention here that during each attack of epistaxis the cardiac action became quite violent, pulsation being visible over the front of the chest and also along the carotids, and also that before I discontinued my visits on June 21st the splenic dulness had disappeared. On July 3rd it had returned and the patient's general condition was evidently more grave than it had ever been. The purpuric spots also had broken out afresh. Later vomiting began, chiefly of blood clots which had been swallowed during the attacks, but it was checked by tincture of iodine. There was no further epistaxis but when I visited the patient on the 4th he was moribund and he died peacefully from heart failure in my presence. It is noteworthy that the œdema had greatly lessened.

These were the salient features in this case and I think that the etiology is very clearly indicated but what pathological condition was brought about by the precedent factors is difficult to determine. The tachycardia might suggest an irritation of the sympathetic system. I may add, in conclusion, that the blood in the later stages was very pale and watery but it still clotted fairly firmly

Knysna, Cape Colony.

TAPEWORM AS A CAUSE OF CHOREA.

By RONALD D. HODGE, M.B., CH.B. GLASG.

IN view of Mr. J. A. W. Pereira's clinical note on Tapeworm as a Cause of Chorea which was published in THE LANCET of Sept. 19th, p. 824, I think the following case will prove of interest.

On August 10th 1903, I was sent to visit a young girl, aged nine years, whom I found resting in a semi recumbent position with flushed cheeks, circumoral pallor, and a somewhat anxious look. She had been ill since the previous day and on examination of the chest I detected a slight to-and-fro friction sound between the tricuspid and apex regions of the heart. This sound was markedly increased on steady pressure with the stethoscope. There was also a long, soft, blowing systolic murmur heard most distinctly at the apex and also well heard over the tricuspid and pulmonary areas and conducted into the left axilla and to the lower angle of the left shoulder-blade behind. On the pulmonary area the second sound was reduplicated. The apex beat was within the vertical nipple line in the fourth left interspace. Her temperature was 102·5° F. and her pulse was 120 per minute. There was no history of rheumatism but there were a doubtful history of "growing pains" and a distinct one of chorea 14 months previously when she was attending the out-patient department of a public hospital. So far as the patient's mother knew there was no cardiac complication at that time. Although there were no choreic movements present I thought it as well to warn the girl's friends that the chorea would be likely to return, which it did in five days when the pericarditis had disappeared and the temperature and pulse had fallen to nearly normal. On the second day after the choreic movements became evident there were slight pain and swelling of both knees and ankles lasting for two days. The movements became gradually worse until the patient was unable to feed herself, but she was still able to swallow, while if questioned she made an effort to answer but would finish up with a fit of either crying or laughing. By Sept. 14th the girl was so much improved that she was able to get up and to go about.

On the 21st the mother informed me that the girl had that morning passed several pieces of tapeworm and on inquiry I learned that 15 months previously when attending hospital for chorea she was also troubled with the parasite, in proof of which I was shown the remains of the emulsion of filix mas which had been ordered; also that 18 months previously pieces of tapeworm were voided unaccompanied by chorea. Unfortunately, when the cestode was passed on the next afternoon the head could not be found, although the part examined had broken off well up towards the head, judging from the very small size of the segments. The anthelmintic was repeated in two days' time but although the motions were carefully searched the head was not found. Considering that the treatment was the same as that which proved successful in dislodging a tapeworm from an adult woman three months before it is possible that the head escaped notice.

Now what is the prime etiological factor in this case?

The various combinations were: (1) 18 months previously the cestode was present; (2) 15 months previously the cestode and chorea were present; and (3) six weeks previously pericarditis, endocarditis, chorea, rheumatism, and the cestode were present. I might say in reference to the cardiac complications that there did not seem to be any increase of dulness towards the left side, but dulness extended to the right border of the sternum, whilst there was slight dulness at the base of the left lung in the axillary line which, with the friction sound in that region, existed for several days.

I am indebted to my principal, Dr. R. Bishop, for permission to report this case.

Manchester.

AN ANTENATAL CASE OF MEASLES.

BY JOHN R. GIBSON, M.D., F.F.P.S. GLASG.

IN Dr. J. W. Ballantyne's book on "Antenatal Pathology and Hygiene" he says in the chapter on Fœtal Measles: "No instance has been placed on record of a fœtus suffering from measles, *the mother escaping*, although having been subject to infection," &c. The following case therefore deserves to be published.

Over a year ago I attended a woman in her third confinement. The birth was easy. The nurse when washing the child called my attention to some raised dull-red spots on both buttocks. It then struck me that this rash might be a syphilide but I did not venture any opinion as the two previous children were very healthy and the character of the parents was above reproach. On the next morning the uncertainty was cleared up, for I found the child covered with a typical measles rash and suffering from suffusion of the eyes, nasal catarrh, and bronchitis and, in short, all the cardinal symptoms of measles. The child recovered in the usual period and without any medicinal treatment. The temperature ranged from 99° to 100° F. The mother made an uninterrupted recovery and showed not a single symptom of measles. When the baby was eight months old the other two children took the measles but the baby did not. The mother had had measles when a child.

Paisley.

A Mirror

OF

HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

A CASE OF TRAUMATIC PNEUMOTHORAX.

(Under the care of Mr. RICKMAN J. GODLEE.)

FOR the notes of the case we are indebted to Mr. J. A. Smyth, house surgeon.

The patient, a female, aged 21 years, was admitted into University College Hospital on March 28th, 1903, under the care of Mr. Rickman J. Godlee, having been knocked down and run over by a van which passed completely over the chest. On admission at 8 P.M. she complained of great pain down the left side of the chest and had obvious respiratory embarrassment. There was marked cyanosis of the face. Upon the left side of the chest the third, fourth, fifth, and sixth ribs were fractured just external to the nipple line, the chest wall falling in with each inspiratory act. There was marked tenderness with some fulness over the clavicle on the right side but no fracture could be detected. The breath sounds were plainly audible upon both sides of the chest; there was a constant rattle in the throat with each expiration, due to accumulation of mucus which she was unable to cough up. The heart's impulse was in the fifth space three and a half inches from the midsternal line; the heart sounds were normal. The pulse was 100. No injury to the spine was detected; there was no paralysis of the lower extremities. At 9 P.M. (one hour after the accident) the cyanosis of the face was more marked and she was extremely restless. Surgical emphysema was now present over the clavicle and the upper part of the chest on the right side. At 10 P.M. surgical emphysema was also present on the left side of the chest extending downwards as low as the fourth costal cartilage and upwards into the neck. Strapping was now applied to the left side of the chest but had to be removed ten minutes later as it increased the pain.

On March 29th at 4 A.M. movement of the chest was markedly deficient upon the right side upon which she was now lying. At 10 A.M. surgical emphysema had extended upwards in the neck as high as the jaw, a resonant note being obtained on percussion over the neck. Movement was now entirely absent upon the right side of the chest and there were typical signs of pneumothorax. The left side of the chest moved freely, recession of the ribs being less marked. The cyanosis and respiratory embarrassment were now intense, the respirations being 40 per minute. The heart's impulse was displaced to the left, being in the fifth space external to the nipple. The liver could not be felt. A trocar and cannula was now inserted into the chest in the eighth right intercostal space in the scapular line, a tube being attached to the end of the cannula and dipping into a bottle containing sterilised salt solution. On removing the trocar there was immediately a rush of air escaping from the pleura during each respiratory act. Directly the salt solution began to be drawn up into the tube a clip was applied, the cannula being packed round with cyanide gauze and retained in position. The cyanosis immediately lessened and the respirations dropped to 28 per minute. Upon auscultating the chest the breath sounds were audible over the whole lung area on the right side. At 7 P.M. the breath sounds had again become inaudible and respiratory embarrassment and cyanosis were again marked; the clip on the tube was removed and air again escaped from the pleura during respiration, after which the clip was reapplied.

nds returning at

less air escaping

than on the two previous occasions, and on moving the cannula the end could be distinctly felt to strike against the lung.

On March 30th as the breath sounds were quite audible the cannula was removed from the chest. There was dulness posteriorly at the lower part of the chest on the right side. The temperature, which had been about 100° F. since admission, rose towards evening to 103·2°. The respirations were 38. On April 1st a double crop of herpes appeared upon the chin and the lower lip and the expectoration was viscid, small in amount, and tinged with blood. The temperature had fallen to 101°. Movement at the right base was deficient; the percussion note was dull upon the right side below the angle of the scapula. The breath sounds were bronchial in character at the right apex and tubular in the fourth intercostal space anteriorly, below which level they were absent, vocal fremitus and vocal resonance being also absent. On the 15th pulsation was marked in the second, third, and fourth interspaces to the right of the sternum, extending one and a half inches to the right of the lateral sternal margin. The heart's impulse was not palpable but the heart sounds were best heard in the fourth space two inches from the midsternal line upon the left side. The heart sounds were normal. A resonant note was obtained on percussion over the whole area of normal cardiac dulness to the left of the sternum.

Five weeks after the accident the patient was discharged from the hospital and was sent to a convalescent home where she remained for a fortnight. During the latter part of this time she was subject to attacks of dyspnœa on the least exertion. On May 26th the physical signs had undergone but slight alteration. The cardiac signs remained unchanged. Movement on the right side was deficient, especially at the base. The percussion note was impaired at the right apex anteriorly and dull below the third interspace. Posteriorly the dulness was absolute below the angle of the scapula. The breath sounds were bronchial in character in the first, second, and third spaces anteriorly, below which level they were absent. Bronchophony and whispering pectoriloquy were well marked at the apex. No moist sounds were present. Posteriorly the breath sounds were bronchial in character down to the angle of the scapula, below which level they were completely absent.

Remarks by Mr. SMYTH.—The object in publishing this case is to draw attention to the great relief afforded to the patient by the tapping of the chest. It seems difficult to believe that the pressure in the pneumothorax could be greater than the atmospheric pressure, since otherwise air would not have passed into the pleura and, therefore, the relief obtained seems to me to be explained in the following manner. That it was noticed that the large volume of air escaped from the pleura during expiration and that clipping the tube prevented the fluid from being sucked into the chest during inspiration to replace this volume of air. Therefore, it follows that the pressure in the pneumothorax was now below atmospheric pressure and consequently the lung was more free to expand. Subsequently, when more air was sucked in through the rupture in the lung, the pressure in the pneumothorax again became atmospheric and the symptoms returned, being again relieved by unclipping the tube during expiration. This relief would have been impossible if a trocar had been inserted, since then the pressure in the pneumothorax would never have been below atmospheric pressure. The change in the physical signs later was undoubtedly due to absorption of air and collapsed lung being drawn over the heart.

I am indebted to Mr. Rickman Godlee for permission to publish the case.

LIVERPOOL WORKHOUSE HOSPITAL.

A CASE OF RUPTURE OF THE RIGHT KIDNEY INTO FRAGMENTS; OPERATION; RECOVERY.

(Under the care of Dr. WILLIAM ALEXANDER.)

FOR the notes of the case we are indebted to Dr. A. T. M. Dodd, senior resident medical officer.

A man, aged 47 years, was admitted into the Liverpool Workhouse Hospital on Oct. 20th, 1902. He stated that while drunk he fell heavily on to the edge of a bucket three days previously to admission. He complained of severe pain in the right flank (aggravated by movement and during micturition), of passing a considerable quantity of blood per urethram, and of frequent vomiting. On examination a slight bruise in the right flank was visible. There was slight abnormal dulness. There was no apparent swelling but excessive tenderness on pressure. He was in a very collapsed condition. His temperature was 101°F. The urine was passed frequently; sometimes it was loaded and intimately mixed with blood, with clots of blood at the end of micturition; at other times the urine was comparatively clear. Laudanum stupes were applied to the abdomen and flank and one-sixth of a grain of morphia was given by hypodermic injection to relieve the pain. A large quantity of blood was passed later in the evening and an ice-bag was substituted for the laudanum stupes. Five minims of liquid extract of hamamelis were given every four hours and small quantities of milk and brandy were given at frequent intervals. The patient had a restless night and was passing almost pure blood, evidently with great pain. On the 24th he complained of retention. A No. 9 soft catheter was passed without difficulty and urine was drawn off containing numerous small clots; apparently the urethra was blocked by blood clot. During the next day there was slight improvement in his general condition but the hæmorrhage continued unabated. On the 25th the bladder was washed out twice. After the second washing the patient had a rigor, the temperature rising to 102·6°. Five grains of quinine in cachets and five grains of urotropine were given thrice daily with good result. On the following day there was a marked improvement—the urine was only tinged with blood. During the next eight or nine days he steadily improved, the temperature remained normal, the blood in the urine diminished daily, and the pulse was getting stronger. The diet at this time consisted of one pint of beef-tea, three pints of milk, and one egg. On Nov. 7th, after partaking of his usual quantity of beef-tea, the patient vomited. The previous symptoms again developed with great rapidity. Five minims of solution of perchloride of mercury and two minims of tincture of opium were given hourly to relieve the vomiting. The diet was confined to milk only. Laudanum stupes were applied and suprarenal extract in tabloid was given thrice daily. During the next few days there was slight improvement, but as the hæmaturia still continued two ounces of pure hazeline were left in the bladder after the washings had drained away. At this time the general condition of the patient was anything but encouraging, the pulse was weak and rapid, and the temperature ranged between 100° and 102°. There was occasional vomiting and he was taking very little nourishment. On the 16th Dr. Alexander, after much persuasion, obtained the patient's consent to an operation.

On the following morning chloroform was administered and an incision was made parallel to, and about one and a half inches above, the iliac crest on the right side and the kidney was exposed. On opening the capsule it was found to consist of fragments of kidney substance mixed with blood clot. The greater part of the clot and pieces of kidney were removed. The cavity was washed out and packed deeply with cyanide gauze. The patient stood the operation well. There was considerable leakage of urine from the wound during the day which necessitated the dressing being changed three times. In the evening he had slept for about two and a half hours after a quarter of a grain of morphia had been given hypodermically. He appeared to be comfortable (except for pain on movement) and had passed naturally 21 ounces of urine during the afternoon. During the succeeding days the dressings were changed frequently on account of the continual leakage of urine and four ounces of brandy were given daily. The temperature ranged between 101° and 102·4°; the patient took nourishment well, slept well, and rapidly improved in his general condition. Eight days after the operation a large slough was removed from the wound which was found to consist of breaking-down kidney substance. After this day the leakage of urine from the wound ceased; the urine passed per urethram was free from all traces of blood and the wound healed rapidly. The patient continued to improve, passed an average of about 40 ounces of urine daily, and put on flesh. He was able to get up and to be about six weeks after the operation.

Remarks by Dr. ALEXANDER.—The above case of ruptured kidney is remarkable for the great extent of the lesions, the entire absence of local signs of disturbance, although there were considerable retention and extravasation of bloody urine in the flank, and the tendency to spontaneous recovery until the attack of sickness produced a recurrence of the hæmorrhage. The hæmorrhage ceased when the cavity was packed with gauze and the torn kidney gradually healed and all the urine secreted was passed per vias naturales. Delay in operating was due in the first instance to the promise that the symptoms gave of spontaneous cure and afterwards to the reluctance of the patient to be operated on in his weakened condition.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Primary Chancre of the Tongue.—Large Bile Cyst of the Liver.

A MEETING of this society was held on Oct. 27th, Mr. ALFRED WILLETT, the President, being in the chair.

Mr. R. CLEMENT LUCAS showed a case of Primary Chancre of the Tongue. The patient was a married man, aged 35 years. He had a family of five children and was a farrier by trade. He was admitted into Guy's Hospital on Oct. 20th for a sore beneath his tongue. About five weeks before he noticed two little white spots beneath his tongue; these extended and formed a sore. He was unable to account for the sore except that in his shop the men were accustomed to smoke the first pipe they saw lying about. The sore extended across the frænum and forward nearly to the tip of the tongue and was almost symmetrical. The edges were slightly undermined. It had a greyish surface and the mucous membrane around was red and inflammed. The sore was very painful and tender. There were enlarged glands beneath the jaw on the left side extending nearly from the symphysis to the angle. They were firm and adherent to the deeper structures but not to the skin. On the skin there was a brownish papular syphilide to be seen on the arms, chest, and abdomen, and there were a few on the forehead. Mr. Lucas remarked on the extreme rarity of the site for primary sore. In the whole course of his experience he had met with only one other on the tongue. In that case the chancre was on the right edge near the tip and corresponded to a ragged artificial tooth plate. It presented a more distinct rim than in the case shown. The man, who was between 50 and 60 years of age, had enlarged lymphatics in the submaxillary triangle and an eruption similar to that in the case shown.

Mr. ALBAN H. G. DORAN read a paper entitled "Large Bile Cyst of the Liver; Jaundice without Cholelithiasis; Incision and Drainage; Recovery." The patient was a woman, aged 42 years, who three years before admission to hospital when in the second month of pregnancy fell against a washing tub, striking the right hypochondrium; abortion occurred within a few hours. The case will be found in full at p. 1218. —Mr. W. BRUCE CLARKE said that Mr. Alban Doran had *hardly made it clear to what pathological condition the* presence of the cyst was due. He considered that the cyst was either congenital in origin or due to injury and he was inclined to favour the view that it was due to injury. He mentioned the case of a patient who was the subject of hydronephrosis and also had epilepsy. On getting out of bed [illegible] had ruptured into the hydronephrotic cyst. Similar cases of traumatic hydrone phrosis had been recorded and he thought there was no reason why a cyst should not be produced in the liver in the same way. With regard to the cause of the jaundice he was of the opinion that it depended on pressure on the duct and that the normal passage did not open till some three weeks after the operation. He did not consider that it was possible in such a case as this before operation to diagnose between a hydatid cyst, a simple cyst of the liver, and malignant disease.—Mr. A. C. BUTLER-SMYTHE referred to the difficulty of diagnosis in the present case. He had seen the patient before operation and had formed the opinion that there was [illegible] by cutting off a portion of the wall of the cyst at the time of the operation. The gall-bladder and the ducts were greatly pressed upon by the cyst and he thought that the jaundice was probably more due to mechanical obstruction than to actual obliteration of the ducts. With regard to the moveable kidney which was present on the right side he was of opinion that the right kidney could in a large majority of cases be felt in women who had had more *than one pregnancy.* He did *not consider that the administration* of chloride of calcium had much effect in preventing the occurrence of hæmorrhage.—The PRESIDENT said that he did not think it necessary to explain the persistent flow of bile into the cyst after it had been opened as due to a catarrhal condition of the duct, for he regarded the opening into the cyst as the freer passage, and it was only when the cyst began to contract that the bile resumed its original channel.—Mr. ALBAN DORAN replied.

MEDICAL SOCIETY OF LONDON.

Discussion on Purpura in Childhood.

A MEETING of this society was held on Oct. 26th, Dr. F. DE HAVILLAND HALL, the President, being in the chair.

Dr. A. F. VOELCKER opened a discussion on Purpura in Childhood. He found some difficulty in defining the term purpura, for it might be a disease, essential or idiopathic purpura, or only a symptom—symptomatic purpura. It was a condition in which hæmorrhages occurred in the skin and in and from the mucous membranes. He would limit the discussion of it to the condition as met with in the first 12 years of life. Essential purpura was by no means a common disease. At the Middlesex Hospital in ten years (1891–1900) only 36 cases had been admitted and only five of these were under ten years of age. At the Hospital for Sick Children, Great Ormond-street, out of 6465 cases admitted in six years (1897 to 1902) there had been only 16 cases of purpura. The disease was more common in the female sex. Symptomatic purpura, on the other hand, was, he believed, more common than essential purpura and more common in early life than in adults. Season had no influence in its causation. The toxic effects of certain drugs, such as potassium iodide, quinine, and ergot, were well known to be occasional causes; and among the other causal factors were whooping-cough, measles, and other acute specific fevers (when it indicated a severe toxæmia), septicæmia, and malignant endocarditis. Cases of gastro-enteritis associated with purpura were referred to and their connexion was discussed. The condition might also be associated with chronic renal disease, cardiac valvular disease, malignant disease (especially sarcoma), jaundice, leukæmia, Hodgkin's disease, hæmophilia, and rheumatism. Purpura was not at all common in scurvy or scurvy rickets. There were four recognised clinical varieties: (1) purpura simplex, where the purpuric eruption was confined to the skin; (2) purpura rheumatica, in which the joints were said to be affected; (3) purpura hæmorrhagica (morbus maculosus), in which there were hæmorrhages from the mucous membranes and severe constitutional symptoms; and (4) Henoch's purpura which was common in children, had a tendency to relapse, and to the occurrence of joint symptoms, which might be ushered in by diarrhœa, vomiting, and abdominal pain. Dr. Voelcker did not believe that there was any close or necessary relation between purpura and the rheumatic state. The former was only related to rheumatism in the same way as it was to the acute specific fevers. In regard to the treatment rest in bed was indicated. No drug appeared to have any definite controlling influence. Opium was of value for the pain and diarrhœa. Calcium chloride had been tried but without effect. It was chiefly *from epistaxis that the* fatal issue resulted and possibly suprarenal extract might be applicable for this

Dr. F. J. POYNTON regarded purpura as a symptomatic condition and said that in most cases it appeared to him to be related to a rheumatic process. Purpura was not common in his experience in the scurvy rickets of childhood. The rheumatic poison seemed to have a very definite effect on the blood-vessels as seen in cases of purpuric pericarditis and in the epistaxis which was apt to occur in rheumatic children. He believed that purpura was definitely associated with rheumatism and was dependent on the rheumatic micro-organism.

Dr. J. WALTER CARR agreed as to the rarity of so-called essential or idiopathic purpura and quoted statistics in proof. Out of six cases five were girls and one a boy. He believed that purpura was closely related to rheumatism. The cases of rheumatic purpura which died were probably registered under rheumatism. Some cases of purpura were of hæmophilic origin, as in a case which he had watched for three years. Others were undoubtedly idiopathic in the sense of having no obvious causal agent. Rest was a valuable *element in treatment.* Turpentine seemed *to* be of use sometimes.

Dr. A. E. WRIGHT regarded the pathology of purpura as a question of derangement of the balance between the blood and the blood-vessels. There was certainly a nervous influence in the process of effusion and he mentioned the case of a man who could produce an attack of urticaria at will by fixing his mind upon the subject. There were, in his view, *three varieties or degrees of effusion—serous effusion,* consisting of lymph, as in urticaria; serous hæmatomata [illegible] as in chilblains and [illegible] *the blood elements.* [illegible] Hæmophilic blood [illegible]pect to find deficient coagulation in every case of purpura but other elements of the blood might be found wanting such as serum globulin and *serum* albumin. Bacterial toxins broke down the albumins into peptones which were much less viscid. Calcium chloride would only be *of use when* the effusion depended on deficiency of lime in the blood, not in conditions such as those he had just mentioned.

The PRESIDENT remarked on the rarity of essential purpura In ten years out of 1000 in-patients at the Westminster Hospital there were only 15 cases of purpura and *only five of these* were under ten years of age. At the London Hospital (according to Sir Stephen Mackenzie) in 16 years out of 17,000 patients there were only 200 cases of purpura—49 under ten years of age. He (the President) had been particularly struck by the association of purpura with ulcerative colitis. He agreed with Dr. Voelcker in not regarding purpura as necessarily connected with rheumatism; the joint pains of the former might be mistaken for rheumatism. Sulphocarbolate of sodium in half-drachm doses every four hours had been useful in his experience but he depended mainly on turpentine.

Dr. VOELCKER replied.

CLINICAL SOCIETY OF LONDON.

Exhibition of Cases and Specimens.

A meeting of this society was held on Oct. 23rd, Dr. Frederick Taylor, the President, being in the chair.

Dr. Leonard B. Williams exhibited a case of Dercum's Disease (Adiposis Dolorosa) in a man, aged 47 years. The swellings had first appeared in the occipital region two and a half years before. There were now bilateral, more or less symmetrical, swellings distributed over the trunk and the upper arms, the face, the forearms, the legs, the hands, and the feet being free. Some of these swellings were typical lipomata; others gave the sensation of varicocele. Their development was accompanied by pain and paroxysms of pain occurred not infrequently without any obvious cause. There was a great tendency to hæmorrhages over these swellings, especially after any exercise of the underlying muscles. The patient had become progressively weaker since he came under observation two months before. There was only one other recorded case of this disease in a male.—Mr. A. A. Bowlby, C.M.G., thought that this case was less allied to the true adiposis dolorosa of Dercum than to the group of cases which Mr. W. Morrant Baker and he (Mr. Bowlby) had described in the Transactions of the Royal Medical and Chirurgical Society under the name "diffuse lipoma."[1] These latter were mostly male patients and, as in Dr. Williams's case, pain was not a pronounced feature.—Dr. Herbert S. French asked if any mental deflection or loss of bodily vigour had been observed in this patient, features which he had observed in another case of this disease.—Dr. Williams, in reply, said that although his patient had but little pain just now it had been very severe in the evolution of the malady which corresponded in other respects with Dercum's disease. The morbid change was probably a connective-tissue dystrophy, possibly secondary to neuritis. Dr. Williams suggested that the morbid condition described by Mr. Bowlby as diffuse lipoma, and that by Dercum as adiposis dolorosa, were in reality the same disease.

Mr. Thomas H. Kellock exhibited a case of Ectopia Vesicæ after operation. The patient was a boy, aged four and a half years. The operation was performed in two parts. On the first occasion, in June, 1903, the penis, which was, as usual, in a condition of entire epispadias, was dissected from its anterior attachments, drawn through an opening made through the scrotum, behind what represented the symphysis pubis, and fixed in that position by sutures. At the second operation, in August, 1903, the whole of the visible portion of the bladder was dissected up, turned down, and drawn under the arch of skin in front of the symphysis by sutures passed through its margins. All the urine now passed along the penis into the perineum, where it was hoped it would be possible to collect it in an apparatus without much inconvenience to the patient.—Mr. Kellock also exhibited a case of Possible Tumour at the Base of the Skull in a child aged two and a half years.

Dr. Herbert Tilley exhibited a case of Vascular Nasopharyngeal Fibroma arising within the left maxillary antrum removed by a combined operation through the soft and hard palate with extensive removal of the anterior wall of the left superior maxillary bone. The patient was a boy, aged 14 years, who complained of complete nasal obstruction associated with blood-stained discharge from the left nostril of five months' duration. Examination showed a large, sloughy, readily bleeding mass completely filling the left nasal fossa from the anterior to the posterior nares. Two operations were performed in November and December, 1901, and two others after extensive recurrence in March and July, 1902. Dr. Tilley wished to emphasise the value of a preliminary laryngotomy in such operations. Since the last operation there had been no recurrence, the patient had grown four inches, and early this year the soft palate had been sutured. The growth (a fibro-angioma) was also shown. Microscopically it did not appear to be malignant although it was locally recurrent.

Dr. French showed two cases of Osteitis Deformans. The first case was that of a man, aged 54 years, who presented marked thickening of both tibiæ and fibulæ with curving, kyphosis in the dorsal region, and lordosis in the lumbar region. The condition began three years before after an attack of gout. The second case was that of a woman, aged 53 years, in whom the condition had begun ten years before at the time of the menopause.—Mr. Bowlby remarked on the fact that in the woman the history showed that for six years the only evidence of disease was to be found in one bone. Sir James Paget had included one case of this kind in his original description of the disease, although most of his cases had involved many different bones.—Mr. Harold L. Barnard referred to a case he had seen of probable osteitis deformans which had apparently begun in one bone. He also asked if spontaneous fracture ever occurred in these cases.—Dr. French, in reply, referred to a case in which spontaneous fracture had occurred.

Mr. Herbert J. Paterson (introduced by Mr. Bowlby) showed a Metal Case measuring four and a half inches long and almost three-quarters of an inch in diameter which was swallowed by a man suffering from pulmonary consumption. Inside the metal case there was a glass inhaler containing a drachm of creasote. No symptoms were produced and the inhaler could not be detected by abdominal palpation, but a skiagram (which was exhibited) showed the metal case lying to the left of the vertebral column, with its long axis parallel to the spine. Mr. Paterson opened the stomach and removed the case which was lying in the œsophagus with about an inch of its length projecting into the cardiac end of the stomach. The patient made an uninterrupted recovery.

Mr. Edgar Beaumont exhibited a child, aged 14 months, with Apparent Absence of the External Sexual Organs. Micturition was performed through an orifice beneath the symphysis pubis. A cicatricial line could be seen stretching downwards from this orifice such as might be produced by the cementing together of the labia majora.—Mr. Kellock referred to the difficulties which had arisen in cases where it had not been possible to determine the sex of newly born children. The great majority of cases of such sexually abnormal children turned out to be males.

Mr. Barnard exhibited a case of Sarcoma of the Left Suprarenal Gland, with Secondary Deposits in the Cranial Bones. The patient was a male child, aged two and a half years. The illness had dated from a fall on the head six weeks before. The entire head was now enlarged and the eyes were protruding. In the left hypochondrium was a tumour probably of suprarenal origin. Apart from moderate anæmia the blood showed no marked changes.—Mr. Barnard also exhibited a soft hæmorrhagic sarcoma taken from the skull of a similar case, in which a suprarenal tumour was the only other growth in the body.—Mr. Barnard also exhibited and demonstrated a Trident for the multiple ligature of the pedicles of ovarian tumours, or omentum, an instrument which he had devised to avoid the following dangers: (1) omission of a part of the tissue; (2) confusion in tying the wrong ends; (3) uncertainty as to whether the ligatures were locked; (4) division of the tissues too near the ligature; and (5) tedious loss of time.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Cases.—Colour Blindness.—Appendicitis.

A meeting of this society was held on Oct. 22nd, Mr. Rushton Parker, the President, being in the chair.

Mr. G. P. Newbolt showed a male patient, aged 64 years, from whom he had successfully removed a large Simple Papilloma of the Larynx involving the Right Vocal Cord. Thyrotomy was immediately preceded by tracheotomy. The tumour had been growing for six years.

Dr. Henry Briggs exhibited a Portable Metal Operating Table designed by Richelot and made by Mathieu of Paris. The Trendelenburg position of the patient was readily secured.

Dr. Thomas Bushby showed a case of Aneurysm of the Ascending Aorta in an unmarried woman, aged 26 years. The condition had existed for the past eight years.

Dr. K. A. Grossmann read a paper on the Quantitative Examination of Colour Vision from the point of view of the practical requirements of recognising colour signals. These requirements were analysed and the desirability of the examination with coloured lights was emphasised. Congenital and acquired colour blindness were considered; the former involved the whole vision field, the latter often only parts thereof. The most frequent and the most dangerous form was the defect of the fovea—central colour scotoma. It was often caused by toxic influences—e.g., by tobacco—and was infinitely more frequent than was generally assumed. Its existence was not detected by the ordinary tests, especially not with Holmgren's skeins. The exact frequency of occurrence was not known as it was rarely looked for. Dr. Grossmann then described and demonstrated his test for the examination of colour and the principles underlying its construction.—Dr. E. NICHOLSON said the greater number of cases showed simply confusion between green and drabs or dark grey, about 1 per cent. of men being thus affected. The graver form, confusion between green and red, was not more than one-tenth as common. The green-drab defect was of little consequence to seamen or railway men except in some foggy states of the air when green might be mistaken for a bright light more easily than in the case of persons with normal colour vision. For the estimation of this defect Dr. Grossmann's method promised to be most useful.

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[1] Transactions of the Royal Medical and Chirurgical Society, vol. lxix., 1886.

Dr. W. BLAIR BELL read a paper on Some Points in the [illegible] appendicitis was preceded by a primary dilatation of the cæcum, possibly by a chronic typhlitis in most cases; it was found almost entirely in the upper classes, being due to over-eating and "bolting" of food, a state of affairs which when accompanied by constipation inevitably, unless cured, led to infection of the appendix.—Mr. F. T. PAUL said that he thought the difficulty in diagnosis was sometimes due to the variable situation of the appendix, which in one case might cause a pelvic abscess and in another an abscess in the neighbourhood of the liver. The source of the trouble was almost invariably mechanical, fæces and fæcal concretions becoming impacted in the appendix. No doubt the appendix was subject to attacks of colic and irritation in the earlier stages, but the more serious lesion, peritonitis, only occurred after the irritation had produced a stricture or the concretion a stercoral ulcer and sloughing. The milder phases of the complaint could not usually be diagnosed with absolute certainty, whilst the acute forms could always be recognised as peritonitis and as such receive appropriate treatment.—The PRESIDENT remarked that even "fulminating" cases with widespread peritoneal infiltration were not all fatal as he had experienced on several occasions, also that cases of abscess effused around the appendix and bounded by peritoneal adhesions were commonly less difficult to manage successfully than abscess occupying a retroperitoneal or retrocæcal position.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—A meeting of this society was held on Oct. 16th, Mr. Clinton T. Dent being in the chair.—Mr. R. Clement Lucas related the particulars of a case of Strangulated Hernia in an infant, 28 days old, on whom he had successfully operated. Two days before coming under observation the child had been seized with a sudden screaming fit and the right side of the scrotum was then for the first time noticed to be enlarged. Persistent vomiting and constipation soon followed. At the operation the hernial sac was found to be dark-blue in colour and to contain a considerable quantity of blood-stained serous fluid, while a small knuckle of purple intestine was strangulated by the neck of the sac.—Dr. Henry Skelding (Bedford) referred to a somewhat similar case in an infant seven weeks old on whom he had recently operated. In operating he now commenced his incision from opposite the external ring and carried it outwards and upwards towards the crest of the ilium. The advantages were: (1) easier manipulation without drawing up the testis; (2) less friction on the wound by the truss; and (3) the dressings were less liable to become soiled.—Mr. J. W. Thompson Walker agreed that a diagnosis of hydrocele might be made in such cases owing to the amount of fluid in the sac, as Mr. Lucas had pointed out. He related a case in which the opposite mistake was made. A child developed a scrotal swelling accompanied by vomiting, pain, and [illegible] had been [illegible] that the c[illegible]nalis, which proved to be correct.—Mr. J. Jackson Clarke mentioned the case of a newly born infant, deeply jaundiced, who had two large scrotal herniæ and vomited frequently. One of the herniæ was easily reduced but the other was not and Mr. Clarke performed herniotomy and returned the bowel to the abdomen. The vomiting continued and the child died and on examination the condition was found to be an interruption in the small intestine at the site of Meckel's diverticulum.—Mr. J. H. Chaldecott read a paper on the Employment of Ethyl Chloride as a General Anæsthetic. He described the method of administration (preferably by Ormsby's ether inhaler): (1) in single dose cases where, after anæsthesia was induced, the mask was removed and the operation was performed without any further administration; (2) in more prolonged cases where the administration was continued during the operation; and (3) in cases in which anæsthesia was induced by ethyl chloride and continued by ether and chloroform. He claimed for ethyl chloride that it was the best anæsthetic for short operations upon the mouth, throat, and nose, and that it was very useful, especially in the case of children, as a preliminary to ether or chloroform. At the same time it was a powerful anæsthetic and the patient should be carefully prepared beforehand, as in the case of other anæsthetics.—Dr. Atwood Thorne said he had found ethyl chloride very convenient but not always without drawbacks. In two cases the patients had been insufficiently anæsthetised and in another case severe vomiting had followed, although this possibly was not due to the anæsthetic.—Mr. Sydney Stephenson said that he had had considerable experience of ethyl chloride in ophthalmic out-patient work and was more than satisfied with it. He had never witnessed any untoward symptoms and vomiting he thought was generally due to an overdose of the anæsthetic.—Dr. J. Porter Parkinson read a note on Paralytic Chorea. The patient, a boy, aged ten years, suffered from hemichorea with almost complete paralysis of the affected side, while the involuntary movements were not well marked. There was evidence of mitral disease.—Mr. Jackson Clarke read a paper on the Association of Certain Deformities with Affections of the Throat. He had come to the conclusion that hyperplasia of the adenoid tissue in the nasopharynx and throughout the body was as characteristic of rickets as the hyperplasia of the epiphyses.—Dr. C. J. Macalister (Liverpool) recorded a case of severe Gastro intestinal Catarrh in a child, aged four years. A remarkable feature of the case was the enormous distension of the abdomen, which diminished greatly during the night but recurred immediately after the first meal in the morning. Gradual improvement followed the exclusion of milk from the diet, with the employment of suitable drugs.

EDINBURGH ROYAL MEDICAL SOCIETY.—The first meeting of the 167th session of this society was held on Oct. 23rd, Dr. B. P. Watson being in the chair.—Dr. R. A. Fleming gave a lantern demonstration on Retinal Hæmorrhage and Optic Neuritis. He emphasised the diagnostic [illegible] theories regarding its causation and he strongly supported the view that the condition was a toxic one. He demonstrated the chief pathological changes and showed that these were in the neuroglia cells for the most part. He illustrated his paper by a series of beautiful slides and he also exhibited a large number of sketches and photographs demonstrating the same conditions.—Dr Shaw read, for Dr. Fitzwilliams, notes on a case of Tetanus which occurred in a farmer who received a large wound in one thigh. The symptoms were quite classical and the bacillus of tetanus was found in the wound.—Dr. T. W. E. Ross read notes on a case of Kopf-tetanus which occurred in a middle-aged man who received two slight abrasions on one temple. The symptoms developed somewhat gradually and then became very severe. The patient had frequent spasms and the case terminated fatally by failure of respiration. The case differed from cases of kopf tetanus that had been described in four respects—namely, (1) the insignificance of the wound; (2) swallowing being practically unaffected; (3) the facial paralysis coming on before the spasms; and (4) the presence of spasms in the lower extremities.

CHELSEA CLINICAL SOCIETY.—This society inaugurated the commencement of its seventh session by holding its first meeting at the new Chelsea Dispensary on Oct. 20th.—The President, Dr. T. Vincent Dickinson, who was in the chair, chose for his opening address the subject of Medical Societies and gave an interesting and amusing account of medical men and their patients.—On the conclusion of the address a very successful smoking concert took place.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The annual meeting of this society was held on Oct. 14th.—Mr. G. Munro Smith, the President for the past session, vacated the chair to his successor, Mr. J. Paul Bush, C.M.G., who then gave an inaugural address. He chose for his subject "Some Surprises I have met with" and related many unusual occurrences and surprises that he had come across in his surgical work and during his experiences in South Africa. He gave interesting details of the working of the Princess Christian Hospital, enumerated many remarkable cases he had seen, and enlivened his address with amusing anecdotes. —Dr. R. Shingleton Smith proposed, and Mr. N. C. Dobson seconded, that the best thanks of the society should be given to Mr. Bush for his able address.—This was carried by acclamation and Mr. Bush having made a suitable reply the officers for the ensuing session were appointed.—Mr. H. F. Mole was appointed honorary secretary in place of Mr. Bush who had held the office for the past nine years.

Reviews and Notices of Books.

Vorlesungen über Kinderkrankheiten: ein Handbuch für Studirenden und Aerzte. (Lectures on the Diseases of Children: A Handbook for Students and Practitioners.) By Professor EDUARD HENOCH. Eleventh edition. Berlin: August Hirschwald. 1903. Pp. 940. Price 17 marks.

THE first edition of this book appeared in the year 1881; since then ten additional editions have been published and the sale has considerably exceeded 20,000 copies. In 1889 the fourth edition was translated by Dr. J. Thomson for the New Sydenham Society and in this way it has become familiar to English readers. During the greater portion of the time which has elapsed since its first appearance and the publication of the eleventh edition Professor Henoch's "Lectures on the Diseases of Children" has had only one serious rival to contend with—namely, Professor A. Baginsky's "Lehrbuch der Kinderkrankheiten." If we remember rightly the latter text-book was published in the year 1882—namely, one year later than the first edition of the work under review. The expansion, popularity, and scope of these two works have followed closely parallel lines and that in the past they have fulfilled the requirements of students and practitioners is abundantly testified by the large number of editions which their respective authors have been called upon to revise. We know not how it may be in Germany but we have no hesitation in saying that the days of handbooks of the character of those of Professor Baginsky and Professor Henoch are numbered, if not already over, both in this country and in America. Compare for one moment the brilliance and attractiveness of the methods of illustration, of printing, of paragraphing, and of the generous leading of the type of such works as those of Holt, Rotch, and Koplik with the deserts of monotonous printing and with the endless paragraphs which in the work before us sometimes run their unsympathetic course over many pages without headline, illustration, or diversity of type to arrest the eye and to fix the attention. In the days when there was practically no competition for the patronage of readers students were content to accept without question the educational pabulum provided by authors and to sit down to their meal of dry bones without benefit of garniture or of the gastronomic expedients which please the eye and aid digestion. In a word, Professor Henoch's lectures, which served their purpose well enough in the past, are to-day entirely out of date and unsuitable to the requirements of the modern student. In his revision the author has practically adhered to the same order and classification of disease which he adopted in the first edition; to anyone who has followed the recent advances in that branch of medicine in which the author is so justly distinguished this conservatism is somewhat perplexing. For instance, the term "atrophy" covers in these lectures a number of conditions which, from the point of view of etiology and pathology, bear no sort of relationship to one another. Simple atrophy, which is now generally known under the name of athrepsia, is not differentiated from the atrophy which is symptomatic of many wasting diseases—e.g., tuberculosis. Again, under the general heading of "Dyspepsia" a few diseases of the stomach and a large number of those referable to the bowel are differentiated. Among the latter that exceedingly common condition which in this country is generally called "acholia" or "cœliac disease" and which in Germany passes under the name of "fettdiarrhöe," is mentioned only to be dismissed, since in the author's opinion, although coming under the head of dyspepsia, it does not constitute an independent variety of the disease. However, whether acholia is an independent disease or not its practical importance warrants an independent line of treatment.

In spite of the length of the articles which are devoted to the description of the various diseases and in spite of the closeness of the print it is quite remarkable how very little definite information is provided as the result of the descriptive method adopted by the author. Although, of course, we must not lose sight of the fact that this book is a collection of lectures and not strictly of the nature of a text-book, nevertheless there is such an inextricable jumble of etiology, pathology, symptoms, treatment, and prognosis that it would be quite impossible for any reader who referred to this book for specific information to arrive at the knowledge he required without examining the whole section which deals with the disease in question. As a clinician Professor Henoch's powers of observation and discernment are undoubted and for resourcefulness in treatment he bears a similarly high reputation, but as a writer of books his want of method and system clearly condemns him. In his preface to the present edition the author remarks on the enormous amount of new literature in the field of dietetics; at the same time he regrets that the scope of his work does not permit him to do more than to refer superficially to the newer methods of feeding. Breast feeding, or when this is impossible, milk diluted with one, two, or three parts of water according to the age of the infant, he believes answers all the requirements of infant dietetics. Sterilisation of cow's milk he believes to be necessary and for this purpose he commends the Soxhlet apparatus. A recommendation for the treatment of certain acute cases of dyspepsia by cold, or even iced, milk and water deserves attention. Calomel and hydrochloric acid are the drugs in which he has most confidence in the treatment of the heterogeneous disorders which are classed under the heading of dyspepsia. In whooping-cough he thinks there is no drug like morphia. In this connexion perhaps heroin might be a safer substitute.

As a hand-book we cannot recommend this work of Professor Henoch, not only because it is dull reading and badly arranged but because it has been most inefficiently revised. Practically none of the recent work in which modern physicians are interested, such as achondroplasia, congenital rickets, lymphatism, infantilism, stenosis and spasm of the pylorus, and exact methods of infant feeding, is in any way referred to. The lectures on dentition and scrofula, perhaps, by very reason of the author's conservatism, are in our opinion among the best.

New Conceptions in Science. By CARL SNYDER. New York and London: Harper and Bros. 1903. Pp. 361. Price 7s. 6d. net.

THIS book is an American view of the relations of science and progress and one of the most interesting chapters in it is that in which the author deals with what he is constrained to call America's inferior position in the scientific world. He points out that while the educational facilities of the United States are great, yet he is not able to claim that America has produced many great men of discovery comparable with Pasteur, Lister, Koch, Clerk Maxwell, Hertz, Helmholtz, Crookes, Rontgen, van't Hoff, Ostwald, Raoult, Kelvin, Faraday, Berthelot, and others. It is refreshing to hear at any rate of this country being placed in a creditable position. "The stronghold," he says, "of English science within the last century has distinctly been the Royal Institution in Albemarle-street Thence have the most brilliant discoveries in England come." We cordially allow the author the comfort which the fact evidently affords him that the Royal Institution was founded, after all, by an American—namely, Benjamin Thompson, who was later Count Rumford, and who was born in a village near Boston. Count Rumford was a man of chequered career. He had strong scientific instincts and strong political instincts also which brought him into contact with revolutions. He finally settled in England and just a century ago, he conceived the plan of the Royal Institution. In England perhaps we have not realised what magnificent work has been done in this institution and to what great industrial developments researches like those which Faraday conducted there have led. We may well have a feeling of admiration for that institution in which, to quote one instance, the principle of the modern dynamo was discovered. In the view of the author the Royal Institution alone has done more for English science than all the English universities put together. "I should like to see, I should like to assist in," he adds, "the founding of such an institution in the chief city of the New World."

On the whole, the developments of science, including those which have been quite recently made in consequence of the discovery of radium, are adequately treated in the book under review. The author's enthusiasm, however, leads him now and then to speculate upon certain facts to a further extent than perhaps those facts warrant him in going. His writing, however, is clear, his facts are arranged in proper sequence, and he has written the story in a bright and attractive way. The man of ordinary intelligence could read the pages with advantage and on the whole we think he should get a very fair idea of the trend of present-day research and discovery. The author certainly has presented a wide field for the curious to wander through. Starting with a consideration of the facts known about the stellar universe, he proceeds to things mundane, and next to a guess as to what electricity is and as to what atoms are. The discussion of the aspects of synthetic chemistry precedes sections on "What is Life," "The Action of the Brain," "The Constitution of the Human Body," and "The Nature of Disease." Finally, he touches upon psychical science and concludes with an account of wireless telegraphy. The author has selected as a text, so to speak, on the page preceding the contents page the following observations of Sir Oliver Lodge "The ordinary run of men live among phenomena of which they care nothing and know less. They see bodies fall to the earth, they hear sound, they kindle fires, they see the heavens roll above them, but of the causes and inner workings of the whole they are ignorant and with their ignorance they are content." Mr. Snyder might have added as an appropriate postscript the seventh, eighth, and ninth verses of the fourth chapter of the second book of Esdras, which run thus: "And he said unto me, If I had asked thee saying, How many dwellings are there in the heart of the sea or how many springs are there at the fountain head of the deep? or how many ways are above the firmament? or which are the outgoings of hell? or which are the paths of paradise? peradventure thou wouldst say unto me, I never went down into the deep, nor as yet into hell, neither did I ever climb up into Heaven. Nevertheless, now have I asked thee but only of the fire and wind, and of the day, things where through thou hast passed, and without which thou canst not be, and yet hast thou given me no answer of them." Such was the great philosopher Newton's view and in spite of the wonderful "new conceptions of science" it is the view of most of her leading devotees at the present day.

Animal and Vegetable Fixed Oils, Fats, Butters, and Waxes; their Preparation and Properties. By C. R. ALDER WRIGHT, D.Sc. Lond., B.Sc. Vict., F.R.S. Second edition, edited and partly rewritten by C. AINSWORTH MITCHELL, B.A. Oxon., F.I.C. London: Charles Griffin and Co. 1903. Pp. 804. Price 25s.

THE late Dr. Alder Wright was up to the time of his death lecturer on chemistry at St. Mary's Hospital Medical School and it was well known to chemists that in the intervals of his academic work he devoted much time to the study of that interesting group of bodies—the oils, fats, and waxes. His acquaintance with the subject naturally brought him into contact with the technical applications of the bodies with which he experimented in the laboratory. It is obvious that a very wide field of technical industry is covered by the subjects dealt with in this volume. Candles, soaps, and similar products form, of course, a considerable feature of home industries, to say nothing of many other applications of oils and fats.

The first edition of the present work was issued in 1893, when the author stated that its object was to give general descriptions of the methods whereby animal and vegetable oils and fats are obtained from natural sources. Such descriptions naturally formed the introduction to an account of the leading practical applications and uses and the physical and chemical properties and reactions of these interesting and important bodies. Dr. Wright, however, stopped somewhat short of analytical methods so far as regards their application to the detection of the adulteration of oils and so chemists, though finding the work one of extreme value as a source of reference, were obliged to look elsewhere for information upon analytical details. In the second edition Mr. Ainsworth Mitchell has endeavoured to fill this gap and to render the work capable of being used as an analytical text-book and in this endeavour we feel he has done a real service to analytical chemists. The work of extension thus involved has, of course, necessitated the rewriting of certain of the chapters, whilst one chapter, dealing with the methods employed in detecting the adulteration of oils and fats, is almost entirely fresh. This step, however, has not altered the general plan of the work. Even to the reader who has no technical concern with the subject many of the chapters will be of the greatest interest. We may mention those, for example, dealing with the manufacture of soaps, candles, night-lights, and the recovery of glycerine from soap leys. Man's ingenuity in devising machines to make the manufacture of the important commodities of daily domestic use efficient and speedy is well exemplified in the machinery designed for the manufacture of candles and soap. We presume that some of the earlier methods in regard to both manufactures are now obsolete. We do not suppose, for example, that the modern dip is made in the way in which it used to be or that mottled soap has its basis in the old mottle which consisted of iron salts accidentally derived from the metallic impurities of the "black ash" which was then used for saponifying the oil. Nowadays pigments are added to give the "veined" or mottled appearance throughout the soap.

The book deals with matters of the greatest interest both to the trade and to those who are dependent upon the trade for the supply of good, well-made, and honest products. Mr. Mitchell undertook no small task in preparing a second edition of Dr. Wright's work. In this task we venture to think he has succeeded and chemists and others will readily own that he has presented them with an excellent and up-to-date edition of a standard work.

LIBRARY TABLE

Sight and Hearing in Childhood. By Robert Brudenell Carter, F.R.C.S. Eng., Consulting Ophthalmic Surgeon to St. George's Hospital, and Arthur H. Cheatle, F.R.C.S. Eng., Assistant Aural Surgeon to King's College Hospital. London: The Scientific Press, Limited. 1903. Pp. 120. Price 2*s.* net.—This little book is intended for the public and specially for parents and those engaged in the education of the youth of the country. It will serve a useful purpose if it helps to draw attention to the frequency of defective sight and hearing in childhood, if it brings home to masters the necessity of considering the recipient of teaching as well as the teaching itself, and if it guides them to look with some suspicion upon the once orthodox belief that all apt scholars are the results of the skill of the preceptor and all dunces the exponents of inherited or natural incapacity. The authors, each in his own department, have been forced to realise the heavy toll which is deducted from the possible capacities of the rising generation by defects of sight and hearing. They very rightly urge, both upon parents and upon those who manage schools, that one of the first questions to be asked about a child in relation to his school or to his intended calling is whether he can see and hear with sufficient acuteness to be safely left to take his place among a crowd. The book is both clearly and simply written. The mechanism and anatomy of vision and of hearing are described and the causes of defects, the consequences of defective vision, the aids to vision, and the cultivation of vision are in turn dealt with. In writing of the consequences of defective vision, Mr. Brudenell Carter draws attention to retinal torpidity arising from want of exercise. He suggests that the determination of the acuteness of vision and of the rapidity of perception should be made for each eye separately in the nursery, at least by the age of eight years, and remarks that in this way much subsequent disappointment would be saved. At every school the vision of each new pupil should be tested and recorded, as affording knowledge of facts absolutely essential to the proper conduct of his education. In the chapter on the Cultivation of Vision, he points out that two separate aims are to be kept in view—viz., the improvements in the acuteness and quickness of vision; these should both be cultivated by the combined effects of exercises and emulation. The cultivation of the colour sense is also a matter which should at least be attempted in every school. Mr. Cheatle's chapters on the Care of the Ears in Childhood, the Diseases of the Ear, and Diseases of the Breathing Pathway are well worth reading. The first named is one that will be helpful to all mothers and nurses.

A Pharmacopœia for Diseases of the Skin, containing Concise Formulæ, Mixtures, Ointments, Lotions, Caustics, Rules of Diet, Classification, and Therapeutical Index. Edited by James Startin, M R C S Eng., Senior Surgeon to the London Skin Hospital, Fitzroy-square Fifth edition. Bristol: John Wright and Co. 1903 Pp. 64. Price 2*s.* 6*d.* —This is a convenient little book inasmuch as it contains many useful prescriptions for affections of the skin but many of these medicines require to be used with more precaution than would be imagined from the prescriptions as they appear. The "indications" for each preparation are rather vague. The use of the symbol for a scruple is unnecessary and somewhat liable to cause confusion. There can be no object in writing Hydrargyri Ammon. Chloridi ℈ ss. and in the very next line Acid. Carbolici gr. x., as the quantities are identical. It would be far better to banish the scruple from all prescriptions.

Surgery: its Theory and Practice. By William Johnson Walsham, F.R.C.S. Eng., M.B., C.M. Aberd., Surgeon to, and formerly Lecturer on Surgery and on Anatomy at, St. Bartholomew's Hospital; Member of the Court of Examiners, Royal College of Surgeons of England, &c. Eighth edition, with 622 Illustrations, including 20 Skiagram Plates, by Walter George Spencer, M S., M.B. Lond., F.R.C S. Eng., Surgeon to the Westminster Hospital. London: J. and A. Churchill. 1903. Pp 1227. Price 18*s.* net.—The recent death of Mr. Walsham lends a sad interest to the issue of the eighth edition of this standard work. The larger share in the preparation of this eighth edition has been taken by Mr. Spencer and therefore his name appears on the title page. Even a glance at the book shows the very great changes that have been made; nearly 300 pages of text have been required to accommodate the increase of matter necessitated by the progress of surgery and a very large number of additional illustrations still further enhance the value of the work. Of "Walsham's Surgery" 38,000 copies have now been issued and the mere mention of these figures proves conclusively that this treatise has supplied what is needed. A work so extensively used is almost beyond criticism; faults, indeed, there may be but they are far outweighed by the unquestionable merits and in the present edition it is difficult to find anything to criticise. The reputation enjoyed during many generations of students will be increased and continued, we do not doubt, for many years to come. The student cannot find a book better suited to his needs and those engaged in the practice of their profession may turn with advantage to this volume for a solution of difficulties encountered. The illustrations are, on the whole, clear and good; a few of the microscopic sections are too indefinite to be of much value but we may especially commend the skiagrams which have been supplied by Dr. Hugh Walsham.

Surgical Asepsis, especially Adapted to Operations in the Home of the Patient. By Henry B. Palmer, M.D., Consulting Surgeon to the Central Maine General Hospital. With 90 Illustrations. Philadelphia: F. A Davis Company. 1903. Pp. 231. Price $1.25.—As the author mentions in his preface, the home treatment of surgical cases offers some very decided advantages over treatment at a hospital or nursing home if the same quality of nursing can be obtained and this work is intended to assist surgeons in carrying out surgical operations and treatment in private houses. It deals with the general principles of aseptic wound treatment, the means of sterilisation, the preparation of a room for operation, and the preparation of the patient. The after-treatment is also given. In a chapter on Minor Aseptic Procedures many useful little hints are to be found. We are glad to see that Dr. Palmer insists on the sterilisation of the hypodermic needle. This is a precaution which is too often neglected.

JOURNALS AND MAGAZINES.

The Practitioner.—The results of organotherapy in Addison's disease are by no means as satisfactory as are those which we confidently expect in a similar method applied to myxœdema, the disease with which this mode of treatment is most familiarly associated. Dr. E. W. Adams supplies in the October issue of the *Practitioner* an account of organotherapy as applied to Addison's disease which is comprehensive and clear Dr Adams divides the cases in regard to the results of the treatment into four classes (1) alarming or fatal result, (2) no influence, (3) marked improvement, and (4) permanent benefit. The natural tendency of the disease towards periods of abatement and temporary recovery is carefully reckoned with The whole article is of value to all those who are concerned in the study and treatment of Addison's disease A lecture on the Diagnosis of Hysteria by Dr J Purves Stewart supplies some instructive cases and is excellently illustrated by diagrams of the various forms of anæsthesia and paræsthesia occurring in this affection Dr Guthrie Rankin's practical paper upon Headache is continued in this number and is quite as full of sound observation and advice as was his last contribution on the same subject An article on the Frequency of Alimentary Glycosuria in the Children of Diabetic Persons and one upon the Relationship between Leukæmia and Tuberculosis form the other principal constituents in a capital number of the journal

The Journal of Anatomy and Physiology Conducted by SIR WILLIAM TURNER K C B, F R S, D J CUNNINGHAM, F R S, G S HUNTINGTON, M D, A MACALISTER, F R S, and J G M'KENDRICK, F R S Vol XXXVIII, Part I, October, 1903 8vo With plates and figures in the text. London Charles Griffin and Co, Limited Price 6s —The contents of this number are as follows 1 Abnormalities of the Renal Arteries with Remarks on their Development and Morphology, by Alfred H Young, M B, F R C S, and Peter Thompson, M D, with a plate showing some varieties 2. A Chemical Study of the Hibernating Gland of the Hedgehog together with the Changes it undergoes during Winter Sleep, by E W Wace Carlier, M D, and C A. Lovatt Evans The authors state that their investigation confirms the remarkable fact that life during hibernation is maintained practically upon fat alone, a condition made necessary by the well known inability of the animal body to lay up a store of nitrogen. 3 Note on an Abnormal Colon, by G Elliot Smith, M D In this case the cæcum was entirely absent and the colon was placed in one plane 4 A Discussion of some Points in Connexion with the Suprarenal Glands—Cortical and Medullary, by Swale Vincent, J Francis Mason Scholar 5 Abnormal Nasal Bones, by B Wahby, with two plates 6. The Lower Cervical Fasciæ, by J Ernest Frazer, F R C S This description of the lower cervical fasciæ, which is illustrated by several drawings, is founded on careful dissection 7 A case of Accessory Patellæ in the Human Subject, with remarks on Emargination of the Patella, by W Wright, M B, M Sc, with three woodcuts in the text. 8 On the Influence of the Patella in Extension of the Knee joint, by J Dunlop Lickley, M B, Ch B It is here shown that in addition to the patella being a lever of the first order it is an important agent in varying the leverage by altering the position of the fulcrum 9 The Unsymmetrical Kidney, its Compensatory Enlargement, by Frederick Craven Moore, M Sc, M D Vict. 10 The Germ Cells, Part I, with two plates, by John Beard D Sc 11 A case of Abnormal Arrangement of the Aortic Valves, by H K Abbott, M D This number contains the Proceedings of the Anatomical Society of Great Britain and Ireland

The Journal of Physiology Edited by SIR MICHAEL FOSTER, F R S, and J N LANGLEY, F R S Vol XXX, No 1 London C J Clay and Sons August 24th, 1903 Price 7s —The contents of this number are as follows 1 Digestion Leucocytosis in Normal and in Spleenless Dogs, by Alexander Goodall G Lovell Gulland, and D Noel Paton The chief conclusions at which they arrive will be found in THE LANCET of Oct 24th, p 1182 2 The Estimation of Potassium and Sodium in Urine and in other Material of Organic Origin, by W H Hartley, D Sc Lond, and K J P Orton, M A. Cantab 3 Reflex Pupil dilatation by Way of the Cervical Sympathetic Nerve, by H K Anderson, M D Dr Anderson finds that after section of the third nerve dilatation of the pupil may be readily excited by tactile and pathic stimuli but the dilatation ceases when the cervical sympathetic is also cut No evidence was obtained of efferent fibres to the iris except those in the third and sympathetic nerves After section of the third nerve no constriction of the pupil could be obtained either by variations of light or other sensory stimulation There was therefore no evidence of inhibition of the central sympathetic tone of the dilatator After section of the third nerve hippus may occur, the rhythmical contraction and dilatation of the pupil ceasing at once on section of the sympathetic nerve After section of the spinal cord immediately below the bulb stimulation of the central end of the sciatic nerve still causes slight dilatation of the pupil, retraction of the nictitating membrane, and separation of the eyelids 4 The Precipitation of Proteids by Alcohol and certain other Reagents, by M Christine Tebb, an interesting article on the obscure chemical reactions of the proteids of the blood, milk, eggs, and muscle. 5 The Qualitative Difference of Spinal Reflex corresponding with the Qualitative Difference of Cutaneous Stimulus, by C S Sherrington, M A, M D, F R S Professor Sherrington's observations were chiefly made upon dogs with a view of determining the causes of the "scratch reflex" in dogs He shows that in the dog different kinds of nerve endings situated in one and the same cutaneous field possess reflex spinal connexions differing wholly *inter se* 6 The Formation of Uric Acid in Birds, by T H Milroy, M D 7 The Proteolytic Activities of the Pancreatic Juice by W M Bayliss and E H Starling, F R S 8 The Products of the Proteolytic Action of an Enzyme contained in the Cells of the Kidney, with one figure in the text by H D Dakin, Exhibition Research Scholar This number also contains the Proceedings of the Physiological Society on June 27th, July 11th, and July 25th, 1903

Caledonian Medical Journal —The principal contents of the October number are two articles, both of them interesting from the historical and folklore point of view The first of these is an essay which gained one of the Stewart Celtic prizes, its subject is Highland Therapy and it was written by Mrs Robert Moodie of Edinburgh, a native of Kintail in Western Ross The second of the two articles is on the Social Life of the Scottish Gael and is by Dr J B McLaren of Salford.

Mercy and Truth —The two principal articles in the October number are (1) on the Medical Mission Meeting held at Keswick on July 24th, and (2) on the Chinese Mode of Life by the Rev M Mackenzie, M B Edin Dr Mackenzie says that the Chinese mode of life as a whole excels that of European countries, that Chinese clothing is more hygienic than that of Europeans and that opium smoking in China is a less evil than alcoholism in Europe

Dublin Journal of Medical Science —The original communications in the October number are on a case of Trigeminal Neuralgia and Excision of the Gasserian Ganglion, by Mr T W Gordon, and on the Hygienic Aspect of Flax Manufacture, by Dr H S Purdon This is also the annual "educational number" and contains a section giving full details as to medical education and examinations in Ireland

West London Medical Journal.—The principal features of the October number are two presidential addresses and the report of the council of the West London Medico Chirurgical Society presented at the annual meeting last July The presidential address delivered before the society by Dr. Seymour Taylor on Oct. 2nd is entitled "*Milestones in*

Medicine," the successive discoveries or improvements mentioned under this head being the ligature, introduced by Ambroise Paré; vaccination, introduced by Jenner; the stethoscope, introduced by Laennec; anæsthesia, introduced by Wells, Morton, and Sir James Simpson; and finally, antisepsis, introduced by Lord Lister. The retiring presidential address delivered by Mr. Rickard W. Lloyd dealt with the administration of anæsthetics in rectal diseases. A lengthy abstract of this address appeared in THE LANCET of July 11th, p. 102.

Looking Back.

FROM

THE LANCET, *SATURDAY*, OCT. 29, 1825.

MIDDLESEX HOSPITAL.

To the Editor of THE LANCET.

SIR,—As it is your professed object to direct your attention to every species of corruption connected with public Hospitals, I beg to call your attention to the proceedings of the Weekly-board and Surgeons of Middlesex Hospital. The circumstances of a poor surgery-man being dismissed and prosecuted with relentless rigour, for imitating a superior servant of that institution, by *drawing a few teeth* from a deceased patient, must be within the recollection of your readers. In that case, investigation immediately followed, and the unprotected man was brought to the gates of a prison, where however, fortunately, the matter terminated. Lord Robert Seymour, who has been so great a benefactor to the institution, will, I trust, explain to the public the proceedings in question.

If there be a law against removing *any part* of the body of a dead patient, Mr. Bell has been guilty of a violation of it, and is as much entitled to punishment as the person alluded to; if, on the contrary, no such law exist, why prosecute an under servant, while his superior is permitted to promote his interest or gratification with impunity? This species of legislation verifies the language of the satyrist, when he said "Laws are like cobwebs, which catch small flies, but suffer the great ones to break through them."

I trust you will continue to furnish your readers with reports from this Hospital, which are of inestimable value, not only to students, but to individuals in practice. The operations performed by Joe Burns and John Shaw, or the senior and junior Joes as they are called, will, no doubt, excite that interest which the labours of such distinguished persons cannot fail to produce. The operation of amputation below the knee, by *young* Joe, which required *an hour and ten minutes* for its performance, and the particulars of the long-looked-for operation of lithotomy, by the same person, together with the appearances upon dissection *nine hours afterwards** will no doubt be acceptable to your readers.

Permit me, in conclusion, Sir, to congratulate you on the extensive circulation of THE LANCET, and the success attending its operations.

I am, Sir,
Yours truly,
OBSERVER.

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* In consequence of the length of Mr. Lawrence's lecture, and of the review, we have been under the necessity of postponing the account of the above operations, as well as several articles of interest, to our next number.—ED.

SOME NOVEL PATENTS.—An American inventor has patented an apparatus for the treatment of defective hearing. It contains a bellows, two electro-magnets, and several other parts; the object of it is "to set up air impulses in the air-tube" and "to produce electric impulses either separately from, or in conjunction with, the air movements." Another inventor has patented a toy for expanding the lungs. It consists of four glass flasks, partly filled with fluid and connected by a system of tubes. Descriptions and drawings of both these contrivances are given in the *Official Gazette* of the United States Patent Office issued on Oct. 13th.

THE ENTRIES AT THE MEDICAL SCHOOLS.

BY the kindness and courtesy of the deans and secretaries of the various medical schools and colleges of the metropolis and the provinces we are able to give our readers some idea of the number of individuals who have entered upon the study of medicine in the autumn session of the present year. It will be seen that while in the provinces there has been a general fall in the number of entries as compared with those of last year the London schools show a slight increase. From the University of Birmingham we have received no returns. The clerk to the medical faculty of that University, on the instruction of the dean, informs us that "pursuant to the custom adopted during the past few years no statistics will be issued respecting entries." The figures for the University of Oxford must be taken as approximate. There is at present no means of finding out at this University how many freshmen intend ultimately to read medicine, for it is not until they take anatomy and physiology that they become collected together. A fair approximation can, however, be obtained by taking the number of men who began dissection during the past year which was 28. The total number of men reading medicine at present at the University of Oxford is probably 150 or 160. This approximation is obtained by multiplying the average number of men studying medicine at each college, which is eight, by the number of colleges, which is 21.

ENTRIES FOR THE YEAR 1903–04.

London.

Name of medical school.	Full medical course.	Special courses and Prel. Sci.	Dental.	Full course, 1902–03.	Increase or decrease in full medical students over or under last year's figures.
St. Bartholomew's	80	53	—	75	+ 5
Charing Cross	18	39	31*	16	+ 2
St. George's...	20	35	—	18	+ 2
Guy's	70	79	32	72	– 2
King's College	20	220†	1	17	+ 3
London...	67	93	2	73	– 6
St. Mary's	42	35	—	26	+ 16
Middlesex	19	48	10	11	+ 8
St. Thomas's	48	17	—	42	+ 6
University College	25	69	—	29	– 4
Westminster	10	30	—	16	– 6
London School of Medicine for Women	36	25	—	28	+ 8
National Dental Hospital	—	9	9	8	+ 1
Royal Dental Hospital of London	—	—	46	50	– 4
Provincial.					
University of Birmingham	—	—	—	—	—
University College, Bristol	12	2	2	12	‡
University of Cambridge	104	—	—	125	– 21
University College, Cardiff	13	33	4	17	– 4
Yorkshire College, Leeds	24	51	2	21	+ 3
University of Liverpool	111	7	26	132	– 21
Owens College, Manchester	51	81	31	48	+ 3
University of Durham (College of Medicine), Newcastle-on-Tyne ..	26	32	3	28	– 2
University of Oxford	28	—	—	—	—
University College, Sheffield ...	4	3†	4	8	– 4

* In 1902–03 there were 38 dental students.
† Including bacteriology and public health.
‡ No change.

THE LANCET.

LONDON: SATURDAY, OCTOBER 31, 1903

The Etiology of Human Tuberculosis.

SINCE the dramatic pronouncement made in 1901 by Professor KOCH to the effect that bovine tuberculosis bore no causal relation to human tuberculosis and that therefore it was unnecessary to take any precautions against the consumption of tuberculous meat or against milk drawn from tubercle-riddled udders we have heard nothing to equal in importance the address on tuberculosis which was delivered by Professor BEHRING at the recent Congress of German Naturalists and Medical Men. A summary of this remarkable delivery was published in THE LANCET of Oct. 24th (p. 1199) and to this we must refer our readers for the details At the present moment we propose to review briefly the general position. The attitude taken up by Professor KOCH in 1901 was eminently lucid and simple. As the result of a series of experiments carried out by himself and Professor SCHÜTZ it had not been found practicable in the opinion of the experimenters to infect bovine and certain other animals with tubercle of human origin, and from these experiments, as also from arguments as to the rarity of primary intestinal tuberculosis, Professor KOCH seems to have inferred that the converse held good—i.e., that bovine tuberculosis could not be communicated to the human species. Since that date a large number of somewhat similar experiments have been made and their general trend has been to show that the results by no means always correspond with those obtained by Professor KOCH and Professor SCHÜTZ. Recent work shows in fact that tubercle of human origin can, at any rate under certain conditions, be transmitted to bovines. This being so, the followers of Professor KOCH, in so far as they base their case upon the negative experiments above referred to, are placed somewhat upon the horns of a dilemma Either they must discredit the recent positive experiments or, for the sake of logical consistency, they must infer that bovine tuberculosis is transmissible to the human species. But whichever horn of the dilemma is selected the only point which is really left over for discussion and experiment at the present time is the *facility* with which human tuberculosis can be transmitted to the bovine host, and as to this, as also with respect to the inferences which are to be drawn from such facility, the report of the Royal Commission on Tuberculosis must be awaited.

In the meantime, however, there comes, also from Germany, another pronouncement, which is, in effect, the absolute antithesis of the position taken up by Professor KOCH and his followers. Professor KOCH having pronounced the opinion that it was not advisable to take any measures against bovine tuberculosis threw his world-wide influence in the direction of combating the infection from person to person and he went so far as to express the opinion that the remarkable decline of pulmonary tuberculosis in this country was very largely the result of the "special hospitals for tubercular patients in England." As to this point, as also with respect to the decrease of the disease elsewhere than in England, the recent Milroy Lectures on Pulmonary Tuberculosis, by Dr. H. T. BULSTRODE, which were published in the columns of THE LANCET,[1] should be consulted. But in diametrical opposition to the thesis of personal infection, which in our view has been materially over-rated, we now find Professor BEHRING expressing the opinion that communication of pulmonary tuberculosis to adults by contagion has not yet been demonstrated. Shortly summed up, Professor BEHRING'S attitude is somewhat as follows. For the development of tuberculosis the soil as well as the seed is essential, and looking at the wide distribution of the parasite the former is, perhaps, more important than the latter. For instance, Professor NAEGELI claims to have shown that among the necropsies made at the Pathological Institute of Zürich signs of tuberculosis were found in every instance in the bodies of persons over 30 years of age and Dr. FRANZ, an Austrian army medical officer, states that 68 per cent. of the men in an Austrian regiment reacted positively to the tuberculin test. Professor BEHRING'S fundamental proposition is, in fact, that as a general rule tuberculosis has its origin in early infancy and that, contrary to the view of Professor KOCH, the vehicle for the conveyance of this latent infection is milk. The cause of active tuberculosis is not therefore so much exposure to infection as the conditions of life which alter the soil of the individual already the bearer of the essential seed. Infants are prone to absorb the tubercle bacillus, not only by reason of tuberculous milk, but also, and mainly, from the fact that the permeability of the gastro-intestinal canal of young animals as shown by the experiments of Dr. ROMER, one of Professor BEHRING'S pupils, is much greater than is that of adults. Professor BEHRING is evidently impressed by a belief that what may be termed "vaccination" against tuberculosis is not beyond the realms of practicability and hence that sanatoriums and other therapeutic measures may become unnecessary. However, the discrepancy that at present obtains between the two German professors upon the fundamental question results, we fear in something approaching an administrative *impasse* and we cannot altogether suppress a belief that the very wide generalisations which have in each instance been drawn from a single series of experiments were not fully justified in a scientific sense. An entirely different theory is that propounded by Dr. H. CHARLTON BASTIAN in an article which we publish in another column. His views will be considered highly heterodox by the majority of living pathologists and bacteriologists, for he boldly suggests that tuberculosis can be produced *de novo*. He bases his conclusions on the conditions respectively known as "Davaine's septicæmia" and "Pasteur's septicæmia" and the experiments of Sir JOHN BURDON SANDERSON who demonstrated that a form of septicæmia (similar to that of PASTEUR) could be set up by injecting a small quantity of a germ-free chemical irritant into the peritoneal cavity or into the subcutaneous tissue of a rabbit. The ingenious yet scientific arguments upon which he founds this assumption can be studied by our readers in the original paper. In another leading article we refer to the opinions held by Professor HUEPPE as expressed in the Harben Lectures.

Reverting to the views of Professor KOCH and Professor BEHRING, we consider it judicious to await the report of the Royal Commission on Tuberculosis before we throw in our lot either with the extremists who believe that tuberculosis may be "stamped out" by sanatoriums alone or with those whose opinion it is that the only danger of infection resides in tuberculous milk. The value of sanatoriums as curative agents cannot, of course, be questioned and all humanitarians will welcome their extension in this sense, but their value as preventive agents depends, firstly, upon the precise degree of the communicability of pulmonary tuberculosis; secondly, upon the extent to which they can be used as educational agencies in promoting resistance generally; and, lastly, upon how far "drop infection" can be prevented or reduced, as also upon the percentage of patients who are sent out from the sanatoriums with no tubercle bacilli in their sputum. Professor KOCH regarded this absence of tubercle bacilli "as the only sure test of success, especially as regards prophylaxis," and he added that "about 20 per cent. of the patients who have tubercle bacilli in their sputum lose them by the treatment" in sanatoriums. Fortunately, administrative action has in the past been taken, though nearly unconsciously, in the direction of promoting the resistance of the host and the harvest, estimated in the enormous reduction in the death-rate from pulmonary tuberculosis, has already been largely gathered in. Whether, therefore, in the end it will be the thesis of Professor KOCH or the thesis of Professor BEHRING which will be found to be true, or whether, as is not improbable, each will have to be regarded as containing something of the truth, the work done by medical officers of health will continue to reduce the death-rate from tuberculosis.

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The Harben Lectures.

THE Harben Lectures were this year delivered before the Fellows of the Royal Institute of Public Health by Professor FERDINAND HUEPPE of the University of Prague. These lectures (of which short abstracts will be found at p. 1216 of our present issue), in due course, will be fully reported in the society's official journal and we strongly advise all those who are interested in the subjects which they embrace to avail themselves of the opportunity which will thus be afforded of studying the views and conceptions held by one of the broadest-minded, most erudite, and most philosophic investigators among bacteriologists of to-day. The specific titles of the lectures in which Professor HUEPPE embodied many of his most important views were as follows: (1) General Views on the Etiology of Infectious Diseases; (2) Hygiene and Serum Researches; and (3) Tuberculosis.

It is not, however, so much our purpose to provide a *résumé* of these lectures as to describe in general the influence which Professor HUEPPE has undoubtedly exercised on our conceptions of the general biological processes involved in the manifestation of disease. In the opinion of many of those who watch scientific events there are at the present time in Europe two men who more than any others are welding together and weaving into homogeneous relationship many of the scattered and tangled strands of scientific knowledge in its relationship to pathology and to bacteriology. These two men are Professor VERWORN of Jena University and Professor HUEPPE of Prague. It has been the task of these two investigators in their respective and complementary fields of study to apply the general laws of conservation of energy and of organic evolution to the understanding of the normal and abnormal processes of the human body; and by the application of inductive and deductive methods of reasoning both of them have been enabled to anticipate on theoretical grounds certain facts in bacteriology and general physiology which have since been confirmed by actual experiment.

At the Congress of Naturalists at Nuremberg in the year 1893 Professor HUEPPE first publicly propounded his views on the causation of disease, adopting for the first time in the history of medicine a clear and unambiguous nomenclature. He claimed, though at that time his audience hardly appreciated his arguments, that the *causes* of all diseases were prefigured in the molecular structure of the cell—in the potential energies of protoplasm,—and that these potential energies could become converted into kinetic energies (symptoms) under the influence of disease stimuli. The clear definition of the meaning of causes, of stimuli, and of resistances in his terminology has enabled Professor HUEPPE to formulate a definite and unambiguous interpretation of disease and to clear the ground of many of the misconceptions which have arisen from erroneous and contradictory deductions arising out of VIRCHOW'S "Cellular Pathology," out of PASTEUR'S and KOCH'S "Conception of the Specificity of Pathogenic Bacteria," and out of PETTENKOFER'S claim that time and place were the chief determining factors in the production of disease. In this memorable lecture Professor HUEPPE maintained that the essence of disease lay not in the cell, in the bacterium, or in the circumstances of time and place, but that disease should rather be expressed as the function of the sum of all these constituent factors. He further insisted that the manifestation of disease was the expression of the conversion into kinetic energy of potential energy residing in the molecular structure of the cell under the liberating influence of disease stimuli and under the influence of varying conditions in the environment. The Harben Lectures were made the occasion by Professor HUEPPE for the circumstantiation by means of concrete examples of the theoretical views which he propounded in 1893. The adaptation of cell activities to the changing conditions of environment and the variation of bacterial species in accordance with the circumstances of time and place were illustrated by examples of susceptibility to, and immunity from, tuberculosis and other diseases and by the morphological and metabolic variations of the tubercle bacillus itself in its varying conditions of parasitism in different hosts. The full appreciation of Professor HUEPPE'S philosophic conceptions throws unmistakeable light on many of the biological problems which vex the minds of medical controversialists to-day.

As far as prevention of disease is concerned, in Professor HUEPPE'S opinion, the task which now lies before hygienists is to arrive at an understanding of the processes by which a susceptibility to disease may be converted into an immunity and to determine the nature of the resistances which hinder the release of what may be called pathological energy; in other words, to study the disposition of men to disease and the methods by which it may be favourably influenced by suitable external conditions.

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The Relation of Chemistry to Medicine: A Retrospect.

SCIENCE nowadays has many branches and happily it is rarely that a decidedly progressive step is made in one branch which does not in some way advance the general cause. The history of medicine certainly teaches that such is the case. Empirical methods give way to rational treatment as the principles of the collateral sciences upon which, after all, medicine must be based are further elucidated. Historically defined as an art medicine is now rapidly establishing its claims to be considered a science. At one time, of course, there was considerable incredulity that assistance could ever come to medicine through such channels as chemistry and physics and the practitioner of a century ago could not trace a very intimate connexion between contemporary medical advance and the growth of chemical knowledge. An interesting example of this scepticism was published in our columns last week under the heading of "Looking Back." "Chemistry," said Dr. CLUTTERBUCK, in a lecture on the Theory and Practice of Physic delivered in the theatre of the General Dispensary, Aldersgate street, and published in THE LANCET of Oct. 22nd, 1825, "notwithstanding the vast advances it has made of late years, and the important applications that have been made of it in other arts, has still but a remote relation to medical science. It is of no service to us in regard to physiology; it does not offer an explanation that is altogether satisfactory of any one of the functions of the animal œconomy." Doubtless Dr. CLUTTERBUCK was well within the mark in these statements made 78 years ago when of necessity empiricism in medicine largely, though, of course, not entirely, prevailed. It may be that the world went very well then but it was yet to see a SIMPSON, a PASTEUR, a HUXLEY, a LISTER, and other great pioneers of medical knowledge and to gain by their devoted energies and genius a wider glimpse into the nature of things, thereby adding immensely to the relief of suffering humanity. It is not a little difficult to realise in this year of grace what the position of medicine really was in the absence of any specific knowledge as to the chemistry of the body, of nerve tissue, of the respiratory processes, of the secretions, of metabolism, of nutrition, of fermentation, of bacteriological function, of antitoxins, of organo-therapeutic agencies, and so on. Incidentally, it may be remarked also that Dr. CLUTTERBUCK spoke before chloroform was discovered and years before its application as an anæsthetic had been tried with those beneficial results which subsequent medical and surgical history has eloquently set forth. "Chemistry," however, he commenced his lecture by saying, "will make a part of this course (the materia medica) because it is chiefly of importance in its relation to pharmacy." No medical man can dispute the valuable rôle of pharmacy in medicine but surely few would hold now that the importance of chemistry to medicine rests chiefly upon its pharmaceutical applications. We must recognise that the germ theory of disease arose out of an investigation into the chemistry of fermentation—an investigation by which chemistry proved to be the foundation of bacteriology. Further, the high level to which the study of bacteriology has raised pathology is patent. The discovery of the existence of toxin and antitoxin was the highly important outcome of the study of specific pathogenic organisms and the relation between toxin and antitoxin, at one time regarded as a physiological one, is now considered to be of the nature of a chemical reaction similar to that which exists between an acid and an alkali. We are thus brought in touch with the nature of the action of a poison and in the future we may confidently hope that chemistry will explain the exact effect of poisons on the human organism and as knowledge is gained on this point so surely will the means of preventing and treating disease be strengthened.

Chemistry and physics have undoubtedly shed considerable light on the nature of disease because they have afforded an insight into the working of the parts of the human machine, for it is obvious that physiology could not have advanced far without the application of physical and chemical knowledge; the phenomena of metabolism and nutrition would not have been understood as they are at the present moment had not chemical and physical researches been prosecuted with such praiseworthy energy and skill. In Dr. CLUTTERBUCK'S time the phenomena of destructive and reparative processes were ill understood and analysis was then little advanced, while synthesis was, comparatively speaking, unknown. "We see," he said, "the same blood carried to the liver and kidneys and we find separated from it by the action of these organs in the one case bile, in the other urine; but neither bile nor urine are to be found in the common mass of blood nor can we extract them from it by any art of chemistry." The secretion of bile as an important factor in alimentation is understood, while chemistry has taught us that urine is the channel by which waste excretory products of the body are discharged. It was soon after Dr. CLUTTERBUCK delivered his interesting address, which no doubt was in complete harmony with prevailing views that urea was obtained by an artificial process, was built up entirely from inorganic elements, and so a crystalline substance identical with the urea of urine was produced by a process in which so-called "vital force" played absolutely no part. This discovery was the death-blow to the theory held in Dr. CLUTTERBUCK'S time that many things could only be the product of life processes. The art of synthesis has progressed enormously since then and not only has it given rise to that numerous class of bodies of pharmacological importance and known as synthetics, but it has also given us a clearer insight into the constitution of complex substances, a glimpse into their molecular architecture, and this added knowledge has to some extent explained the manner of the building up and breaking down of complex structures in the human physiology. Again, pharmacology, as it deals with the relation between the chemical composition and constitution of a substance and its physiological action, will no doubt prove to be the basis of rational therapeutics depending upon the administration of drugs.

Chemical research permeates in many directions and not the least important direction is that in which it relates to the nature of the processes of digestion, comprising the assimilation of starches, fats, and proteids. We know broadly the chemistry of the changes by which food is brought into a condition in which it is appropriated by the body and we know the destiny of these food substances and their bearing upon the nature of the waste products. The action of pepsin, pancreatin, and lipase are now recognised as chemical in kind. This most interesting group of bodies—the enzymes—would appear to be unorganised entities and their behaviour falls into a line with that of other chemical agents; their conduct in effecting metabolic transformations, as, for instance, the conversion of starch into sugar, appears to be due to their alternate power of giving and taking, after the manner of the oxygen-carrying substance—the hæmoglobin of the blood. There seems, again, to be little doubt that the recent developments of chemical and physical research in regard to the nature of solution and of chemical reactions in solution will throw considerable light upon physiological problems and will add materially to our knowledge of the function of fluids in the human body. The theory of the dissociation of salts in solution into "ions" is calculated to place a new interpretation upon the manner in which not only the digestive juices act but also upon the changes sustained by the blood during respiration and in the metabolic processes.

In spite of all the enormous advances, however, that have been made since Dr. CLUTTERBUCK'S time, particularly in regard to the chemistry, physics, and physiology of the processes upon which the existence and well-being of the human body depend, it must be admitted that we are a long way, a very long way, from the finality of things. But the knowledge which has accrued in this direction since the foundation of this journal and which it is our privilege to place before our readers, should serve as an encouragement to all those who study medicine and who realise what noble ends their labours have in view. Few have time to study chemical science in its entirety and the busy practitioner in particular has usually little chance of gaining further insight than broad principles will give him, but he will be ready to acknowledge that chemistry and the related sciences have extricated medicine from much empiricism, and that they will do yet more there can be little doubt.

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Experiments devoted to the Elimination of Plague in Hong-Kong.

THE Governor of Hong-Kong (Sir HENRY BLAKE, G.C.M G.) has been not only interesting himself in the eradication of plague but has taken steps to give a well-considered scheme of his own a practical trial. Sir HENRY BLAKE, in a memorandum which he has written upon the subject, states that he attributed the "dumping" of bodies dead from plague in the streets and on hill sides of the colony "to the dread of the disinfecting process as carried out by the sanitary authorities." The plan adopted by the authorities consisted of (1) placing a policeman in charge of the plague-infected house; (2) detaining the inmates until their clothes are disinfected; and (3) disinfection of the house. Great dissatisfaction was caused amongst the Chinese in the city by these processes and to overcome some of the objections Sir HENRY BLAKE set about devising a plan more acceptable to the poorer inhabitants. Firstly, he nominated a committee for every health district to deal with the matter but bodies still continued to be "dumped." He then, after consultation with the Hon. J. M ATKINSON, M.B., principal civil medical officer, asked to have a block of houses in a plague-infected district handed over to him to be dealt with according to the following plan. He visited the locality with several members of the Colonial Government staff and several of the leading Chinamen. He called the people together and addressed them upon the necessity of personal cleanliness, the destruction of vermin, and the meaning of disinfection of clothing and of dwellings. To enable them to clean their houses he erected tanks for boiling a watery solution of Jeyes' fluid into which bed-boards and furniture could be dipped and he provided washhouses for both sexes. In the month of April, 1903, the process of cleansing the district was begun and in course of time 253 houses were systematically dealt with. Moreover, local hospitals were established in the district to which the patients were willingly transferred by their relatives and where the relatives were allowed to nurse them under the treatment of either European or Chinese medical men as preferred The outcome of these measures was that "dumping" of the dead bodies ceased, the disease practically disappeared, and early notification was expedited.

In addition to these practical steps Sir HENRY BLAKE fostered the scientific investigation of the general prevalence of plague in men and in animals. The question of the general infection of the community was investigated by Dr. W. HUNTER. He examined 110 specimens of blood from men, women, and children taken at random and found plague bacilli in 4·54 per cent. of the persons thus examined. Extending these figures proportionately to the inhabitants of the city, it would appear that some 8000 or 9000 persons had plague bacilli in their blood in whom there were neither signs nor symptoms of their being thus affected. In other words, chronic plague may exist in a plague-infected district amongst persons apparently well. Dr. W. J. R. SIMPSON had already shown that domestic animals suffer from chronic plague and Dr. HUNTER found flies, cockroaches, bugs, and the like, to be similarly infected. A further interesting fact was brought to light by Dr. HUNTER, namely, that in specimens of rice exposed for sale in the shops plague bacilli exist. Sir HENRY BLAKE recognises the fact that the unhygienic construction of Chinese dwellings and tenements is chief difficulty to be contended with in the ext tion of plague and in the existing circumstances, there he believes that the rigid observance of personal a household cleanliness is the only available method eradicating or limiting outbreaks of plague. His attempt to render cleanliness easy of accomplishment has been attended by excellent results and we hope to see the disease eliminated, or at all events reduced in virulence, by his well-timed interference on behalf of the colony.

Annotations.

"Ne quid nimis."

THE ST. BARTHOLOMEW'S HOSPITAL APPEAL.

Her Majesty the Queen has forwarded to the Lord Mayor of London a sum of £1000 to start the appeal which it is intended to make shortly to the public for funds for the new buildings and improvement of the present buildings of St. Bartholomew's Hospital. The Lord Mayor has sent the money to the treasurer of the hospital, Sir Trevor Lawrence. This gentleman, it will be remembered, was the proposer of the motion passed on Jan. 19th last appointing a committee of 15 members to inquire into the hospital affairs At the meeting of this committee of inquiry, which was held at the Mansion House on May 5th, the committee expressed the opinion that it was fully justified in appealing to the public for funds to enable it to utilise the land acquired from Christ's Hospital and to provide the new buildings urgently necessary to bring the hospital up to modern requirements in all respects. As the appeal is going to be made within a short time we can only express the hope that the great depression of the public funds and other stocks and shares and the general agitation over the fiscal question will not thwart and obscure the efforts for publicity and success which the appeal committee will make. We have received an advance proof of an article by Sir Henry Burdett to be published in the *Hospital*. He points out that the present site, together with the additional land recently purchased from Christ's Hospital, comprises an area of a little over six acres. In his opinion this area is insufficient to contain all the buildings required for the purposes of a modern hospital and, in addition, everything essential to the successful conduct of a great medical school. He proposes, to put the matter shortly, that in addition to the £350,000 which the Mansion House committee decided that the hospital should appeal for, a further £250,000 should be asked for in order to purchase more land from the governors of Christ's Hospital. Sir Henry Burdett's article includes a plan of the hospital as he would have it. According to this plan both the present residential college and the nursing home are eliminated from the present site, but Sir Henry Burdett does not say to where these two institutions are to be moved. We have authority for stating that the medical and surgical staff of St. Bartholomew's Hospital has always felt and said that the amount of land recently acquired is not sufficient for all that is wanted, as a large part of the new ground is to be taken up with the new nursing home. In the opinion of the staff the nursing home should be removed outside the actual hospital walls in the same manner as it has already been decided to remove the residential college In that case the staff considers that all that is likely to be required for many years to come could be arranged on the site now available. We have already expressed our opinion upon the various matters as to whether St. Bartholomew's Hospital should remain on its present site and as to whether it ought to appeal to the public for funds.[1] The hospital, like so many other metropolitan hospitals, benefits the country at large although primarily a City institution, and in the present circumstances it seems to us that whether or not it is decided to remove the nursing home and the residential college more land is a necessity. £600,000 represent without doubt a large sum, but we are sure that if the public, including all who are or have been at any time connected with St. Bartholomew's Hospital were convinced that by the expenditure of this sum the ancient foundation would be put upon firm ground for many years to come the money would not be long in forthcoming. The kindly gift of the Queen will without doubt give the movement a favourable start and it is to be hoped that at the meeting of the governors to be held on Nov. 5th the matter will be seriously considered and that those present will remember that the expenditure of an apparently large sum now will really prove an economy by making sufficient provision for future years.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE Lord Mayor of London, who is treasurer of the Hospital Sunday Fund, has received from Mr. George Herring the amount of £12,312 for the year 1903, in accordance with his most generous offer to add one-fourth to the total amount collected in each place of worship on Hospital Sunday in aid of the Fund. Mr. Herring's latest gift therefore represents £49,248 thus collected as against £46,300 in 1902. The total receipts of the Fund this year, including income from other sources and Mr. Herring's special gift, comes to £64,700, as against £62,669 in 1902 (an increase of £2031). We are quite sure that Mr. Herring is as glad as we are to see the demand on his pocket steadily growing and we can only add—long may he continue his beneficence and may he find many imitators.

THE ASSOCIATION OF PUBLIC VACCINATORS OF ENGLAND AND WALES.

THE annual dinner of this association took place on Oct. 23rd under the presidency of Mr. E. Climson Greenwood and was attended by members from all over the country. The proceedings of the afternoon meeting will be found at p. 1253. The President, in a half serious and half humorous speech, proposed the toast of "The Boards of Guardians." Although there were no guardians present (with the exception of Sir W. S. Church) they had among them men who were of more importance than the guardians—namely, the clerks to the boards of guardians. Mr. Henry List, in responding, said there was no reason why public vaccinators should not be appointed and paid by the local authorities in the same way as the registrars and superintendents of registration were appointed and paid. Mr. H. Stuart Sankey, L.C.C. (recorder for Faversham and standing counsel to the association), in proposing the toast of "The Visitors" said that the President had plunged them into a dismal gloom by bringing before their eyes the harrowing spectacle of the highly trained public vaccinator being trampled on by the brutal guardians and he had put before them a picture of the depths of poverty into which they had been plunged by the extremely inadequate fees which they were paid. He was, however, filled with admiration at the way in which they had all disguised their feelings that night. He next referred to the visitors present, including Sir W. S. Church, Dr. Dawson Williams, Dr. S. M. Copeman, Mr. D. B. Balding, J.P., Dr. A. G. Bateman, and Mr. E. W. D. Elsam. Sir W. S. Church, in responding, mentioned his connexion with the Imperial Vaccination League. They had to overcome the ignorance of the public with respect to vaccination. He recounted an interesting conversation he had had two years ago with Sir Harry Johnson whom he found to be a strong vaccinationist and who used the strongest language about anti-vaccinationists. He said he only wished he had them with him in Africa where he had seen whole tribes carried away by small-pox. The natives knew the value of vaccination and crowded round to be operated on when the mails arrived with a fresh supply of lymph. Mr. Balding and Mr. Elsam, honorary secretary to the National Vaccination Officers' Corporation, having responded other toasts followed. After the President had responded to the toast proposed by Mr. V. A. Jaynes, which was received with musical honours, a most enjoyable evening terminated.

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[1] THE LANCET, Jan. 17th (p. 180) and 24th (p. 254), March 7th (p. 678), and May 16th (p. 1389), 1903.

THE PERIODIC FORM OF MELANCHOLIA AND OTHER MENTAL DISTURBANCES.

THE periodicity of certain forms of insanity has been recently the subject of special study by alienists. The late Dr. Krafft-Ebing in his recent text-book[1] refers to an extensive series of cases collected by him which serves to show the rôle of heredity in determining the attacks of the periodic insanities. In the *New York Journal of Nervous and Mental Disease* for September, Dr. Alfred Gordon, neurologist to the Jefferson Medical College, Philadelphia, refers to the fact that cases of periodic insanity are not frequently met with in asylums for the insane, though outside asylums they are not very rare, as a number of such cases have come under his observation. This is due to the fact that in the periodic insanities the attacks of mental derangement occur at limited and sometimes brief periods and that in the intervals between such attacks the patient is more or less free from mental disturbance. Cases of this sort are also important in a medico-legal sense since the question of responsibility for acts committed during the periods of such "attacks" may be raised in the law-courts and the defence of insanity may be set up. The view entertained by alienists a century ago that the intervals between the attacks must be of equal duration in cases of periodic insanity can now no longer be held. The records of cases published during the past half century and individual experience show that the duration of the interval varies. The periodic psychoses known are periodic melancholia, mania, paranoia, and circular insanity, in which definite maniacal and melancholic states alternate. Mania is often likely to occur in the periodic or recurrent form and melancholia comes next in order of frequency. Dr. Gordon refers to three cases of typical intermittent melancholia continuously observed by him during the previous four years. "The evolution of the disease as well as other features," he states, "are so different from the common type of melancholia that they deserve a special mention." He observed that in all of them there were no morbid symptoms (prodromes) immediately preceding the onset of each attack. While ordinary melancholia develops in an insidious and progressive manner so that the patient or his relatives cannot as a rule indicate the time when the state of depression exactly begins, in periodic melancholia of the intermittent type the onset is strikingly sudden. Feeling perfectly well a day before, the patient awakes in the morning with symptoms of sadness. Sometimes a local pain of the nature of facial neuralgia or cephalalgia of short duration is present at the beginning of the attack. As the onset is characterised by its suddenness the termination of an attack of periodic insanity is equally abrupt, while an attack of ordinary melancholia subsides slowly and very gradually. Of the cases recorded by Dr. Gordon the following is one. The patient was a married woman, aged 35 years, and had been through seven pregnancies. Her personal history showed that she suffered from mental "obsessions" at the age of 16 years and was always of a highly irritable disposition and that a sister and a grandmother suffered from insanity. In 1899, after her fourth confinement, in the midst of apparently perfect health, she suddenly became depressed and felt that she could not do her work, and when she commenced her work she had to discontinue it immediately. She worried over this because she could not do anything for her children—e.g., prepare their food, and finally she lost all interest in her household, in her husband, and in her children. This painful depression of spirits became associated with physical apathy and aversion to the sexual act. Her mind was dominated by sad ideas, and she gradually developed the delusion that she was unworthy to live and had been condemned to perish. The appetite was lost and wasting set in. The respiration was slow and superficial, the pulse was small and accelerated, and frequent pain was felt in the præcordial region. The blood showed marked deficiency of hæmoglobin and a distinct degree of leucocytosis (22,000 leucocytes per cubic millimetre). There were also present headache, partial insomnia, horrible dreams, and occasional visual hallucinations. The mental state just described remained almost unchanged for two months, except for occasional remissions lasting for a few hours. "At the expiration of two months, one morning the patient awoke in a calm and peaceful manner, called her children, began to caress them, and offered to prepare breakfast for the family." The mental faculties cleared up rapidly, interest in her surroundings and in herself was quickly restored, and the melancholic state entirely vanished. She became pregnant again and was in good health when confined. Labour was normal. Three weeks afterwards and without any preliminary symptom the old mental trouble returned. The same course of symptoms, mental and bodily, recurred. The duration of the illness was two months, at the end of which time the attack ceased and rapid recovery followed. Another—i.e., a sixth—pregnancy occurred. Six weeks after confinement the attack of insanity made its appearance, but on this occasion it lasted longer—viz., for four months. The mental disturbances were almost identical in evolution with those of the first two attacks, and the termination was also in rapid, almost abrupt, recovery. The other cases recorded display similar features of evolution of an attack as the above. "It is singular to note the comparative mental lucidity between the individual attacks," adds Dr. Gordon. All these cases showed a marked hereditary neurotic tendency. Dr. Gordon concludes that his observations confirm those of Krafft-Ebing and agree with recent cases published by Ziehen, namely that the periodic insanities are predominantly of hereditary origin and indicate a degenerative tendency in those subjects who manifest them.

SCHLATTER AND DOWIE.

"DR." DOWIE is in danger of turning even fanatics into sceptics. He should follow the best traditions of his kind in the United States and self-denyingly "go under." A timely disappearance has sometimes almost saved the reputation of a quack. This in some sort has been the case with a certain Francis Schlatter who as lately as 1895 enjoyed a huge reputation for thaumaturgy in Denver, Colorado. Schlatter had the appearance of an ascetic and probably did sincerely despise high living and riches. He seems to have remained poor and, wonderful to relate, disappeared at the very zenith of his fame. As lately as Sept. 17th, 1895, the *Rocky Mountain Daily News*, intoxicated as it were with the fame of the "Saint of Denver," published at the head of its columns a startling manifesto beginning with the words "Death to Doctors" and describing the merits of the prodigy of the south-west. Schlatter, the puff averred, cured rich and poor alike, provided only that they were halt, deaf, or blind. When patients could not reach Mr. Schlatter gloves were taken to them, which he had previously touched. The gloves were distributed twice daily—gratuitously, it would appear. Gloves rained in the house of a certain Mr. Fox, a "prominent citizen," who was thereby reported to be cured of the most obstinate form of deafness

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[1] Lehrbuch der Psychiatrie, 1903.

He became Schlatter's ardent disciple and persuaded the master to become his guest. As if to expiate this acceptance of luxurious conditions Schlatter, one November night, quietly disappeared, leaving behind him this laconic scrap of blasphemy: "Mr. Fox, my mission is finished and the Father recalls me. I salute you; Francis Schlatter. Nov. 13th." He has not apparently been heard of since. Both Dowie and he are only links in a long chain of thaumaturgists whose prototype is lost in the mists of time "The mania for believing oneself inspired," Calmeil points out in his work "De la Folie," "for believing and announcing oneself a prophet, has been so frequently manifested among the sectaries of all religions, that we are embarrassed by the choice of examples of this deplorable unhealthy condition."

AN UNUSUAL APPLICATION.

A REMARKABLE instance of popular misconceptions with regard to the asylum treatment of insanity was supplied recently in the West of England. During an interval in the business of the Cornwall quarter sessions held at Bodmin on Oct. 21st the whole of a jury which had been engaged in the trial of a prisoner expressed a wish to visit the county asylum and for this purpose asked written permission from the chairman (Mr. W. C. Pendarves). The motives which prompted the jurymen to make this request were, no doubt, harmless enough; the strange feature of the case was their failure to understand that the coming and going of casual visitors would be singularly out of place in such an institution Unhappily, the majority of the patients suffer from chronic mental disorder, often associated with structural changes in the cerebral tissue, but when the symptoms have not been of long duration many regain their faculties and resume the positions which they held before their illness. This proportion of recoveries being an important justification of our elaborate and costly asylum system, the object of the medical superintendents is to make their institutions as far as possible hospitals for mental disease. In addition to being afflicted with one of the most terrible of maladies many of the patients are abnormally sensitive and anything which might suggest that they were being made subjects of exhibition would be intensely cruel. It is, however, only within a comparatively recent period that the public responsibility for the humane treatment of lunatics has been generally recognised. Even in 1844 the Commissioners in Lunacy in their reports to the Lord Chancellor complained of the prevalence of abuses and of the remissness of justices of the peace in attending to their duty of inspecting lunatic asylums, while in the eighteenth century Bethlehem Asylum in London was an everyday resort of idlers who paid a small admission fee for the purpose of being entertained by the antics and foolish talk of the inmates. Edward Ward, a well-known writer who died in 1731, introduces a visit to this asylum in his "London Spy" and has left a deplorable account of the scenes which were to be witnessed.

THE UNIVERSITY OF TORONTO AND ITS MEDICAL SCHOOL.

AT the annual convocation of the University of Toronto which took place on Oct. 2nd the honorary degree of LL.D. was conferred upon Professor William Osler of Johns Hopkins University, Professor C. S. Sherrington of the University of Liverpool, Professor Welch of Johns Hopkins University, Professor Keen of Jefferson Medical College, and Professor Chittenden of Yale University. The degree was also conferred *in absentiâ* on Professor Bowditch of Harvard University. The inaugural address, which was delivered by Professor Sherrington at the opening of the new medical and science buildings of the University of Toronto, will appear in our columns next week. The new buildings in question are chiefly intended for the study of physiology, pathology, and hygiene and are stated to be as fine as, or even finer than, any which we have in this country. The opening of these buildings was also marked by the union of the old Anglican School of Medicine—viz, Trinity College—with the University School, so that now the University School contains over 600 medical students and is the largest in Canada.

BETHLEHEM HOSPITAL.

WE have received a leaflet giving notice of a service of commemoration which was held in the chapel of the above hospital on Oct. 23rd. The order of service was a hymn, Evening Prayer up to the end of the Third Collect, the 130th Psalm, and another hymn. Then followed the address, two anthems, and the final hymn. The leaflet contains some interesting historical notes dealing with various important dates in the history of the hospital which was founded in 1247 as a Priory of St. Mary of Bethlehem; the following were the word of the Founder in his charter of foundation:—

> By reason of my reverence for my Lord and for His most tender Mother, to the honour and glory also of our Lord the King, to the benefit in manifold ways of the City of London, in which I was born, as well as for the salvation of my own soul, and for the salvation of the souls of my parents and friends, I have given to God and to the Church of St. Mary of Bethlehem all my land in the parish of St. Botolph, without Bishopsgate, with houses, gardens, orchards, ditches, and marshes, for the foundation of a Priory there, with a prior, canons, brothers, and sisters, who shall wear upon their mantles the badge of a star. And there shall be celebrated in the church to be erected there divine services for the souls aforesaid and for the souls of all the faithful dead And I have handed over the possession of all things aforesaid to Godfrey, Bishop of Bethlehem, to whom the said place shall pay one mark each year at Easter.
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> This Charter of my Foundation I have signed and sealed on the Wednesday after the Feast of St. Luke, A.D. 1247. Witnesses:—Peter Fitz Alwyn, Mayor of London; Nicholas Bat, Sheriff; Ralph Sperlynges, Alderman; Godfrey de Campes, Simon the Tiler, Simon the Loriner, and others.

We are glad to see that the commemoration service has not been altogether dropped, though no doubt the intention of the founder was to include a *missa pro defunctis* We think it would not be out of the way to remind the authorities of the hospital that both before and after the Reformation there existed a number of services called dirges and one of these closely following the English use authorised in 1545 was sung last year in St. Paul's Cathedral on the burial day of the late Archbishop of Canterbury.

OBLITERATION OF THE SUPERIOR VENA CAVA.

IN the *Bulletin of the Johns Hopkins Hospital* for July Professor Osler has published an important paper on the rare condition of Obliteration of the Superior Vena Cava. While compression of this vessel is not very uncommon in cases of aortic aneurysm and mediastinal tumours complete obliteration with establishment of a collateral circulation is extremely rare. Only 29 published cases could be collected from literature. They can be classified as follows:—1. Thrombosis due to disease within the vein (10 cases). 2. Disease outside the vein (19 cases)—tuberculosis (four cases), mediastinitis (four cases), aneurysm (four cases), syphilis (three cases), periaortitis (two cases), carcinoma (one case), and fibroma (one case). The symptoms depend on the degree to which the collateral circulation is established. Any one of the three great veins of the body may be obliterated for years and the patient retain good health if the collateral circulation is complete. Professor Osler records the two following cases. A man, aged 23 years, was admitted to hospital complaining of dyspnœa, tightness of the chest, and swelling of the neck. Six weeks previously he went to bed feeling well and awoke with dyspnœa. He found that his neck was swollen and felt as though something was pressing on his chest. On admission the face and eyelids were puffy. The neck was full and pulsated and its veins were distended with blood. The superficial veins of the thorax and right upper arm were dilated. On Dec. 21st he was discharged improved. In December, 1899, he was re-admitted complaining of pain in the chest and swelling of the face. The thoracic subcutaneous veins anastomosed with the superficial and deep epigastric veins. The current in the thoracic veins was from above downwards. Radiography revealed nothing abnormal. In June, 1900, there were signs of pulmonary tuberculosis and the veins were more dilated. In February, 1901, he had a severe attack of dyspnœa with cyanosis and died. At the necropsy the innominate veins and upper part of the superior vena cava were found to have been converted into a fibrous mass. This was adherent to the spine which at this point was carious. There were many tubercles in the lungs. The left jugular vein was occluded; blood from the head must have passed mainly by way of the right jugular vein, through the right subclavian, pre-pectoral anastomosis with the anterior perforating branches of the internal mammary and with the subcutaneous tortuous veins, and superficial epigastrics to the inferior cava. An alternate course was from the subclavian to the upper right intercostal veins through the perforating branches of the latter and thence to the vena azygos which was very large. In the second case the patient was a man, aged 31 years, who was admitted to hospital in October, 1899, complaining of swelling of the neck and face. In 1884 he noticed that the right cervical glands were enlarged; afterwards the left ones were affected. In 1887 the enlargement much increased and about Christmas of that year the face was much swollen and the veins of the face, arms, and chest began to dilate. When he came under observation the face was suffused and swollen and the tongue was somewhat cyanosed. The venules were prominent and the veins of the cheeks and forehead were distinct. There was great enlargement of the cervical glands, particularly on the right side. The thoracic and abdominal veins were enormously distended. In September, 1890, the venous distension was still greater and in some of the veins over the manubrium thrombi could be felt. Death took place in March, 1893. The necropsy showed that the superior vena cava was obliterated by enlarged mediastinal glands.

THE DEATH-RATE FROM ALCOHOLISM.

THE difficulty of reconciling public and private interests is rarely more marked than in those cases where, in deference to the susceptibilities of patients and their friends, medical practitioners have to conceal information obtained by them in the course of their professional work which might be of great service to the community at large. How much, for instance, might be done to check the ravages of venereal diseases if popular prejudice would permit of their notification. Similarly, in cases of alcoholism the part played by the poison in causing death is usually obscured by the unwillingness of the attending physician to add to the troubles of sorrowing relatives by an outspoken declaration of the real state of affairs. Death certificates are consequently often much less instructive than they might be and the value of the statistics compiled for the Registrar-General is materially diminished through the application of the principle *de mortuis nil nisi bonum.* In Denmark and Switzerland an attempt is made to meet this objection by provisions which enable the medical man to give such details of an illness as considerations of public hygiene render desirable, while at the same time secrecy is preserved in regard to the failings of the particular individual. The arrangements in force in the latter country were described by M. Mahaim of the University of Lausanne at a recent congress held in Brussels. During the past 15 years in the case of 15 of the larger towns of Switzerland and during two years throughout that country it has been the custom for the certificate of death to be written on a card bearing merely a number instead of the name of, and other particulars about, the deceased, as with us. The identity of the person to whom the certificate refers can, however, be ascertained, if this becomes necessary, by a circuitous method which involves application to the central administration at Berne. In this way the practitioner is enabled to express in full his views of the nature of the illness without appearing unduly censorious. The value of such a removal of the restriction imposed upon the medical attendant by the requirements of professional propriety is shown by the figures relating to the effects of alcohol which have thereby become available. Switzerland is not, as far as we are aware, a country where alcoholic intemperance is peculiarly rife, yet it appears that the deaths from delirium tremens in males over 20 years of age amount to 0·5 per cent., which is ten times the rate in France as officially recorded. For males over 70 years of age alcohol is given as a principal or concomitant cause of death in 10 per cent. of the cases, while the general death-rate directly referable to acute or chronic alcoholism, without including hepatic cirrhosis or other subsidiary conditions, is 3 per cent. By the introduction into this country of some such method as is here described medical men would be given the opportunity of exercising a similar candour to that which characterises their brethren in Switzerland, and though the result would probably be rather distressing to our national self-esteem it could hardly fail to inculcate sundry valuable lessons.

PUBLIC VACCINATORS AND BOARDS OF GUARDIANS.

AT a meeting of the Chard board of guardians held on Oct. 19th a return of the cost of vaccination in the Chard union for four years prior to, and subsequent to the passing of, the recent Vaccination Act was read. We need not give the detailed figures but we may say that in general, though not in all districts, the number of vaccinations performed after the Act was passed had increased and in all the districts the expenses had gone up. Mr. Dening, the mayor of Chard, said that it was no wonder that the medical men were starting their carriages and pairs. Mr. Gawler asked if the demands were in excess of the regulated charges or if the medical men made their own charges, to which the clerk replied that the charges were strictly legal. Mr. Gawler thereupon said, "Then you cannot blame the doctors." In the *Chard and Ilminster News* of Oct. 24th a letter from Mr. Napier Close, public vaccinator for Chard borough, is published, which puts very plainly the case for a public vaccinator in a rural district. Mr. Close's district comprises an area of 7051 acres and the average sum received by him per annum for vaccinating throughout this district has been £39. Deducting estimated expenses, including materials for dressings, postage of notifications and the like, he actually receives each year £20 2*s.* 3*d.*, which works out at 1*s.* 3*d.* for each visit. He pointedly asks the editor of the *Chard and Ilminster News* to tell him of any member of any learned profession who would do such work for a like wage. Another letter appears in the same issue of the paper from Mr. Benjamin L. Powne, medical officer to No 1 Chard District, stating that at a meeting of the guardians held on Oct. 12th the chairman made "a perfectly one-sided statement." Mr. Powne also shows very clearly, while allowing that the expense to the ratepayers has increased, that the work of a public vaccinator has trebled. We may remark that an editorial paragraph in the same number of the *Chard and Ilminster News* which published the account of the board of guardians' meeting said: "Where are the anti-vaccinators? Now is their chance." In the same paper for Oct. 24th, after the publication of Mr. Close's and Mr. Powne's letters, another editorial paragraph stated that it should be well known that the new Act thrusts upon the public vaccinators an immense amount of work and responsibility, and that though the extra cost to the ratepayers has enormously increased it cannot be said that the price paid is too high, seeing that efficiency and thoroughness had been secured. Also that anti-vaccinationists are fortunately rapidly becoming extinct. We need not here labour the point that vaccination is a prophylactic against small-pox and we would point out to the Chard and Ilminster guardians that the charges made by medical men are perfectly legal, for according to the Vaccination Act of 1898 either the guardians agreed with the medical men to give them the fees which they received or else the charges have been fixed by the Local Government Board. It must be remembered that a vaccination does not simply consist in scratching a child's arm with a lymph-covered lancet but it may entail a long journey and always entails two or three inspections, careful dressings, the filling up of some six official documents, and a great deal of responsibility.

THE USE OF GLYCERINE INSIDE THE UTERUS.

IN a paper entitled "An Adjunct to Uterine Irrigation" which is published at p. 1229 of our present issue Dr. David Watson recommends the use of an intra-uterine injection of an ounce of glycerine containing 3 per cent. of formalin in cases of septic infection occurring after delivery. The question of intra-uterine irrigation in such cases is one upon which very varying opinions are held by different obstetricians. Most writers on the subject are agreed that in cases of pure streptococcic infection the use of such injections is best avoided. It has been shown that by the time the initial chill and rigor occur the organism has already invaded the tissues of the uterine wall and is beyond the reach of any antiseptic solution however powerful. In cases of mixed infections, and especially where the discharges are offensive, the employment of large quantities of, say, normal saline solution is valuable from its mechanical action in washing out the cavity of the uterus. The use of powerful antiseptics for this purpose is not only dangerous from the risk of poisoning but is actually harmful from the destruction of the already damaged tissues which they produce. Dr. Watson believes that watery solutions also act injuriously because they increase the amount of moisture in the interior of the uterus. To overcome this drawback he recommends for this purpose the solution of formalin in glycerine mentioned above. It must be remembered, however, that the introduction of glycerine into the interior of the uterus is not unattended with a special danger of its own. In 1890 Pelzer of Cologne advocated the method of inducing premature labour by injecting a small quantity of glycerine between the membranes and the uterine wall. A considerable number of cases was soon recorded, but it was not long before this method was found to be attended with much danger. Pfannenstiel showed that intra-uterine injections of glycerine were not uncommonly followed by the occurrence of hæmoglobinuria and in some cases by the death of the patient. Similar untoward results have occasionally attended the use of injections of iodoform and glycerine into the joints in cases of tuberculous disease. Such accidents are especially likely to follow when the patients are suffering from any renal affection and in these circumstances the intra-uterine injection of glycerine is strongly contra-indicated. In the case of a healthy woman recorded by Ferrari the intra-uterine injection of as small an amount as ten cubic centimetres of glycerine with every antiseptic precaution was followed in ten minutes by a rigor. Vomiting, hæmaturia, and diarrhœa set in almost immediately and the patient died from syncope two hours after delivery. At the post-mortem examination acute parenchymatous nephritis was found to be present. On account of the danger of such an occurrence this method of inducing labour has fallen into disrepute, and we should be afraid lest the more general adoption of the novel treatment suggested by Dr. Watson for cases of uterine sepsis might lead to equally disastrous results. That no such ill effects need be anticipated when glycerine is given in moderate doses by the mouth is shown by the experiences of Hermann. He has used the drug in 119 cases of nephrolithiasis in doses of from one to four ounces and has seen no bad results from its administration. The hæmoglobinuria that may follow the intra-uterine injection of the drug is no doubt to be explained by its immediate absorption by the blood-vessels and its direct action upon the blood. In this connexion it is interesting to recall the fact that the intra-vascular injection of glycerine is the method commonly employed in the physiological laboratory for producing experimental hæmoglobinuria.

THE WORSHIPFUL COMPANY OF PLUMBERS AND TECHNICAL EDUCATION.

THE Worshipful Company of Plumbers, whose persistent endeavours to raise the plumber to a level consistent with his responsibilities in relation to public health are well known, has recently published the first twelve of a series of full-size diagrams of plumbers' work. These diagrams have been prepared by a committee of practical men connected with the Plumbers' Company and illustrate the most approved modern practice of the trade. They are intended for the use of instructors in technical schools to supersede the usual rough black-board sketches and will tend to unify the existing methods of instruction. The first sheets are devoted to the illustration of some of the important scientific principles underlying the operations of the plumber. The drawings and appliances have an advantage over those frequently met with in that they illustrate general principles rather than the individual productions of certain manufacturers. The company has also reproduced the series in shilling pamphlet form with short descriptive notes, the value of which would have been increased had the notes been more extended. The pamphlet, however, is likely to be of use to architects, medical men, and others interested in the subject. The diagrams and pamphlet are published by the Plumbers' Company, at their office, 1, Adelaide-buildings, London Bridge, E.C.

THE PREVENTION OF TUBERCULOSIS IN IRELAND.

IN view of the continued high death-rate in Ireland from pulmonary tuberculosis the Local Government Board for that country has rightly deemed it desirable to re-issue the circular letter of Sept. 16th, 1901, to the district councils. This document set forth some of the resolutions of the International Congress on Tuberculosis which was held in London in that year and also impressed on the local authorities the importance of educating the people in the best means of guarding against the disease. In another letter dated Oct 6th of this year statistics are given showing the high death-rate from pulmonary tuberculosis which still exists in Ireland. The number of deaths from that disease in 1901 was 9549, representing a death-rate of 21·5 per 10,000 of the population. In England and Wales in the year 1871 the death-rate from this disease was 23 4 per 10,000, while in the year 1901 the rate of mortality had been reduced to 12·6. Such a marked difference in the figures for the two countries, as the Board points out, shows the necessity of taking prompt and sustained action with the view of reducing the present excessive mortality from pulmonary tuberculosis in Ireland. The fact that so considerable a reduction has been effected in England and Wales between the years above mentioned should act as an incentive to the local authorities of Ireland to use their best efforts towards securing a similar reduction in their country. We have always maintained that one of the most important forces in the combating of pulmonary tuberculosis is the education of the people and we entirely endorse the action which the Local Government Board has taken in again calling the attention of the local authorities to the matter. It has issued placards and leaflets clearly indicating the steps which should be adopted by "consumptive people and those who live with them" in order to prevent the spread of the disease. The information given is succinct and precise, it is stated in terms that can easily be understood by everybody, and with the aid of medical practitioners could be made to yield results which would show themselves by a considerable reduction in the deathrate from pulmonary tuberculosis.

PATHOLOGICAL SPECIMENS AT ST. GEORGE'S HOSPITAL.

THE practice of showing at the beginning of each winter session all the specimens that have been added to the pathological museum during the past year has been in force for some years now at St. George's Hospital and the exhibitions this year contain some particularly interesting objects. A short type-written description of each specimen with brief references to the case of the patient from whom it comes is appended in each instance. Those interested in any particular specimen can thus easily obtain fuller particulars of the clinical history of the individual from whom it is taken. The mounting and descriptions of the specimens reflect great credit upon the industry of the curators and the students at St. George's Hospital may congratulate themselves upon the support that they can easily obtain from such exhibitions as this to supplement and to enliven their clinical observations. A cysticercus in the brain, an embolism of the splenic artery, and some remarkable growths and abnormalities of the abdominal organs are among the specimens most worthy of attention. The hospital authorities welcome any medical man who cares to inspect the exhibition which is in the museum of the medical school.

IMPROVEMENT SCHEME IN JOHANNESBURG.

ON the British occupation of Johannesburg in June, 1900, Major O'Meara, the acting burgomaster, formed the opinion that a considerable area within the limits of the town was in an insanitary condition and would be a source of exceptional danger if bubonic plague, which was then raging at Cape Town, should make its way to Johannesburg. Lord Milner therefore in September, 1902, appointed a commission consisting of five members to report as to the condition of the area and also as to the desirability of giving powers to the town council to expropriate any of the land or buildings thereon. The area consisted of about 172 acres held by some 700 owners and having a total population of about 5600 persons. The procedure adopted was that the town council should adduce evidence as to the insanitary state of the area and that owners, lessees, and occupiers should hand in objections and call evidence in support of them. On behalf of the objectors five witnesses were called and on behalf of the town council 20 were called, including Dr. Charles Porter, medical officer of health of Johannesburg. In their report the commissioners state that they were much impressed by Dr. Porter's knowledge of the questions to be considered and also by the admirable way in which his evidence was presented. The commission took the view that the area was insanitary and dangerous to public health and that expropriation was advisable.

THE SWINEY PRIZE.

THE council of the Society of Arts has recently decided that the twelfth quinquennial award of the Swiney prize for work in some branch of jurisprudence shall be made in January, 1904. Intending competitors for this prize, which consists of a sum of £100, together with a cup of the same value, will have their claims investigated by the Society of Arts and the Royal College of Physicians of London conjointly. Medical jurists have on several occasions been successful, the list of gentlemen so honoured containing the names of Dr. J. A. Paris, Dr. J. Fonblanque, Dr. A. Swaine Taylor, Dr. W. A. Guy, Dr. Norman Chevers, Dr. C. M. Tidy, and Dr. J. D. Mann. In accordance with precedent, since the last award was made for research in forensic medicine the next recipient will probably be sought for in some other field of legal activity, but it is open to any medical man to submit evidence of his title to consideration. Applications should be made to the Secretary of the Society of Arts, John-street, Adelphi.

VACCINATION EXPENSES.

THE departmental committee appointed by the President of the Local Government Board to inquire into, and to report with regard to, the payments made to public vaccinators and vaccination officers under the Vaccination Order, 1898, on Oct 21st heard the evidence of Mr. C. A. Kemble, chairman of the board of guardians of the Clutton Union; Mr. J. T. Beston, a member of the Birmingham board of guardians; and Dr. H. W. Langley Browne, public vaccinator of the West Bromwich Union. On the 22nd Dr. A. E. Cope, Dr. A. Drury, and Mr. A. Maude gave evidence on behalf of the Association of Public Vaccinators of England and Wales. We understand that the committee is now proceeding to consider the evidence given with a view to drawing up its report.

THE Hughlings Jackson Lecture of the Neurological Society of the United Kingdom will be delivered by Sir William Broadbent, Bart, M.D., F.R.S., K.C.V.O., at 11, Chandos-street, Cavendish-square, on Thursday, Nov. 5th, at 9 P.M. The subject will be "Hughlings Jackson as Pioneer in Nervous Physiology and Pathology."

Sir William Taylor, K.C.B., Director-General of the Army Medical Service, will preside at a dinner of the Glasgow University Club, London, to be held on Thursday, Nov. 26th, in the Trocadéro Restaurant. Particulars may be obtained from Mr. James Dodds, Dover House, Whitehall, or from Dr. C. O. Hawthorne, 28, Weymouth-street, W.

THE Harveian Lectures of the Harveian Society will be delivered this year on Nov. 5th, 12th, and 19th by Dr. D. B. Lees, at the Stafford Rooms, Titchborne-street, Edgware-road, London, W. The subject selected by Dr. Lees for his lectures is the Treatment of Some Acute Visceral Inflammations.

IN the Cape Colony for the week ending Oct. 3rd there were two cases of plague discovered—namely, one European male and one native male, both at Port Elizabeth. Plague-infected rats were found at East London.

THE meeting of the Pathological Society of London announced for Tuesday, Nov. 3rd, will not be held.

THE ASSOCIATION OF PUBLIC VACCINATORS OF ENGLAND AND WALES.

Annual Meeting

THE annual meeting of the above association was held on Friday afternoon, Oct 23rd, at the Hotel Cecil the President, Mr E **Climson Greenwood**, occupying the chair The reports of the council and of the organising secretary, which had been placed before the members, showed that as a result of various representations the President of the Local Government Board had instituted an inquiry, which was then being held at Whitehall, as to the payments to public vaccinators and vaccination officers Evidence was being tendered on behalf of the association by three of its members It was gratifying to observe from this that the association had been officially recognised as a representative association Another encouraging feature was the liberal response of the members to the appeal for a special guarantee fund The most important part of the work of the association during the year however, had been in the direction of organisation, the establishment of 14 district councils representing all the public vaccinators in various districts of England and Wales indicating the amount of success achieved There still remained a good deal to be done in that direction as it was estimated that 27 more councils were required to cover completely the ground

The report and balance sheet having been passed, the election of president took place, the result being that Mr Greenwood was unanimously re-elected for the ensuing year The election of the council produced three changes in its *personnel* Dr Arthur Drury (Halifax), Dr S Woodcock (Manchester) and Mr G W Brabyn (Wimbledon) taking the places of Dr Mahomed Dr O P Oliver, and Dr Thompson

Dr A E **Cope** referred to the immense amount of work the organising secretary had accomplished during the past year and said that to his indefatigable exertions was mainly due the success of the association

The **Organising Secretary** briefly dwelt on the progress the association had made during the year, referring particularly to the establishment of the district councils which it was expected would be of immense service to them Since the issue of the report four more councils had been established, bringing the number up to 18 and three others would be shortly added to the number so that they hoped gradually to cover the whole of England and Wales

Dr **Cope** then read a very able and exhaustive paper on Our National System of Vaccination—How can it be improved? He thought that the one all important factor in any really national system of vaccination should be the absolute equality and uniformity of administration in every part of the country and that could only be obtained by centralising the system There was one branch of the public service which was completely organised and uniformly administered and free from all local political influence—that was the registration service That system was ready to hand as a framework on which to expand and to develop a national system of vaccination Vaccination should he held be approximated to registration in its organisation and method and gradually withdrawn from its Poor law associations While Poor law administration was still a local administration vaccination should be considered as a national administration the same as registration The new organisation could be built upon the existing substructure There would be 11 divisions as at present for registration purposes, which would be subdivided into counties and districts and each division would have a superintendent public vaccinator and a superintendent vaccination officer He believed that an extension of vaccination organisation in the direction indicated accompanied by fixity of tenure would greatly improve the system and make it truly national After touching upon the question of how vaccination should be paid for, Dr Cope went on to deal with the payment of the public vaccinator himself It would be desirable that in metropolitan and large urban districts at all events, the public vaccinator should be either a whole time man or should not engage in practice which would put him in competition with the medical men in his district. He thought that all opposition would be disarmed and the public vaccinator would be able to render more efficient service if that were the case He need not be restricted entirely to vaccination in all cases He (Dr Cope) could not see why the public vaccinator should not be allowed to take appointments which would not interfere with his vaccination work, such as district medical officer, or why he should not be permitted to engage in special or consulting practice provided he obtained the sanction of the Local Government Board or the controlling authority This vaccination appointment should be permanent and carry with it superannuation Dr Cope also dealt with the necessity for a system of revaccination after the manner obtaining in Germany and he strongly urged that something should be done towards educating the public on vaccination matters

An interesting and animated discussion followed in which a number of members took part

Mr A **Maude** complimented Dr Cope on his admirable paper and said he agreed mainly with the views expressed. They could not expect such an efficient system of registration in this country as obtained in continental countries but they should make the best use they could of the available machinery, and if they connected vaccination with State registration he considered it would be best all round He strongly favoured the adoption of a system of revaccination approaching as near as possible to the German system

Dr G A **Miskin** suggested that as so many children escaped vaccination through the parents moving it should be compulsory for changes of address to be notified to the registrar or vaccination officer

Dr W **Gosse** hoped that the new Act would make it very clear that the onus of having the child vaccinated should be on the parents If the parents failed to carry out the law they should be punished He saw objections to rural districts being covered entirely by a man who did nothing else

Mr W **Holder** differed considerably from Dr Cope on the question of a public vaccinator not being allowed to engage in medical practice They as public vaccinators had been doing their work efficiently and he could see no reason why the Government should wish to make a change and take the duties from those who had attended to them for so many years

Dr **Drury** said that Dr Cope had gone to the very fountain head as to the possible improvement, and perhaps the only thing for improvement under the present Act, which was simply the administration of it He believed that every man in the room was prepared to say that the Act was a very good one As to the question of the whole-time man, there were many things to be said in favour of it but only in large congested areas It would not be practicable in rural districts But Dr Cope himself suggested an argument against it where he insisted on the desirability for uniformity and any interference with the uniformity of the vaccination service would cripple it He noticed during the last five or six years that the tendency was when vacancies occurred for the guardians to cut up the districts rather than to enlarge them

Mr W N **Clemmey** referred to the conscientious objector clause and mentioned that the Act of Parliament said that the magistrate must be satisfied but if they got two magistrates on the bench one being satisfied and the other not, what was to be done? He thought the form should read that any parent who came before the magistrate and produced two certificates, one signed by a medical practitioner and the other signed by the public vaccinator of the district, to say that vaccination would be injurious to the child, the magistrate should grant the certificate of exemption which should be in force till the child reached the age of five years.

Mr V A ***Jaynes*** *said that the first object of the association* was to improve the position of the public vaccinator. What they wanted he considered, was to be under the Local Government Board and to have fixity of tenure

Other members spoke and Dr **Cope** in his reply, wished it to be understood that what he had written in his paper was absolutely irresponsible so far as the association was concerned In regard to his remarks about the whole-time public vaccinator or the man who was restricted with regard to private practice that had a very limited application There were half a dozen men in London who were occupying that position at present. He distinctly limited it to the metropolis and large urban districts but might possibly have given a wrong impression in his paper He would never lift a finger to enlarge a public vaccinator's district at the expense of any other public vaccinator nor would he prevent a public vaccinator taking an adjacent appointment if it were vacant. Dr. Miskin's suggestion about reporting removals he thought would be unworkable. No penalty which they could impose would insure the due registration of changes of address. He agreed that the parents of a child who had reached the age of five years should be required to produce evidence of the latter having been vaccinated.

A hearty vote of thanks was accorded to Dr. Cope for his valuable paper.

MEDICINE AND THE LAW.

Faith-healing and Cruelty to Children.

AT the recent quarter sessions at Ipswich a tailor named Sach was tried for neglecting his adopted child, a little girl five years old, in a manner likely to cause her unnecessary suffering. It was proved that the child was knocked down by a cart and that her thigh was thereby fractured. Prayer was resorted to as a remedy and an evangelist of the "Christian Catholic Church in Zion" told an officer of the National Society for the Prevention of Cruelty to Children a few days later that the "symptoms were lovely." The adoptive father and mother in the witness-box declared their belief in the efficacy of prayer in these circumstances with such effect that the punishment imposed upon them was limited to a fine of £20. With all respect for the faith which leads persons of this class to endure a modified martyrdom for the sake of their principles it may be suggested that steps should be taken for the protection of helpless little children in such families. If power were to be given by law to remove the children from their parents, at all events after a first conviction, the parents might be compelled to contribute towards their maintenance without being permitted to let them suffer or die without aid when sick or injured. Within a few days of the trial of Sach a coroner's jury at Leeds recommended that another member of the "Christian Catholic Church in Zion" should be censured for allowing her daughter, aged 17 years, to die. In this case the mother does not appear to have had enough faith in prayer to invoke the aid of the elders of her church. She merely said that she "had no faith in a doctor's medicine" and left her child to die without medical aid.

Recent Cases of Cruelty.

Two trials which have taken place in different parts of the country during the recent county quarter sessions have attracted universal attention. In the one a young solicitor named Edalji was convicted and sentenced to seven years' penal servitude at Stafford for maiming cattle and horses in the neighbourhood of Great Wyrley. In the other a woman named Day was at Exeter convicted and sentenced to six months' imprisonment with hard labour for repeated acts of cruelty perpetrated upon one of her children. The principal facts of these two cases are well known and need not be recapitulated. They present features frequently observable in cases of apparently aimless cruelty and some of these are common to both of them. In neither could the prosecution suggest any motive for the acts done. Edalji had no proveable grudge against the farmers whose animals he mutilated. For this reason his acts are clearly to be placed in a totally different category from that of a man who was convicted in London on the same day for maliciously killing a mare. In that case the prisoner was employed by the owner of the animal, which he stabbed in the belly with a pitchfork immediately after receiving notice to quit his mistress's service, being actuated beyond doubt by anger and revenge. At the trial of Mrs. Day no reason was proved to account for her dislike for the children whom she ill-treated (for there was a second indictment against her referring to a second child which was not gone into) and it was not alleged that towards the rest of her family she was anything but a humane mother. In her case the marked antipathy towards one or two of her children is a feature which was observable in that of Mrs. Penruddocke, a lady whose acts were less cruel and were very much more lightly punished than hers. In the case of Edalji and in that of Mrs Day, moreover, no possible motive, had one existed, would have justified, or even palliated, that which was proved to have taken place. Resentment, for example, for wrong done to him could not have excused Edalji, nor could the necessity for disciplinary action have rendered permissible the monstrous indignities and tortures inflicted by Mrs. Day upon a child of tender years. Whereas, however, acts of cruelty committed without any apparent object beyond the infliction and contemplation of suffering are strongly suggestive of some degree of mental alienation upon the part of the person charged with them, the trials of Edalji and of Mrs. Day presented another common feature which precluded the possibility of any inquiry into the mental condition of either of them. In each case the defence was based upon a denial of guilt. Both prisoners were defended by solicitors and by counsel of experience briefed on their behalf. Both prisoners went into the witness-box to deny the acts alleged against them and to have their denials tested by cross-examination, and in the case of both of them relatives or friends were ready to come forward to support them in their defence. In such circumstances there was obviously no room for any suggestion at the two trials in question of any peculiarity of mind or temperament which might account for the deeds the perpetration of which was denied. Edalji and Day as a result take their places under the sentences passed upon them in the ranks of ordinary prisoners. Possibly their mental condition may be made the subject of special observation when in prison and they may be treated according to the result. It is hardly desirable that a man with the propensities which apparently influence Edalji should resume unrestricted liberty, and it is to be hoped that the National Society for the Prevention of Cruelty to Children will not altogether lose sight of Mrs. Day when her family, Joan excepted, is restored to her.

The Medical Evidence in the Case of Mrs. Day.

At the trial of Mrs. Day at Exeter referred to in the preceding paragraph, as at that of Mrs. Penruddocke at the Old Bailey for a similar offence, the most important evidence corroborating the story of the child as to her treatment was that of a medical witness. Dr. W. A. Valentine of Appledore, called on behalf of the prosecution, said that he had examined the child Joan Day on two occasions, the first being August 4th, a week before her removal from her mother. She then appeared to be frightened. He found marks upon her hands and arms consistent with her story that her mother had cut her arms, had scratched her hands, and had bitten one of her fingers, also marks consistent with her story that her hand had been burnt by her mother. There were 12 marks on her right hand and arm and 11 on the left, a condition which in itself could hardly be accounted for by the explanation of the defence that she was a clumsy child and given to hurting herself accidentally. Counsel for the prosecution laid considerable stress upon the evidence of Dr. Valentine in summing up to the jury, and so did Lord Coleridge, K.C., the chairman of the bench. The former also called attention to a significant fact. He pointed out that a second medical man had twice examined the two children with regard to whom charges of cruelty were made and had done so avowedly in the interests of Mrs. Day. If his opinion had not agreed with that of Dr. Valentine he could have come to the court to say so and from the fact that he was not called by the defence counsel invited the jury to draw the conclusion, which indeed seems irresistible, that their views coincided. Two other medical men besides Dr. Valentine gave evidence in the course of the trial, one of whom, Dr. W. G. Dickinson of Putney Heath, called for the prosecution, proved that Joan Day's arm had been broken when her mother was living at Wandsworth. He stated frankly that so far as his observations went Mrs. Day was anxious about her children when they were ill. Mr. C. K. Ackland of Bideford, called for the defence, had attended Joan Day upon one occasion when she made no complaint of ill-treatment and upon another when she complained of feeling ill but he could find nothing the matter with her. He expressed an opinion that the marks stated by the child to be cuts could not have been inflicted as she said they had been, although they were also inconsistent with her little sister's story that they were the result of an accident, and he also commented upon the remarkable nature of the story told by John Day that she had been made to remain naked in the garden during the greater part of a frosty night and had apparently suffered no ill-effects from the alleged exposure. The evidence of Mr. Ackland no doubt affected the verdict of the jury who, in finding the prisoner guilty, recommended her to mercy on the ground that some of the acts alleged had not been proved to their satisfaction. That no complaint had been made by the child either to Dr. Dickinson or Mr. Ackland was in no way remarkable and it was not likely that Mrs. Day would exhibit her propensities before them. They were called in as medical men to attend her family and it was not for them to suspect her of inhumanity or to constitute themselves investigators of her relations with her children.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8386 births and 4610 deaths were registered during the week ending Oct. 24th. The annual rate of mortality in these towns, which had been 15·3, 15·8, and 15·8 per 1000 in the three preceding weeks, further rose to 15·9 per 1000 last week. In London the death-rate was 15·1 per 1000, while it averaged 16·3 in the 75 other large towns. The lowest death-rates in these towns were 4·0 in Hornsey, 6·8 in Leyton, 7·1 in Burton-on-Trent, 7·4 in King's Norton and in Newport (Mon.), 9·0 in Willesden and in Wallasey, and 9·2 in Aston Manor; the highest rates were 21·8 in Merthyr Tydfil, 21·9 in Preston, 23·0 in Sunderland, 23 1 in Hanley, 24·1 in Middlesbrough, 24·2 in Salford, 24·6 in Rotherham, and 30·8 in Tynemouth. The 4610 deaths in these towns last week included 532 which were referred to the principal infectious diseases, against 697, 707, and 634 in the three preceding weeks; of these 532 deaths, 291 resulted from diarrhœa, 58 from diphtheria, 55 from measles, 46 from "fever" (principally enteric), 45 from whooping-cough, 36 from scarlet fever, and one from small-pox. No death from any of these diseases was registered last week in Hornsey, Ipswich, Burton-on-Trent, Bootle, or Newport (Mon.), while they caused the highest death-rates in West Bromwich, Birkenhead, Warrington, Burnley, Preston, Rotherham, Middlesbrough, Sunderland, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Warrington and Sunderland; from scarlet fever in West Bromwich; from diphtheria in Bournemouth; from whooping-cough in Birkenhead; from "fever" in Merthyr Tydfil; and from diarrhœa in West Ham, Birmingham, Aston Manor, Burnley, Preston, Rotherham, and Middlesbrough. One fatal case of small-pox was registered last week in Gateshead, but not one in any other of the 76 towns. The Metropolitan Asylums hospitals contained 34 small-pox cases on Saturday last, Oct. 24th, against 21, 17, and 11, on the three preceding Saturdays; 26 new cases were admitted during last week, against one, two, and one in the three preceding weeks. The number of scarlet fever patients remaining under treatment in these hospitals and in the London Fever Hospital, which had been 1876, 1881, and 1861 at the end of the three preceding weeks, had further declined to 1858 at the end of last week; 209 new cases were admitted during the week, against 235, 240, and 208 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 161, 146, and 175, in the three preceding weeks, further rose to 194 last week, but were 57 below the number in the corresponding period of last year. The causes of 58, or 1·3 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Leicester, Nottingham, Salford, Bradford, Leeds, and 46 other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, St. Helens, Blackburn, Sheffield, South Shields, Gateshead, and Newport (Mon.).

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 17·3, 16·0, and 16·1 per 1000 in the three preceding weeks, further rose to 16·7 per 1000 during the week ending Oct. 24th, and was 0·8 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 11·8 in Leith, and 13·9 in Perth, to 19·5 in Paisley and 21·0 in Greenock. The 546 deaths in these towns included 39 which resulted from diarrhœa, 16 from measles, eight from whooping-cough, six from "fever," four from scarlet fever, and four from diphtheria, but not any from small-pox. In all, 77 deaths were referred to these principal infectious diseases last week, against 65, 71, and 72 in the three preceding weeks. These 77 deaths were equal to an annual rate of 2·4 per 1000, which was 0·6 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of diarrhœa, which had been 42, 41, and 35 in the three preceding weeks, rose again last week to 39, of which 14 were registered in Glasgow, seven in Aberdeen, six in Dundee, four in Edinburgh, three in Paisley, two in Leith, and two in Greenock. The deaths from measles, which had been four, eight, and 14 in the three preceding weeks, further rose last week to 16, all of which occurred in Glasgow. The fatal cases of whooping-cough, which had been seven, six, and seven in the three preceding weeks, further increased to eight last week, and included four in Glasgow and two in Aberdeen. The deaths referred to different forms of "fever," which had been six, nine, and six in the three preceding weeks, were again six last week, and included two in Glasgow, two in Dundee, and two in Greenock. The fatal cases of scarlet fever, which had been two, four, and five in the three preceding weeks, declined again last week to four, of which two occurred in Edinburgh and two in Aberdeen. The four deaths from diphtheria corresponded with the number in the preceding week, and included two in Edinburgh and two in Paisley. The deaths referred to diseases of the respiratory organs in these towns, which had been 88, 62, and 82 in the three preceding weeks, further rose last week to 92, but were 24 below the number in the corresponding period of last year. The causes of 17, or more than 3 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 18·3, 19·7, and 18·6 per 1000 in the three preceding weeks, rose again to 21·5 per 1000 during the week ending Oct. 24th. During the past four weeks the death-rate has averaged 19 5 per 1000, the rates during the same period being 14·8 in London and 15·7 in Edinburgh. The 156 deaths of persons belonging to Dublin registered during the week under notice showed an excess of 21 over the number in the preceding week and included 13 which were referred to the principal infectious diseases, against nine in each of the two preceding weeks; of these, eight resulted from diarrhœa, four from "fever," and one from whooping-cough, but not any from small-pox, measles, scarlet fever, or diphtheria. These 13 deaths were equal to an annual rate of 1 8 per 1000, the death-rates last week from the principal infectious diseases being 1·4 per 1000 both in London and in Edinburgh. The fatal cases of diarrhœa, which had been three, four, and five in the three preceding weeks, further rose last week to eight. The deaths referred to different forms of "fever," which had been one and three in the two preceding weeks, further rose to four last week. The 156 deaths in Dublin last week included 40 of children under one year of age and 40 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons showed a considerable excess over the number recorded in the preceding week. Nine inquest cases and eight deaths from violence were registered, and 48, or nearly one-third, of the deaths occurred in public institutions. The causes of nine, or nearly 6 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: J. R. McDonnell to the *Æolus*; T. J. Crowley to the *Albemarle*; and H X. Browne to the *Cambridge*. Staff Surgeons: J. K. Robinson to the *Donegal*; E. St M Nepean to the *Centurion*; J. O Wood to the *Arrogant*; J. L. Smith to the *Revenge*; and W. Bett to the *Bedford*. Surgeons: J. G. Peebles to the *Donegal*; S. S. H. Shannon to the *Centurion*; A. F. Fraser to the *Albemarle*; A. I. Sheldon to the *Hearty* for the *Landrail*; H. Hunt to the *Fire Queen*, additional; M. J. Laffan to the *Bedford*; and W. R. Harrison to the *Tweed*.

ROYAL ARMY MEDICAL CORPS.

Major G. W. F. Long, from half-pay, to be Major, with precedence next below B. A. Maturin (dated Oct. 6th, 1903). Major M. T. Yarr is seconded for service on the Staff of the Governor of Bombay (dated Oct. 9th, 1903).

IMPERIAL YEOMANRY.

Scottish Horse: David Mitchell Macdonald to be Surgeon-Lieutenant (dated Oct. 24th, 1903).

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion the Duke of Cambridge's Own (Middlesex Regiment): Surgeon-Lieutenant T. S. Allan resigns his commission (dated Oct. 24th, 1903). 2nd (the Weald of Kent) Volunteer Battalion the Buffs (East Kent Regiment): Surgeon-Lieutenant J. L. Kerr to be Surgeon-Captain (dated Oct. 17th, 1903).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Glasgow Companies: William Adam Burns to be Lieutenant (dated Oct. 17th, 1903).

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

The Seaforth and Cameron: Lieutenant D. J. Kelly resigns his commission (dated Oct. 17th, 1903).

DEATHS IN THE SERVICES.

Surgeon-Lieutenant-Colonel Robert Vacy Ash, late Army Medical Staff, recently, at Morecambe, aged 58 years. He entered the service in 1871, was promoted surgeon in 1873, surgeon-major in 1883, and retired as surgeon-lieutenant-colonel in 1891 He served in the Zulu War of 1879 and in the operations against Sekukuni (medal). He served in the Egyptian War of 1882 and was present at the battle of Tel-el-Kebir (medal with clasp and the Khedive's star). He also took part with the Burmese Expedition in 1886–87 (mentioned in despatches, medal with clasp).

REGIMENTAL COTTAGE HOMES.

The Wiltshire Regiment intends to erect a cottage home near the barracks at Devizes as a permanent memorial to the seven officers and 127 men of the regiment who fell in South Africa. General Dunne, colonel of the regiment, and president of the regimental committee which has been formed, has issued an appeal for subscriptions to complete the required sum, any surplus being devoted by the regiment to the payment of rents of disabled soldiers.

Correspondence.

"Audi alteram partem."

THE BRITISH MEDICAL BENEVOLENT FUND.

To the Editors of THE LANCET.

SIRS,—At the monthly meeting of the British Medical Benevolent Fund held here this afternoon, 12 members being present, I was called upon by a unanimous vote to make an appeal on behalf of the fund. The circumstances are as follows. There were 19 applications for help from medical men, their widows or daughters, while at the opening of the meeting our treasurer, Dr. S. West, announced that there was a deficit of £52, the account having been overdrawn to this amount in consequence of the urgency of the cases brought before the committee in September. Notwithstanding this the committee proceeded to vote £39, making a total adverse balance of £91 in the hope that somehow or other the money would be got together rather than refuse the more distressed applicants the aid they need. The committee could not venture on more.

The following are examples of the distress the fund is called upon to relieve, and it must be borne in mind that it is the only professional charity open for the wreckage of the profession with the exception of THE LANCET Relief Fund which deals with acute rather than chronic cases.

Mr. ——, aged 57 years, M.R.C.S., L.S.A., suffers from varicose veins and ulcers which have prevented active practice for some years past; now only able to earn about £20 per annum.

Miss ——, aged 27 years, suffers from acute spinal disease and has not walked for eight years. *Only* means of support 5*s.* a week allowed by a friend.

Mr. ——, aged 50 years, M.R.C.S., L.R.C.P., who practised for many years in London; incapacitated by advanced valvular disease with dropsy and embolism; savings exhausted; three children partially dependent.

Mrs. ——, aged 49 years, a widow. Husband practised in the north of London, but made no provision for his wife who has supported herself for several years as an obstetric nurse. Now incapacitated by cataract in both eyes.

Mrs. ——, aged 41 years, a widow. Husband had an excellent practice in the Midlands but lost it through a five years' illness, leaving wife and four young children quite unprovided for.

Mr. ——, aged 45 years, who practised in South Africa. Savings exhausted by a three years' illness. The honorary local secretary reports that applicant is nearly starving and that his destitute condition is due to misfortune and not to any fault of his own.

Miss ——, aged 49 years, whose father practised in Staffordshire, has supported herself as governess for 30 years but health has now broken down.

The two last were on to-day's list. £5 were devoted to one and the other had to be postponed as, out of five new cases, four were not even considered owing to the impossibility of helping. Of the old cases some were postponed in the hope of having money available next month and to two or three quite small and inadequate grants were made. The annuity department of the fund has continued to prosper and has now a list of 115 rescued from actual destitution in their old age. Every really necessitous case over the age of 60 coming to the notice of the committee is entered as a candidate and as vacancies occur they are at once filled up from the list after careful inquiry. 27 are now waiting their turn and in 1902 15 were elected at ages varying from 90 to 60 years, amongst them a M.R.C.S. aged 74 years.

It is the donation department which is in need of help. Last year grants were made to 161 applicants, the amount voted being £1723, mostly paid in monthly instalments, since this method has been found greatly to enhance the benefit to the recipients. Times almost everywhere are bad and the profession is suffering from the general financial depression, but we must not let the unfortunate of our number suffer from cold and hunger during the winter months or look forward to Christmas and the New Year in actual privation. There are few more piteous cases than those of widows and daughters of medical men left unprovided for by the premature death or totally inadequate earnings of the husband or father. Many of those who are ultimately driven to seek the aid of the fund have maintained themselves for years till overtaken by old age or illness.

Donations may be sent to the honorary treasurer, Dr. West, 15, Wimpole-street, or I shall myself be happy to acknowledge them.

I am, Sirs, yours faithfully,
W. H. BROADBENT,
President of the Fund.
84, Brook-street, Oct. 20th, 1903.

THE LUNG REFLEX OF ABRAMS.

To the Editors of THE LANCET.

SIRS,—I think Dr. Harry Campbell in his letter to THE LANCET of Oct. 24th, p. 1191, makes a valuable contribution to the study of the lung reflex and while there are certain other facts not mentioned in my previous letter on this subject which go to establish beyond any doubt the existence of the reflex in question I may, perhaps, first be permitted to deal shortly with the thoughtful observations of Dr. Campbell.

The view is expressed that expansion of the chest in the living body is due to the operation of two factors—one, a relaxation of the lung, and the other, action on the part of the respiratory muscles. Assuming for the sake of argument that a lung reflex of dilatation is produced, the result would be an expansion of the chest wall due to diminution of suction action *plus* action of the inspiratory muscles. Now I am not sure that every degree of lung relaxation is accompanied by action on the part of the inspiratory muscles, because we know that at the end of an ordinary inspiration the chest wall has not even then reached its full recoil. This is proved by experiments on the dead body when, on puncturing the chest wall and so permitting the lungs to collapse, it is found that the thoracic wall registers an expansion somewhat greater than that registered within the limits of quiet respiration. There is a certain point, therefore, to which the chest wall may expand beyond an ordinary inspiration which does not necessitate any action on the part of the inspiratory muscles, as the inhibition of the lung pull is of itself sufficient to produce it. The contention of Dr. Campbell that "the inspiratory muscles are ever busy keeping the lungs at the requisite degree of stretch" may be doubtless true in the case of spasmodic asthma or in hypertrophous emphysema, where the pulmonary suction is abolished or nearly so, but in normal breathing, matters are precisely the reverse, as herein, instead of the inspiratory muscles acting to tone up the pulmonary fibres, their action is directed towards overcoming this tonus. It is only when a relaxation of lung occurs to such an extent as to pass the indifferent point that the inspiratory muscles are necessarily called into play in the direction of "toning up" the lung fibres. It was certainly the original view, as propounded by Hutchinson,[1] that the inspiratory muscles acted in the normal respiration not only in overcoming the elastic resistance of the lungs but also a resistance on *the part of the chest walls. But some time afterwards* Salter[2] made the important observation above referred to on the elastic recoil of the chest wall following post-mortem puncture of the pleura, and this resiliency was accurately estimated subsequently in a number of very careful experiments by Sir R. Douglas Powell.[3] When, therefore, Dr. Campbell makes the general assertion that "any enlargement of the chest ...... is chiefly brought about by the inspiratory muscles," he fails to appreciate that enlargement (up to a certain point) which is brought about by the reserve recoil of the chest walls.

As regards the lung reflex, once it be proved that bronchial (and therefore pulmonary) dilatation can be induced by stimuli applied to the chest wall or otherwise, it is a matter of secondary consequence how far the inspiratory muscles thereafter contribute to the thoracic enlargement, but Dr. Campbell goes so far as to assert that the entire phenomena of the lung reflex may in fact be due to reflex excitement of the inspiratory muscles themselves. Now, in regard to the chest generally, it is doubtless true that such a procedure as vigorous rubbing tends to induce, if not dyspnœa, at least a deeper character of the breathing. In neurotic persons this is sometimes very marked, but that this is chiefly the result of a reflex pulmonary relaxation is shown by examining the state of the lungs and comparing the same with the effect produced by simply getting the patient to draw a number of deep breaths. In the former case there is a distension of lung which persists for some time after the breathing has become quiet, whereas in the latter case the distension subsides with the breathing; in other words, the mean size of the chest is more persistently enlarged when the lung reflex is induced, and if the cutaneous stimulus be maintained for some time this expansion is correspondingly maintained. The conclusive evidence, however, as to the existence of the lung reflex of dilatation is that afforded by the application of stimuli over small areas of lung which have been invaded by collapse. If such a small area be irritated, as by spraying with ether, it will be found that the percussion note, formerly dull, will acquire some resonance, and I have observed that the same effect is frequently produced by prolonged *percussion over the area. Now such an effect* over a limited area, say at the base of the lung, is only susceptible of one explanation—viz., a reflex dilatation of the collapsed air cells. If the dilatation were produced by a dyspnœa involving the action of the inspiratory muscles the remaining portions of the lungs would likewise be dilated, whereas no dyspnœa is apparently produced nor are the lungs otherwise altered in volume.

As regards the reflex of dilatation which is induced by the inhalation of certain irritating vapours and which Dr. Campbell believes to be merely an effect of inspiration, it may be sufficient to point out that the reflex of dilatation can also be brought about by the oral administration or the subcutaneous injection of such drugs as atropine and hyoscine wherein inspiratory effort is wanting.

I am, Sirs, yours faithfully,

Henrietta street, W., Oct. 24th, 1903. A. G. AULD.

SLEEPING SICKNESS: A DISCLAIMER.

To the Editors of THE LANCET.

SIRS,—I have just learnt that I have been credited with the statement, made in certain newspapers this week, that a Liverpool student discovered the cause of sleeping sickness. *I did not make any such statement*, nor have any of the members of our Liverpool school ever made such a statement. *We have not sent any expeditions from Liverpool to the* sleeping-sickness area with the exception of the expedition very recently sent to the Congo. I would be much obliged if you could give publicity to this statement.

I am, Sirs, yours faithfully,

University of Liverpool, Oct. 23rd, 1903. RUBERT BOYCE.

THE UNIVERSITIES' MISSION TO CENTRAL AFRICA.

To the Editors of THE LANCET.

SIRS,—I have been asked on behalf of the Bishop of Zanzibar (the Right Rev. J. E. Hine, M.D.) to make known the great need that exists in his diocese for the services of a fully qualified medical practitioner. In a letter received within the last few weeks the Bishop writes:—

> [illegible] help of Dr. R. Howard and his work, I hear, is always increasing as the people on the lake shores get to understand and to value the skilled treatment they receive at his hands. We want another [illegible] those who are in touch [illegible] qualified could bring [illegible] one might be found [illegible]

I should be most glad to give further and more detailed information to any who may desire it.

OSWALD A BROWNE, M.D. Lond.,
Member of the Medical Board of the Universities' Mission to Central Africa.
9, Dartmouth-street, Westminster, S.W., Oct. 26th, 1903.

SMALL-POX IN TASMANIA.

To the Editors of THE LANCET.

SIRS,—I observe in THE LANCET of Oct. 17th, p. 1132, a paragraph headed "Small-pox in Tasmania" I may mention that the outbreak to which you refer was confined entirely to the city of Launceston. It has now been altogether stamped out I have been advised by cable that the last case of small-pox occurred on Sept. 3rd and that the quarantine restrictions which had existed for a short time in Australasia against Tasmania have now been removed. As this subject may interest some of your readers I shall esteem it a favour if you will kindly insert the above information in your next issue.

I am, Sirs, yours faithfully,

ALFRED DOBSON,
Agent General.
Victoria street, Westminster, S.W., *Oct. 22nd, 1903.*

PROPOSED MEMORIAL TO THE NURSES WHO DIED ON ACTIVE SERVICE IN THE SOUTH AFRICAN WAR.

To the Editors of THE LANCET.

SIRS,—Nearly two years have elapsed since the conclusion of the war in South Africa and a duty still remains to be fulfilled which we venture to commend to the generous sympathy of the whole nation. While all honour has been accorded to the nurses who have returned from active service and acknowledgment has been made of the value of their work by the award of orders and decorations, nothing has been done to express the nation's appreciation of the devotion the work as at present organised in the flax-spinning mills where damp always prevails constitutes an insalubrious operation which is *injurious to* health.

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[1] Transactions of the Royal Medical and Chirurgical Society, vol. xxix., p. 137.

[2] THE LANCET, August 5th, 1865, p. 141.

[3] Transactions of the Royal Medical and Chirurgical Society, vol. lix., p. 165.

1. Expresses the following desiderata: (*a*) That the age for admission in these mills or factories shall be raised to the extreme limit compatible with the economic situation and that the hours of labour shall be progressively reduced.

2. Invites the employers (*a*) to study with zeal all means of ameliorating the thermometric and the hygrometric condition of the spinning mills. (*b*) To indemnify by a suitable pecuniary allowance all workwomen who leave the works a fortnight before their confinement. (*c*) To install in or near to the mills crêches so that the mothers may go there to suckle their infants during the day's work.

The Dangers in Dealing with Skins

The next question dealt with the industries connected with the fur used for making felt and the extraction of bristles from the skins of animals. To pull out these hairs constitutes in itself quite a technique. The skin then undergoes another process called *secrétage* in French and "carotting" in English. It consists of dipping the skins into a solution of nitric acid and of mercury, then of drying them in an oven. Afterwards the nitrate of mercury formed has to be brushed off the dried skins. Dr. GLIBERT, the principal reporter on this question, showed how severe were the cases of mercurial poisoning that resulted and urged the necessity of periodical medical examination of the workers. Dr. T. M. LEGGE replied that such examinations were enforced in England and he had never seen in England such bad cases as those which Dr. Glibert had brought before the section. M. LECLERC DE PULLIGNY said that more energetic efforts should be made to find a substitute for mercury. In this, rejoined Dr. GLIBERT, the employers would gladly help for mercury was very expensive. A motion to this effect was at once adopted.

M. ALQUENBOURG (France) thought that whatever measures were taken should be as international as possible, for otherwise the nation that took the greatest care of its workpeople would be at a disadvantage when competing with other countries. The President of the Section, Dr. KUBORN, replied that the Belgian and French Governments were considering the advisability of attempting to induce the other Governments to join in constituting a permanent international hygienic institution having for its object the study of methods for the prevention of disease by means of an international agreement. The section by a vote approved of this effort.

Then the Congress adopted the following motion:—

> Besides the periodical medical examination of the workers, the noxious smoke or fumes produced during the operation of "carotting" must be removed by means of special local ventilation. The workers must wear a special dress when at work if they have to manipulate toxic substances. There shall be lavatories and dressing rooms at the disposal of the workers. The ventilation of the workshops shall be supervised with particular care.

Small Industries and Home Work.

Miss A. M. Anderson, H.M. Principal Lady Inspector of Factories, from the British Home Office; M. Fontaine, Director of the Office of Labour at the Ministry of Commerce, Paris; and M. van Overstraeten, Inspector-General of Labour from the Ministry of Industry, Brussels, were the reporters and the discussion was opened by the last named. He urged that the Belgian law of 1889 on the inspection of workshops and factories should be extended in its application to domestic workshops.

Miss ANDERSON gave a very lucid exposition of the law in England, showing how the smallest private dwelling or room could be treated as a workshop and inspected if anyone except members of the family living in the house was called in to work there.

M. LAUTER (Brussels) related how in his youth he had been compelled to work in a home industry, to which he was apprenticed, from six o'clock in the morning to the afternoon of the next day and had been 36 hours with hardly any rest. Not only was the labour excessive but the room was badly lighted and ventilated.

M. DRION urged that if the Belgian Government would only order an investigation appalling discoveries would be made as to the condition of the workshops of milliners and dressmakers.

Dr. BUYSE remarked that home industries were often not only injurious to the workers themselves but also to their neighbours. Thus, in Flanders skins were frequently prepared in private dwellings and the mercury employed could reach and poison neighbours. He thought that the employment of toxic materials in home industries should be forbidden. Professor DE WALQUE, however, considered that such a rule should not be enforced in a general sense as it would stop many industries that were not injurious—that of the photographer, for instance.

Mr. ADOLPHE SMITH spoke at some length on the sweating system and its obvious dangers to health and on the contamination of clothing made in private houses which could not possibly be converted into well illuminated and ventilated workshops. Nor was it possible to apply the laws and customs tending to elevate and to protect the worker if he was hidden away in a private house. There could never be inspectors enough to watch over these places even if they had a right of entry. It would be much more practical to build blocks, subdivided into small workshops which the workers could hire and where power and mechanical ventilation would be provided and inspection would be rendered easy. The great object was to keep the home sacred as a place of rest and the abode of the family and to attract the worker to workshops or factories built especially for the purposes of his trade.

Professor DE WALQUE interrupted with exclamations to the effect that it would be a great misfortune to do away with home industries and M. FUSTER spoke energetically urging that, on the contrary, modern effort tended to increase home industries. To drive the wife to the factory was to break up the family but if home work could be found for her then she might at the same time attend to her home and family while earning something to augment the joint income. With the help of electricity it would now be possible to supply power in private dwellings, thus reducing the necessity of going to a factory. This had actually been brought about in the Jura provinces, where the mountain torrents supplied the force to generate the electricity and this gave power in the cottages of the home workers.

M. VARLEZ protested that no one wanted married women to go to work in factories. In America there were no longer married women working in the mills. The object was to bring the man to the workshop where he could be watched, prevented from underselling other workmen, and made to earn enough to keep his wife instead of living on her earnings. A certain poetry might be associated with light forms of home work but in practice it led to cruel abuses. Public opinion could control the workshop and see to the hours and the wages being such as to render the preservation of health possible.

Miss ANDERSON here attempted to throw oil on the troubled waters by explaining that there were such enormous varieties in the nature of home industries that the different types of such work accounted for the various opinions that had been expressed in the section. Some of these home industries were very ancient and some were quite modern. Some industries would be better carried on by grouping the workers; others, on the contrary, could be undertaken by the isolated worker. The section evidently did not possess enough information to deal with the matter. There were crafts of an artistic nature that would be injured and the artistic qualities of the worker would be destroyed by the introduction among them of the factory system. No one rule could apply to the very different states that prevailed in different localities and trades.

M. MAMY (France) argued that the man should earn enough to keep his wife and thus the family life could be maintained but when this could not be done then the wife should get some home work to do and not go to a factory.

M. FUSTER remarked that there was an international association for the protection of labour. This association insisted that it was the duty of all mothers to suckle their children and that home life was to be promoted in every way. It would be very wrong for the section to vote against home work.

M. VARLEZ replied that the association to which M. Fuster had alluded did not deal with the question of women's work in general. Naturally all sanitarians opposed women going to factories; there was quite enough work for them at home if they attended to their children properly.

Some conversation ensued as to the Belgian lace makers. This was a home industry and a considerable quantity of carbonate of lead was employed in the "get up" of the lace. The fact that this was used within the family circle did not make it any the less poisonous. Then some confusion arose as to whether home work meant small workshops in private dwellings or places where only members of the same family worked together. Finally, and as this was the last day and this subject was the last on the agenda, the attendance gradually dwindled away. It seemed as if only those who were interested in the maintenance of home work remained, for the following motion, which was proposed by M. MAMY, was carried by 21 votes to six :—

> That the Congress desires that home work should be developed more and more by surrounding it with all the protective measures necessary for the security and the hygiene of the workers.

It must be confessed that this result and the discussion were disappointing. In England so much has been written and said on the question that it was natural to expect a better debate but evidently the question has not been so well studied on the continent. The French, it is true, were the first to enact a law against the sweating system and it bears the date of 1848 but the present generation of Frenchmen at the section seem to have forgotten what their fathers said on the subject and the law, though still on the statute book, has been allowed to become a mere dead-letter.

A Ministry of Public Hygiene.

Before the section finally adjourned it adopted a motion to the effect that hygiene should be taught in the schools of engineering. Then Dr. JULES FELIX (Brussels) read out the following :—

> If we consider the numerous discoveries and the increasing progress of experimental science as applied to public and private hygiene, [illegible] which cannot be separated as hygiene and as social economy when it is a question of insuring the strength and the health of the workers, the prosperity of nations, and the peace and happiness of humanity.

On being put to the vote, of the few persons still remaining in the section 12 voted for and 12 against. The chairman decided that the matter had better be dropped as, after all, he was not sure that it came within the scope and competence of the section. Thereupon the section dissolved, the members being glad to rest after their hard week's work.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Liverpool Country Hospital for Chronic Diseases of Children.

THE governors at their meeting on Oct. 26th changed the title of this hospital to that of the "Liverpool Country Hospital for Children" and also made some important alterations in the rules. All this has been done in view of a very important change in the condition of the hospital. It has been done in the hope that the institution, which is at present located in the Children's Convalescent Home at West Kirby, will shortly have its own building at Heswall. Only £3000 stand between it and the accomplishment of that hope and the belief is strongly felt that this sum will shortly be forthcoming. The hospital is a home for neither cripples nor incurables, the object of treatment aimed at (by prolonged and judicious treatment in the fresh air of the country) being to prevent children becoming cripples. The ambition of the governors is to build an institution for themselves on the lines that experience has taught to be desirable. In 1900 they bought a site for the building which they propose to erect at Heswall. The committee has been promised £27,000 towards the requisite sum of £30,000. A donor of £5000 has made it a condition, however, of his gift that the £30,000 should be obtained before the commencement of building operations. The hospital authorities are now obliged to refuse admission to scores of suitable cases, cases in which disease does not stay its hand and which might become hopeless a year hence. The appeal for £3000 to enable the committee to commence operations at Heswall will surely not fail to have a generous response from the benevolence of Liverpool citizens.

Sanitation in Liverpool: a Year's Work by the Health Committee: Retirement of Two Medical Members.

At the concluding meeting for the year held on Oct. 22nd the chairman of the health committee spoke highly of the work of the medical officer's department during the last year. The health of the city was far better even than during the previous year. The death-rate had declined substantially and the lives of 1000 more people were saved this year as compared with last year. Everything pointed to a fuller decrease of the death-rate in the future. There had been a considerable diminution in the number of deaths from tuberculosis, which was very satisfactory. The infantile mortality had also decreased. The work of their female inspectors who were looking after the mothers and giving advice on domestic arrangements to the poor people no doubt accounted for this to some extent. The sale by the corporation of sterilised milk for infants was also a good work. During the summer months experiments were made on macadamised roads with a view to ascertain the effect of oil on roads in reducing annoyance from dust and these had proved satisfactory. They had disposed of nearly 300,000 tons of refuse by burning in the destructors. A few years ago this had been carried out to sea. This year only 55,000 tons had to be carried out to sea. The destructors also supplied heat for making electrical energy for the electric power and tramways committee. More dwelling houses had been erected in the city than in any previous year; it was evident that the prosperity of Liverpool was continuing. At the final meeting of the port sanitary and hospitals committee the retirement of Alderman Dr. Thomas Clarke, the chairman, was announced, as was also that of Mr. Alexander Murray Bligh who had served on the health committee for 27 years. Much regret was expressed by the members at the retirement of both gentlemen and warm tributes were paid to their devotion to the work of the committee.

Inaugural Ceremony of the University of Liverpool.

The Earl of Derby (the Chancellor), the council, and the senate have issued invitations for the inaugural ceremony of the new University which will take place at St. George's Hall in the afternoon of Saturday, Nov. 7th. Academical costume will be worn on the occasion.

Oct. 27th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Pontypool Hospital.

A SMALL general hospital was formally opened on Oct. 20th at Pontypool, a Monmouthshire town with a population of about 6000 persons situated in the centre of a mining district. Mr. Richard Coslett of Bristol, who died in 1895, bequeathed £1000 and an annuity of £100 for the establishment and endowment at Pontypool of a home for poor persons suffering from rupture. It was, however, found quite impracticable to carry out the testator's intentions strictly and with the consent of the Attorney-General Mr. Coslett's trustees were permitted to hand over the capital sum and the endowment to the trustees of the new hospital. There is accommodation in the institution for 19 patients. On the ground floor are two eight-bed wards, one for men and the other for women, a small accident ward, and a two-bed hernia ward. The site of the hospital was given by Mr. J. Capel Hanbury of Pontypool Park and the workmen of the district during the past two years have made a levy of 1*d.* weekly which has brought in about £1200 annually. The cost of the building was £7000 and that of the furnishing and ambulance was £1300. Nearly the whole of these sums have been subscribed and it is anticipated that the workmen's weekly pence, together with Mr. Coslett's endowment, will be sufficient to maintain the hospital. The medical staff will include the colliery surgeons practising in the district.

The Question of Tramps.

The Gloucestershire county council has for many years concerned itself with the question of tramps and at a meeting held on Oct. 20th a motion was unanimously passed requesting the Local Government Board to hold an inquiry with a view of establishing a more effective and uniform system of dealing with the evil of vagrancy. It was stated at the council meeting that in the county of Gloucester during the first nine months of this year there had been 40,761 admissions to casual wards, an increase of 7875 as compared with the corresponding period of last year.

One speaker said that the solution of the question was to be found not so much in the treatment of the vagrant as in the discovery how to educate the public not to encourage these lazy wanderers. So long as the public would give food and money so long would the tramp flourish. An illustration of the manner in which disease may be spread was given from Stow-on-the-Wold where a tramp was discovered to have small-pox. There was no isolation hospital in the union and temporary accommodation had to be provided, the cost of which with medical attendance and nursing amounted to £220. As a commentary upon this costly experience the recent action of the Monmouth board of guardians may be cited. For several months past the public vaccinator (Mr. T. G. Prosser) has by instruction of the board vaccinated or revaccinated tramps who have passed through the Monmouth workhouse but as the fees during the last six months amounted to £20 the guardians have decided to discontinue the practice.

Asylum Maintenance Charges.

The weekly charge per head made to the various Poor-law unions for the maintenance of patients in the Hereford City and County Asylum is now 9*s.* 7½*d.* and in the Somersetshire Asylum the charge is 9*s.* 4*d.* per head.

Plymouth Public Dispensary.

The annual meeting of the subscribers to this institution was held on Oct. 21st under the presidency of Mr. H. Lopes. The medical report stated that 3881 patients were treated during 1902, as compared with 3922 in the previous year; 765 of these were attended at their homes. The financial statement showed that the receipts amounted to £1024 and the expenditure to £1023. During the year Sir Massey Lopes had given £500 towards the endowment fund. The gross receipts of the provident department during the year amounted to £104, as against £114 in the previous year. It was decided on the recommendation of the committee to appoint an honorary gynæcologist to the dispensary.

Oct. 27th.

SCOTLAND.

(From our own Correspondents.)

The Edinburgh New Fever Hospital.

Last week it was noted that the new fever hospital at Colinton Mains had been open for public inspection. It has now begun to be occupied. Fresh cases of scarlet fever have been admitted into it and also patients convalescent from scarlet fever from the old hospital in Infirmary-street No new cases of scarlet fever are to be received into the old building but cases of diphtheria and typhoid fever are still to be received there. It is, however, anticipated that in the course of six weeks or so the transference to the new hospital will be complete. There are at present 366 patients suffering from infectious disease in the hands of the public health authorities.

Epidemic of Scarlet Fever in Edinburgh.

Scarlet fever has assumed moderate epidemic dimensions in Edinburgh, this being a period of the year when it is likely to do so. In July there were 96 notifications of its presence; in August these had risen to 123 and in September to 143 During the month of September there were, in addition to scarlet fever, 60 notifications of diphtheria and 26 of erysipelas. During the same month 128 of the cases of scarlet fever were admitted into hospital and 46 of the cases of diphtheria.

Infant Milk Depôts

The subcommittee (of the health committee) on infantile mortality and the milk-supply of the city of Glasgow, after visiting the municipal depôts in Battersea, Liverpool, St Helen's, and Bradford, has submitted a report containing certain definite conclusions which are as follows. Infantile mortality has a definite relationship to (1) the feeding of infants; (2) personal care of infants by parents; and (3) housing accommodation Other elements enter into the problem but so far as municipal action is concerned these are the three main elements. It is clear that housing schemes, unless associated with efforts calculated to meet difficulties arising out of the first [illegible] be disappointing in [illegible] it is believed that [illegible] succeed in raising the quality, as regards purity, of the milk on which infants are fed they will at the same time educate and improve the sense of duty towards their infants on the part of parents. The mischief lies in polluted milk. The sources of the pollution are not only in unsatisfactory methods of milking and in storing and conveying the milk supplied but also very largely in dirty domestic conditions and particularly in carelessness in the use of feeding bottles. To attack successfully by municipal administration all the sources of pollution is at present impossible but the ideal of health administration is a pure milk-supply which needs no sterilisation and towards that end all efforts should be directed. Meanwhile the best that can be done under existing conditions involves sterilisation of the milk. The subcommittee therefore recommends that the corporation should agree to the principle of supplying milk for infant feeding in poor localities. This involves (1) the setting up of an establishment for the preparation of the milk supplied, modified and sterilised according to requirements, and (2) depôts for the sale of the milk unless supplied through milk-dealers to whom an allowance for retailers' profit would require to be made. It is suggested that the experiment should be made in three or four of the districts where the infantile mortality is high. The price at which the milk could be sold consistent with reaching the poorest would be no more than is at present paid for ordinary milk, and in any case, even were it necessary, a small charge upon the health-rate would be justified by the result. The health committee has accepted the report and has recommended that it should be adopted by the corporation and that the health committee should be empowered to carry the business through.

The Clyde Port Sanitary Authority.

The special subcommittee of the Glasgow corporation, the members of which visited several seaport towns in England and ascertained the procedure followed out in these places, has issued its report in which it recommends—

1. The medical officer of health to be the chief medical officer of the port and responsible to the port authority in every matter and way in which he is now responsible under the Acts and regulations made by the corporation of the city for the proper discharge of his duties as medical officer of health for the city.

2. The chief sanitary inspector to be the [illegible] the port and responsible to the port authority [illegible] in which he is now responsible under the Act [illegible] the corporation of the city for the proper [illegible] sanitary inspector for the city.

3. The clerk of police to be clerk to, and law adviser of, the port local authority, to issue statutory notices when required, carry on any negotiations or correspondence arising out of questions of detention of vessels, damage to, or destruction of, cargo, or any other claim or matter arising out of the operations on board infected vessels, and to act as agent for the port authority in any court proceedings which may be found necessary.

Small-pox in Glasgow.

There has been an outbreak of small-pox again in Glasgow. On Oct. 16th there were six cases and on Oct. 23rd 21 cases. The outbreak originated from a labourer who on Sept. 12th travelled by train to Glasgow, staying that and the following night at one of the model lodging houses Thereafter he went to another model lodging-house where he sickened and where subsequently six cases occurred among persons sleeping in the same dormitory. No fresh cases supervened until Oct. 20th when a series began to appear in the model lodging-house in which the man slept first. All the cases which have occurred up to the present have been traced to the same source. Summary measures have been taken throughout; these have consisted in the immediate removal of all cases to the hospital, thorough disinfection, and revaccination. No new inmates have been admitted into either of the lodging houses where the cases occurred unless they had been recently revaccinated or submitted themselves to revaccination.

Aberdeen University Medical Society.

The opening lecture on Medical Ethics was delivered on Oct. 23rd by Dr. Angus Fraser to a very large audience. Professor J. T. Cash presided and in introducing the lecturer referred to the eminent position held by him in the medical profession and to his special fitness for delivering such an address. Dr. Fraser referred to the necessity of young practitioners at the beginning of their professional career having some definite knowledge of the relations which should guide their intercourse with other medical men and with their patients. Medical men ought to "do to others as they would that others should do to them"—e.g., a medical man was not entitled to take over a patient to whom he had been introduced while acting as a substitute or as a consultant, not even for a different or a subsequent illness unless in special circumstances. In a small town it was more difficult to stick to that rule, but the practitioner ought to inform the recent medical attendant of his being called in and, as a general rule, also to tell the patient to pay any fee due to the former physician. This engendered friendly feeling which was usually reciprocated. On no account ought one medical man to call in question the treatment adopted by another to any patient—if he thought previous treatment should be changed then let him do so without drawing any special attention With regard to patients he advised the medical man to "possess himself of an irresistible, indestructible optimism." If there were any serious case he might tell a relative in the event of death and future recriminations. He strongly advocated the great benefit to be derived by a newly fledged medical man in taking a house surgeonship in any general hospital for a short period or, failing that, he recommended an assistantship under an experienced practitioner. He then gave several useful hints as to the best way to begin practice for oneself, particularly referring to the bogus concerns where a medical man worked up a practice, more or less non-paying, in a few years and then offered it for sale preparatory to shifting to pastures new and repeating the dodge. At the close of the address a vote of thanks to the lecturer was proposed by Mr. James Clark and a similar compliment to the chairman was moved by Dr. Fraser, both of which were heartily accorded.

Oct. 27th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Irish Poor-law Medical Service.

AT the meeting of the Cookstown board of guardians on Oct. 24th it was decided after a long discussion to increase Dr. C. H. P. D. Graves's salary from £50 to £90. Dr. Graves is medical officer of the union infirmary and fever hospital and this increase simply brings his pay up to that of his predecessor and it is only after 15 years' service that the salary has been brought up to what it formerly was. I am glad to report that this has been done but sorry to note that one of the guardians who supported the increase said he did so all the more heartily as Dr. Graves had not joined the Irish Medical Association which is battling so hard to improve the wretched position of the Poor law medical officers. At the same meeting Mr. H Harris's application as medical officer of Stewartstown for more than 20 years for an increase of salary was not only refused but his letter was treated with great contempt, being marked "read." His work has greatly increased as medical officer to the rural district council and, as he stated in his letter of application, "his salary would not pay cab hire." The ways of the guardians are at present peculiar.

Annual Dinner of the Cork Medical and Surgical Society.

The annual dinner of the Cork Medical and Surgical Society was held on Oct. 24th. There were about 40 persons present, including several guests The chair was occupied by the President, Dr. J. Cotter. The toasts were "The King," "The Cork Medical School," "Our Guests," and "The Officers of the Society." Professor J. J. Charles and Professor W. E A. Cummins replied to the toast of the Cork Medical School. Professor Charles referred to the numerous important posts occupied by past students of the Queen's College and the desirability of maintaining the medical school at its present high standard. "Our Guests" was responded to by Sir Abraham Sutton, high sheriff, and Mr. O. C Cowan, chief engineering inspector to the Local Government Board. The high sheriff referred to the rumoured proposed settlement of the University question and commented on the loss it would be to the people of Cork if the medical school were swept away as the result of any political manœuvring. Mr. Cowan expressed his admiration for the medical profession and his sympathy with the grievances of the Poor-law medical officers but pointed out that unjust odium had attached to the Local Government Board, as its action is necessarily limited [illegible] the Treasury. A nt [illegible] of the evening and [illegible] late hour.

Oct. 27th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Remuneration of Assistants at Surgical Operations.

IN general the remuneration of medical men who act as assistants at surgical operations is very small in comparison with that of the operator himself, but this seldom leads to disputes because in most cases the surgeon brings men who have studied under him. Exceptions, however, sometimes occur and an important judgment has just been delivered on this subject deciding that the surgeon is not to have the only voice in the matter. This judgment is founded on the following considerations When the medical man who acted as assistant has only been engaged on work of an ordinary character such as does not require the possession of a diploma, and might in fact have been done by almost anybody, then it is reasonable that the surgeon should decide how much shall be paid and that his decision shall be final, but the case is different when the assistance was indispensable to the success of the operation and was such as only a medical man could give. In these circumstances the courts may intervene if the surgeon and the assistant required by him cannot come to an understanding. In the case which led up to the decision just mentioned the surgeon had charged the patient an inclusive sum to cover both his own fees and those of his assistant. The surgeon's own fees were calculated on the basis of the patients' presumed standing, the difficulty of the operations, and the standing of the operator; the fees of the assistant were calculated in the same way, regard being had to the relative positions of the surgeon who operated and of the assistant who administered chloroform. The court ordered the surgeon to pay his assistant the sum of 270 francs (£10 16*s.*), considering that the latter was a practitioner of repute and that he had evidently been selected on the ground of his admitted experience.

The Causes and Treatment of Rheumatism.

At a recent meeting of the Academy of Science M. Pénière discussed this question He reminded the meeting that the researches of Bouchard had shown that ordinary healthy urine contains toxins and still more that which is in a pathological condition These poisons are eliminated without danger to the health of the body through the action of the epithelium which lines the urinary passages. This layer of epithelium forms a fragile barrier but one which is quite sufficient against the absorption of these products. If, however, this protective layer is injured in any way absorption of the poison takes place into the general circulation. It is this which produces rheumatism. The product which is reabsorbed is a ferment analogous to, if not identical with, the fibrin ferment studied by Schmidt and A Gautier The epithelium lining the ureter is that which is particularly concerned in the absorption; visceral congestion provoked by cold or damp, erosion brought about by calculi or the passage through the ureter of toxic substances, wounds of the surrounding tissue, straining, and pressure brought about by the intestines or by the psoas muscle may all cause a desquamative ureteritis which is a forerunner of rheumatism This desquamation manifests itself at the beginning of an attack of rheumatism by a high coloured urine As regards therapeutics in rheumatism it is necessary in accordance with this pathogenic view to restore the epithelium of the ureter and to destroy or else to neutralise the ferments Some antiseptic must therefore be sought for by which the ureter can be freely irrigated without inconveniencing the stomach, the kidneys, or the general health. M. Pénière generally uses a combination of various resins, among which is that obtained from cubebs.

Sleeping Sickness.

On Oct 20th M. Blanchard showed to the Academy of Medicine three negroes suffering from this strange disease which on the African continent is the cause of a higher mortality than either plague or cholera. These three negroes had been brought from the Congo by M. Brumpt who is the assistant of M. Blanchard. At Brazzaville M. Brumpt had seen 38 cases of this disease. The unfortunate sufferers from it fall little by little into a state of sleep and at the end of a longer or shorter period die. The three patients exhibited to the Academy of Medicine showed oscillations of the head and erratic movements of the eyes and had a very peculiar air of stupidity and heaviness.

The disease is due to the presence of a protozoon belonging to the genus trypanosoma which breeds in the cerebro-spinal fluid of the patients.[1] It is not yet known how the trypanosoma comes to pick out this particular place of dwelling but there is another African disease affecting the same regions called Dutton's disease. In this complaint there is no slumber although the parasite appears to be the same as in sleeping sickness, but in Dutton's disease the parasite remains in the blood instead of passing, as in sleeping sickness, into the cerebro-spinal fluid. Sleeping sickness only attacks the black races. Dutton's disease attacks both whites and blacks alike. It is well known that Dutton's disease is due to the bite of the tsetse fly which apparently conveys the trypanosoma from one patient to another by its bite. In general this fly only bites animals which it kills very rapidly by being the cause of the disease called nagana. M. Blanchard asked if sleeping sickness could be a cerebro-spinal form, which was proper to the negro race, of Dutton's disease. He also asked if it was a human form of nagana and if it was the same variety of the tsetse fly which produced the two diseases. In any case, the bite of this fly is necessary for the spread of the malady, for negroes suffering from this disease who have been taken to America have never been the cause of the transmission of sleeping sickness. M. Brumpt has tried to inoculate this disease into animals but his experiments were without result in rats, mice, and guinea-pigs, although it is possible that the incubation period may be very long. He was, however, enabled to inoculate a monkey which died with all the symptoms of sleeping sickness but unfortunately no histological examination was made.

The Anti-Alcohol Congress.

The First National Anti-Alcohol Congress was opened on Oct. 26th in the large theatre of the Faculty of Medicine, M. Casimir-Perrier being the acting President. In connexion with the congress there was an anti-alcohol exhibition which was held in the hall of the Pas-Perdus.

The Disinfection of Bathing Cabins.

In connexion with the report drawn up by M. Duguet the council of hygiene of the department of the Seine has just laid down measures of disinfection which must be taken in the case of bathing cabins. The floor of the cabin must be made of some impermeable substance. The walls and the seats must be smooth and covered with either tiles or cement. The seats and the furniture should be either painted or else covered with some material which can be easily washed. The pieces of cork which it is the custom to give a bather to stand upon when he comes out of his bath must be covered with a napkin which is to be changed for each bather and every time that such napkin is used it must be thoroughly washed in soapsuds or else sterilised in a stove at 100° C.

Oct. 27th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

Myopia in School Children.

Dr. A. Steiger of Zürich in a paper which appeared in the last number of the *Swiss Journal for School Hygiene*, and which is sent to all medical men and schoolmasters and schoolmistresses of the Swiss State schools, discusses the relation existing between myopia and the faulty positions in which children sit when at school. A great number of children are sent to him by schoolmasters on the ground of supposed shortsightedness, the reason apparently being that they assume such awkward postures that the masters at length come to the conclusion that their eyesight must be defective. An examination of 22,941 children aged six years has, however, proved that myopia is very rarely at the root of the evil, for of this number only 222—i.e., less than 1 per cent.—were suffering from myopia. An examination of 2994 school children in Zürich during the year 1902 showed that 485 of them had defects of vision as follows: hypermetropia, 26; myopia, 28—i.e., 1 per cent.; astigmatism, 259—i.e., 8·5 per cent.; paralysis of accommodation, 50; maculæ of the cornea, 21; various affections, 17; and diagnosis indefinite, 84. The schoolmasters are instructed to divide the children into three classes—namely, those who have normal vision, those who have abnormal vision, and, lastly, the doubtful cases. These superficial examinations may be made by any fairly educated person but in the majority of cases a thorough investigation by an ophthalmic surgeon is necessary in order to ensure a correct diagnosis. Of course seating themselves improperly, a practice which Dr. Steiger remarked in at least 25 per cent. of all the school children, is productive of shortsightedness.

Workmen's Compensation and Self-inflicted Injuries.

Dr. E. Patry of Geneva has published his startling experiences of traumatic œdema of the back of the hand, a "new disease" which was first described by Dr. H. Secretan in the *Revue Médicale de la Suisse Romande* for July, 1901. Dr. Chenissi of Montpellier has also written on the subject. Dr. Patry, who saw 11,725 accident cases at the Geneva Cantonal Hospital during the period 1896-1902, encountered the first case of traumatic œdema in 1899, six cases in 1900, and 42 in 1901 and 1902, a fairly remarkable increase. The first two patients were awarded £52 as compensation under the Workmen's Act, but the later cases had to be contented with sums varying from £15 down to £2 10s. Careful investigation went to prove that probably the great majority of the lesions were deliberately brought about for the purpose of being used in claiming compensation. Dr. Patry concludes this from the fact that the number of attacks rapidly increased after considerable compensation had been paid, that the cases occurred only among Italian workmen who either came from the same district or occupied lodgings together, that out of 48 cases the left hand was affected 34 times, that the men eventually accepted small sums as compensation, and that the majority of cases occurred in September, October, and November when the men were out of work. Self-inflicted injury could be brought home in one case only, the man having caused the œdema by repeated knocks with a hammer. Dr. Patry concludes that the etiology of this new disease is to be looked for in the compensation clauses of the Workmen's Act.

Zürich, Oct. 24th.

NEW YORK.

(FROM OUR OWN CORRESPONDENTS.)

Health of New York City for the Year 1902.

IN the year 1902 New York reached its lowest recorded death-rate. The mortality-rate of 18·75 per 1000 was not only the lowest known in the city as a whole but each of the five boroughs had also its lowest recorded death-rate.

Provision for Consumptives in New York City.

During the past few years New York has awakened to the need of properly caring for those suffering from pulmonary tuberculosis within her borders. It is now understood by the more intelligent citizens that the consumptive, if allowed to remain in the crowded districts, is a menace to the entire community. Self-preservation is said to be the first law of nature and acting upon this ancient axiom the municipal authorities of New York have taken steps to isolate individuals who are likely to spread tuberculosis among their families and neighbours. The American *Review of Reviews* for October, in an article treating of the progress made in municipal affairs in New York during the past two years, refers to the provision made for consumptives as follows:—

> Two buildings have been completely altered to fit them for new purposes. One of these formerly occupied by a State hospital for the insane has been utilised, together with other unaltered buildings, as a hospital for consumptives. This was opened Jan. 31st, 1902, and provides separate quarters and special care for all male consumptives in the care of the department in the boroughs of Manhattan and the Bronx, and for female consumptives for all boroughs. 440 patients were in this hospital on August 1st. Eight tents accommodating 110 patients have been erected, in which there will be abundant opportunity for open-air treatment. It is intended to keep these tent cottages open during the coming winter, as is done in similar tents occupied by insane patients on Ward's Island. It has also been decided to erect an adequate municipal sanatorium for incipient cases, under the management of the board of trustees of Bellevue and allied hospitals.

New Water-storage Plan for New York.

Although the city of New York now enjoys what Londoners would consider a most ample supply of water its citizens are not satisfied and plans are afoot to provide an amount of water which may be termed superabundant. A commission of experts has been examining into the sources of water for some time and is expected to make its report to the mayor shortly. It is said that in this report six different propositions will be laid before the city with regard to water-supply conditions. Three of these will deal with the Croton watershed, whence the water of the city is now derived, one with a ramification of the old Ramapo idea, a fifth with the storage dam capabilities of the Adirondack region, and the sixth with a Catskill mountain storage proposition. It has been found that by damming a section in this district an area of eight square miles would be formed as a natural reservoir and at a comparatively small expense. According to present estimates the construction of the plant would take ten years, when the city would have one of the best water plants in the world and at a very small cost.

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[1] Vide THE LANCET, June 20th, 1903, p. 1735.

Health of the American Army.

The annual report of the Surgeon-General of the United States Army has been published recently by the War Department. Brigadier-General Robert M. O'Reilly, the Surgeon-General, devotes a large portion of his report to a consideration of the health aspects of the American army of occupation in the Philippine Islands. The death-rate of the American negro troops and of the native Filipinos serving under the Stars and Stripes was almost 60 per cent. greater than among the white troops. The entire army at home and abroad during the period covered by the report showed for the white troops an admission-rate of 17·06 per 1000 and a death-rate of 14·40. The negro troops had 18 97 admissions per 1000 and a mortality-rate of 24·11 deaths per 1000, and the Malay Scouts 17·07 admissions and 24·04 deaths per 1000. Asiatic cholera appeared to be far less deadly among the white soldiers of the army than among the negroes and Filipinos. The white soldiers had 4·72 cases and 2·83 deaths in each 1000 of strength, while the negro regiments showed 15·68 cases and 7·96 deaths per 1000, and the Filipino troops 16 68 cases and 10 15 deaths per 1000. General O'Reilly, however, explained that these figures were largely due to the fact that there were a large number of white soldiers in the United States who were not exposed to cholera and that when these circumstances were taken into account the rates for the different races do not exhibit a great difference. Beri-beri was especially deadly among the native soldiers, causing an admission-rate among the Malay Scouts of 123·92 per 1000 and a death-rate of 6 01 per 1000. This disease scarcely affected the soldiers of white colour and the negroes were attacked by it to quite a slight extent. Alcoholism showed the other side of the picture. Out of 5000 Filipino soldiers but three were treated for this condition, while the rate for white troops was 24·78 per 1000, for negroes 11·70 per 1000, and for Malay Scouts 0 62 per 1000. The Surgeon-General called attention to the fact that yellow fever had been practically driven out of United States territory and declared that "a little concerted action on the part of the countries whose ports still harbour the disease, and the most terrible malady of the two American continents will undoubtedly disappear for ever." It is also pointed out in the report that the summer of 1902 energetic measures were taken at army ations in the United States situated in malarious districts exterminate mosquitoes. The work was fairly successful ad was continued during this season. The methods of preention put into force were the use of petroleum on large odies of stagnant water and draining, clearing underbrush, c. 20 soldiers fell in action in the fiscal year ending une 30th, 1903, and there were 31 suicides and 12 homiides. On the whole the report is satisfactory, especially hat part which deals with the health of the white troops in he Philippine Islands.

The Progress of Medical Education in the United States.

A recent statistical inquiry was made by the *Journal of the merican Medical Association* to determine the condition of edical education in the United States at the present time. rom this article it appears that there are 154 medical colleges hich are chartered to grant the degree of M.D.; of these 21 are regular, 19 are homœopathic, ten are eclectic, three re physico-medical, and one is national medical. In addition here are three schools which give instruction in the first two ears' work, making a total of 157 institutions devoted to the eaching of medicine. The number of medical students in the chools during the year ending June 30th, 1903, was 27,615, istributed as follows: 24 930 were at the regular schools, 498 at the homœopathic, 848 at the eclectic, and 339 at the ondescript schools. There was an increase in the attendance t the regular schools of 52 over that of last year and an increase over that of the year previous of 1024. In the homœopathic schools there was a decrease of 119 below that of 1902 and of 185 since 1901. The number of students in the eclectic schools increased in the past year, 848 being registered, against 765 in the preceding year and 664 in 1901. The attendance upon the nondescript schools also increased—viz., 98 over that of last year and 115 over that of 1901. The total number of graduates in medicine for the last year was 5698, an increase of 699 over that of the preceding year. The ratio of schools to population of the cities in which they are located is very striking. New York, with 3,500,000 inhabitants, has seven schools, while Chicago, with 1,500,000 inhabitants, has 14 schools. Until the year 1895 no educational qualification was required by any school higher than graduation from an ordinary high school. In that year the Johns Hopkins Medical School announced that to gain admittance to that school applicants must possess the Bachelor's degree in arts and sciences and also certificates showing a year's work in biology, chemistry, and physics, and must give evidence of the possession of reading knowledge of French and German. Though these requirements were strongly opposed by the schools and the profession on the ground that they were almost prohibitive to the class which generally applies for admission to the schools the standard was maintained by the Johns Hopkins school with steadily increasing classes. But what is most interesting, the sentiment is gaining ground that the schools must have a high standard of admission if they would do full justice to the profession. The time is apparently near at hand when the schools will raise the standard of educational qualification for admission to some position not greatly inferior to that of the Baltimore School.

The Legal Status of "Faith-cure" in New York.

A case has recently been decided by the highest court of this State which determines the legal status of "faith-cure." A Christian Scientist was convicted by a jury for intentionally failing to provide medical aid for his child suffering from broncho-pneumonia and was sentenced to 500 days in gaol and to pay a fine of $500. The law provides that "a person who wilfully omits without lawful excuse to perform a duty, by law imposed upon him, to furnish food, clothing, shelter, or medical attendance to a minor is guilty of a misdemeanour." The question as to the meaning of "medical attendance" is determined by the court to be "the authorised medical attendance prescribed by the statute" and according to the statute only a legally qualified practitioner of medicine could be a medical attendant. Now a legally qualified practitioner of medicine in this State is a person who is a graduate of a chartered medical school and who has passed the State medical examining board. This decision settles for the present the legal status of the "faith-cure" scientist and the fate of those parents who neglect their children in regard to providing medical attendance on the occurrence of sickness.

Oct. 19th.

Obituary.

ROBERT JOHN GARDEN, M.D. ABERD.

THE death is announced on Oct. 23rd at Coynach, Aberdeenshire, of Dr. R J. Garden. Since his retirement from the office of senior surgeon of the Royal Infirmary, Aberdeen, three years ago Dr. Garden had been living in retirement at Coynach, the gradual failure of his eyesight, ending in total blindness, having precluded him from the practice of his profession. He had not been in good health for some time, his strength having rapidly given way under his enforced confinement Dr. Garden was a son of the late Mr. James Garden, advocate. He studied medicine at the University of Aberdeen, graduating M.B. and C.M. in 1872 with highest honours, after a brilliant curriculum in which he took the leading places in all his classes. To surgery he always had a special leaning and was class assistant to Professor Pirrie during the session 1870–71,
while during his fourth year
house surgeon at the infirmary
the great medical schools of
for two years, after which he settled down to practice in Aberdeen in the year 1874. Almost immediately he was appointed to the dispensary and held office there till 1880. In 1876 he was appointed as fourth surgeon at the

UNIVERSITY OF CHICAGO PRESS, Chicago.

The Decennial Publications. The Structure of the Glands of Brunner. By Robert Russell Bensley, Assistant Professor of Anatomy. Price $1.00 net.

WRIGHT, JOHN, AND CO., Bristol (SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London).

The Medical Examination for Life Assurance. With Remarks on the Selection of an Office. By F. De Havilland Hall, M.D., F.R.C.P., President of the Medical Society of London. Third edition. Greatly enlarged. Price 4s. net.

Essentials of Pelvic Diagnosis, with Illustrative Cases. By E. Stanmore Bishop, F.R.C.S. Eng., Hon. Surgeon, Ancoats Hospital, Manchester; Vice-President, British Gynæcological Society, London; and an Appendix on Examination of Blood, &c., by Charles H. Melland, M.D. Lond., M.R.C.P., Hon. Physician, Ancoats Hospital, Manchester. Price 9s. 6d. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BOWLBY, E. H., M.D., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

BROWNE, OSWALD A., M.D. Cantab., F.R.C.P. Lond., has been appointed Consulting Physician to the Metropolitan Hospital, Kingsland-road, N.E

BUSHNELL, FRANK GEORGE, M.D. Lond., D.P.H. Cantab., has been re-appointed Medical Officer to the Provident Department of the Plymouth Public Dispensary.

CAUTLEY, EDMUND, M.D Cantab., F.R.C.P. Lond., has been appointed Physician to the Metropolitan [illegible]

GREENHILL, EDWARD FOWLER, [illegible] has been appointed Medical Officer [illegible] Great Western Railway Provident Society, vice Mr. Walter E. Lloyd, resigned.

JACOB, F. H., M.D., M.R.C.P. Lond., has been appointed Assistant Physician to the Nottingham Children's Hospital.

LINDSEY, COLIN D., M.B. Lond., has been reappointed Medical Officer to the Provident Department of the Plymouth Public Dispensary.

MASSIE, THOMAS, M.B., C.M. Aberd., has been appointed Medical Officer at the St. George's Workhouse, Southwark Union, London, S.E.

PEGLER, L. HEMINGTON, M.D. Edin., has been appointed Honorary Surgeon for Diseases of the Ear, Nose, and Throat to the Home in Harley-street belonging to the Governesses' Benevolent Institution.

SAVILL, MRS. AGNES F., M.D. Glasg., has been appointed Clinical Assistant to the New Hospital for Women, Euston-road.

SOLTAU, A. BERTRAM, M.B. Lond., F.R.C.S. Eng., has been re-appointed Assistant Physician to the Plymouth Public Dispensary.

THURSFIELD, HUGH, M.D. Oxon., M.R.C.P. Lond., has been appointed Assistant Physician to the Metropolitan Hospital, Kingsland-road, N.E.

WARD, J. P. STEPHENS, M.R.C.S., L.R.C P. Lond., has been re-appointed Assistant Physician to the Plymouth Public Dispensary.

WATERSTON, DAVID, M.D., F.R.C.S.E., F.R.S.E., has been appointed Senior Assistant in Anatomy and Lecturer in Regional Anatomy in Edinburgh University.

YOUNG, SYDNEY, D.Sc. Lond., F.R.S., Professor of Chemistry at University College, Bristol, has been appointed to the Chair of Chemistry at Trinity College, Dublin.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, Kennington, S W.—Resident Medical Officer for six months. Salary at rate of £40 per annum, with board and lodging.

BIRKENHEAD UNION INFIRMARY, WORKHOUSE, AND SANATORIUM.—Resident Assistant Medical Officer. Salary £120 per annum, with board, washing, and apartments.

CANCER HOSPITAL, Fulham-road. — Hon. Medical Radiographer. Honorarium £26 5s. annually.

CHARING CROSS HOSPITAL.—Anæsthetist. Salary £60 a year. Also Medical Registrar. Salary £40 a year, with lunch.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Physician to out-patients.

EDINBURGH, ROYAL COLLEGE OF SURGEONS.—Conservator of Museum. Salary £105.

GLASGOW UNIVERSITY.—Three Examiners, each in Anatomy, Medical Jurisprudence, and Midwifery. Salaries, Anatomy £80, Medical Jurisprudence £50, and Midwifery £50, with hotel and travelling expenses. Also Examiner in Botany. Salary £50, with hotel and travelling expenses.

GRAVESEND HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House Surgeon. Salary £80 per annum, with board, lodging, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physician, for six months. Honorarium of £25. Also Dental Surgeon.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—House Surgeon, unmarried, for six months. Salary £20, with board and residence. Also [illegible]

INDIAN MEDICAL SER[illegible]nty Commissions.

LANCASHIRE INEBRIATES' REFORMATORIES, Langho, Whalley, Lancashire.—Director and Medical Officer, married. Salary £500 per annum, rising to £700, with residence, coal, light, and washing.

LEEDS GENERAL INFIRMARY.—Resident Casualty Officer. Salary £100 a year, with board, lodging, and washing.

LIVERPOOL, CITY OF, INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer, unmarried. Salary £120 per annum, with board, washing, and lodging.

LONDON HOSPITAL MEDICAL COLLEGE (UNIVERSITY OF LONDON).—Demonstrator of Biology. Salary £75 per annum.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House Surgeon. Salary £90, with residence, board, and washing.

MELBOURNE, UNIVERSITY OF.—Chair of Physiology and Histology.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—House Physician for six months. Salary at rate of £80 per annum, with board, residence, and laundry. Also Assistant Physician. Also Resident Medical Officer. Salary £120 per annum, with board, residence, and washing.

NOTTINGHAM CITY ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, and washing.

PORTSMOUTH ROYAL HOSPITAL.—Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board, residence, &c.

ROYAL DENTAL HOSPITAL OF LONDON, Leicester-square.—Dental Superintendent. Honorarium £250 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Assistant Physician.

ROYAL LONDON OPHTHALMIC HOSPITAL, City-road, E.C.—Senior House Surgeon. Salary £100, with board and residence.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, E.C.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

SALISBURY INFIRMARY.—Assistant House Surgeon. Salary £75 per annum, with apartments, board, and washing.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Resident Assistant House Surgeon. Salary £80 per annum.

SHEFFIELD ROYAL HOSPITAL.—House Surgeon, unmarried. Salary £120 per annum, with board, washing, and apartments.

SOUTH UIST PARISH (NORTHERN DIVISION).—Medical Officer. Salary £70.

SUSSEX COUNTY HOSPITAL, Brighton.—House Surgeon, unmarried Salary £140 per annum, with board and residence.

THROAT HOSPITAL, Golden-square, W.—Resident House Surgeon. Salary £50 per annum, with board, residence, and laundry.

WESTERN DISPENSARY, Rochester-row, Westminster.—Resident Medical Officer, unmarried. Salary 100 guineas per annum, with rooms, coal, gas, and attendance.

WISBECH, NORTH CAMBS. HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with rooms, attendance, coals, gas, and washing.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies for Certifying Surgeons under the Factory Act at Selly Oak, in the county of Worcester, and at Nantgaredig, in the county of Carmarthen.

Births, Marriages, and Deaths.

BIRTHS

BRUCE PAYNE.—On Oct. 25th, at Melville, Shepherdswell, the wife of Edward Bruce Payne, M.R.C S., L.R.C.P., of a daughter.

CARRUTHERS.—At 12, Rose Terrace, Perth, N.B., on the 12th inst., the wife of D. A. Carruthers, M.B., C.M , D P.H., of a daughter.

GOODCHILD.—On Oct. 26th, at 9, Highgate-road, N.W., the wife of N. John Goodchild, M.R.C.S., L.R.C.P. Lond., of a daughter.

WOAKES.—On the 27th Oct., at 79, Bickenhall-mansions, Gloucester-place, W., the wife of Claud Woakes, of Harley-street, of a daughter.

MARRIAGES

HARRIS—CUMMINS.—On Oct. 24th, at St. George's Church, Bloomsbury, by the Very Reverend the Dean of Worcester, assisted by the Rev. R. B. Tollington, M.A., vicar, Henry Arthur Clifton Harris, M.R.C.S England, L.R.C.P. London, eldest son of the late Henry Harris, M.R.C S. England, to Lillian Maud Cunard Cummins, L.R.C.P. Ireland, L.R.C.S. Ireland, elder daughter of the late William Alves Cummins.

SAFFORD—BADCOCK.—On Oct. 28th, at Dum-Dum, Bengal, India, by the Rev. Cogan, D.D., assisted by the Rev. C. H. Barlow, M.A., vicar of Barrackpore, Arthur Hunt Safford, Captain, Royal Army Medical Corps, second son of Arthur Herbert Safford, to Dorothy Jeanne, elder daughter of A. P. Badcock. (By cable.)

STEELE-PERKINS—HARRILD.—On Oct. 27th, at Holy Trinity Church, Sunningdale, John Shirley Steele-Perkins, B.A., M.B., B.C. Cantab., M.R.C.S. Eng., L.R.C P. Lond., to Elsie Charlotte Ann, younger daughter of Horton Harrild.

DEATH.

WILLS.—On Oct. 16th, at 232, Old Kent-road, London, James Wills, M.D., aged 49 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE CIGARETTE CRAZE.

To the Editors of THE LANCET.

SIRS,—With reference to the harmful results popularly attributed to cigarette smoking I think all critics on the subject seem to lose sight of the fact that the average cigarette smoker will get through about twice as much tobacco in the week as the pipe smoker—at least, this is my experience, and I have observed the matter closely both at home and abroad. Everything tends to this condition of things: the ease and *facility with which a cigarette can be smoked and obtained compared* with a pipe, the number of occasions on which a pipe is not permissible is also in favour of the cigarette, and of course, the fascination of the actual act of smoking is in itself a great factor in conducing to the craze. I suppose any subject like this would be incomplete without figures and statistics and I consequently give a few. A pipe smoker who consumes an ounce of tobacco per diem, that is seven ounces a week, would be considered a very excessive smoker, and three and a half ounces a week may well be put down as the average. One of the most popular brands of cigarettes weighs 14 to the ounce and another 20 to the ounce, and a very excessive cigarette smoker would consume between 250 and 300 cigarettes in a week, and this is no uncommon occurrence by any means. If he smoked the brand first named he would consume 21 ounces of tobacco per week and if the [illegible] several men who get through 300 Egyptian cigarettes per week all the year round, which at a low estimate is two ounces of tobacco per diem, and apparently do not suffer any appreciable disadvantages from doing so, but I never met the man yet who smoked two ounces of tobacco a day with a pipe, and if there are such I am sure they are more likely to suffer than the cigarette smoker for one reason alone, the latter escapes all the disagreeable results of a foul pipe. Like [illegible] quality [illegible]

JOHN J. SCANLAN,
late Surgeon-Captain Imperial Yeomanry (South Africa).
Station Hospital, Fermoy, Oct. 21st, 1903.

⁎⁎⁎ Another correspondent ("M M.") writes that "the deleterious effect of cigarettes is in some degree due to the bleaching processes which the light coloured tobaccos undergo and to the presence in them of nitre and other chemicals," and adds that "it is significant that all the great cigarette-smoking peoples, with the possible exception of Russians [and he should have included Turks and Egyptians]—i.e., those of Spain, Portugal, France, Italy, and South America—invariably smoke cigarettes of dark-coloured tobacco." Virginia cigarettes he regards as much more harmful than those made of dark tobacco; for example—Algerian, Brazilian, or West Indian cigarettes. We are not aware that tobacco is artificially bleached, whilst nitre is a natural constituent of the leaf. On the other hand, it is quite possible that there is a difference between *the character of the smoke of light and of dark tobacco* We have known professional tasters of wines and spirits to be great smokers of cigarettes made of dark tobacco: the light-coloured tobacco, they assert, destroys the discriminating sense of the palate —ED. L.

REFUSE DESTRUCTORS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers furnish data showing the effects of refuse destructors on the vital statistics of towns where they have been in use for a period of sufficient duration to show results?

I am, Sirs, yours faithfully,
Aberystwyth, Oct. 26th, 1903. T. D. HARRIES.

MOTOR CARS FOR MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—In reply to "General Practitioner" in THE LANCET of Oct. 10th, p. 1066, I may briefly relate my motoring experience. I have been for more than six years thoroughly conversant with the mechanical parts of many of the cars on the market, having been the owner of four during that period. My experience of the one suitable to a medical man of moderate means, and one particularly adapted to his special requirements, may prove a guide in determining the purchase of a reliable car. During the last seven years improvements have been many and varied. Cars are more reliable, structurally are more perfect, and the designs are more pleasing. My purchase of a little French car, the "Dorey," and, after four months' experience, a tour of 1500 miles through Scotland, Wales, and the Lake District have given me every satisfaction. The following are the particulars in brief:—It was made in *Paris*, tube frame entirely suspended, 6 h.p. *Di Dion* motor in front, with radiators, throttle on exhaust, water cooled, driven by friction pump on fly wheel, three speeds (8, 12, and 24 miles) and reverse, the third speed always in mesh and direct drive, live axle, four equal artillery wheels, pneumatic tyres (760 by 85), body in wood and aluminium, side lever for change of speeds, inclined pillar, wheel steering, three brakes, petrol tank (two and a half gallons) and lubricating tank, in front on dash, Di Dion carburetter, no chains, bands, &c., two bucket seats in front, and room for another seat behind. I have a hood fitted which renders one independent of the weather. There is a full capacity for luggage in the rear. The price is £167 delivered in London; without tyres, £151. Extras are hood, detachable tonneau, and seat in rear. To avoid any unnecessary correspondence I should be pleased to allow any medical gentleman a trial run here by appointment, the only expense being the driver's fee. There is an expert motor-car driver in this town whom I can confidently recommend On all sorts and conditions of roads I find I can do my work in half the time as compared with a horse, averaging about 12 miles a day at a cost of about 3*s*. 6*d*. per week for petrol and oil. Under favourable conditions and good roads the car runs 70 miles on two gallons of petrol. I consider, speaking roughly, that 20 per cent. *ought to be allowed for depreciation per annum. Moreover, the* amount of depreciation depends so much upon how the car is looked after, driven, and intelligently used.

I am, Sirs, yours faithfully,
E. PEACOCK, M.R.C.S. Eng., L S.A.,
Nuneaton, Oct. 19th, 1903. Medical Officer of Health.

KING CHARLES II. AND THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

To the Editors of THE LANCET.

SIRS,—In the summarised account of the benefactors of, and benefactions to, the Royal College of Physicians of London at the opening of Dr. W. H. Allchin's Harveian Oration in THE LANCET of Oct. 24th, p. 1141, there is an incidental reference to the visit of King Charles II. to the College in 1665. The *following quaintly phrased* allusion to that event by a contemporary writer may perhaps be of sufficient interest to merit insertion in THE LANCET:—

> *The K. visits the Colledge of Phyricians of London, April 15, 1665.*—Nor was the King so wholly taken up with the thoughts of the approaching War, but that he also minded other affairs, and his innocent diversions; he therefore on the fifteenth of *April* visited the famous *Colledge* of Physicians of *London*, and was received very honourably by the *Doctors*.
>
> There he saw the Marble Statue of *Harvey* the chief Pilot of the Blouds Circulation; and heard the *President Ent*, with [illegible] natomy, [illegible] *Bates*, [illegible] ter his *chief Physician* since; and *Glisson*, excellent in *Medicine* and Philosophy; and successful *Micklethwait*; and much-esteemed *Cox*; and *Scarborough*, accomplished in all Natural Philophy, [*sic*] and no less famous amongst the Muses; with *Wharton* the Secretary of the *Glandules*; and acute *Merret*: besides many others eminent in the Art of *Curing*; to whom at length were associated, *Willis* the great Restorer of Medicine, but of too short a life, with *Lower* and *Needham* who have illustrated the *Faculty* by their Writings.

The book from which the above is taken was published in 1685 and consists of three parts Part I. (first published anonymously in 1651) and Part II. were written, in Latin originally, by Dr. George Bates, "Principal Physician to K Charles the I. and K. Charles the II.," under the title of "Elenchus Motuum Nuperorum in Anglia: or, a short Historical Account of the Rise and Progress of the Late Troubles in England." Part III., the work of "Tho. Skinner, M D.," at p. 87 of which the quoted sentences may be found, bears the title, "Motus Compositi: or, the History of the Composing of the Affairs of England by the Restoration of K. Charles the Second, and the Punishment of the Regicides; and other Principal Occurrents to the year 1659." This part also was first published in Latin, presumably between 1669 and 1676, seeing that Sir George Ent who held the Presidentship of the College during the period 1670–75, is styled therein "the President Ent."

I am, Sirs, yours faithfully,
Oct. 26th, 1903. W. R.

THE MOTOR-CYCLE IN MEDICAL PRACTICE.

THE subject of motor-cycling for medical men—and especially for those in country districts whose practices are scattered over large areas—is one which has not received anything like the attention which the possibilities of this comparatively inexpensive and rapid method of transport would seem to warrant. "A Country Doctor," in the current issue of the *National Cyclists' Union Review*, relates his experience of motor-cycling in his practice and is enthusiastic over the success of his efforts since he discarded the use of horses in June last year. Certainly "A Country Doctor" makes out a strong case for the more general adoption of the motor-cycle by medical men, and on the whole we are inclined to think that there is much to be said in its favour. We should have liked a little more information on one or two points—i.e., as to the steps taken, when riding in the rain, to prevent the electrical connexions getting wet and thus becoming a source of short-circuiting; the weight of the motor-cycle as well as the size of the frame and the size of the wheels; and "A Country *Doctor's" own height and weight—important factors generally, but* particularly so when the purpose for which the motor-cycle is used is considered. Our own view is that for the average-sized man and on the average road the practical machine is one weighing not more

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An Address

ON

MEDICINE AND SCIENCE IN THE MODERN UNIVERSITY.

Delivered at the Opening of the New Medical School of the University of Toronto on Oct 1st, 1903,

BY C S SHERRINGTON, M A, M D CAMB, F R S,

HOLT PROFESSOR OF PHYSIOLOGY IN THE UNIVERSITY OF LIVERPOOL

PRESIDENT LOUDON, DR REEVE, LADIES AND GENTLEMEN,—Believe me, it is a difficult thing for a stranger, even at your invitation, to address you on an occasion like the present So many significant events crowd in upon him and time for reflection is needed to weld into a connected whole the impression he would wish to offer to you Not that the growth and doings of this University have not been followed and watched with interest by us in the old country; on the contrary, your activity has been felt not only as a matter of mutual congratulation but as a spur to arouse us to effort in our own similar pursuit of educational aims But the stranger coming among you necessarily feels the shortcomings of his acquaintance with the details of these academic enterprises you have taken in hand One advantage however, is his His view, gained from a distance necessarily has freedom and truth of perspective that may give it a value in your eyes Some things lose by perspective Some things large when close to hand dwindle when viewed from afar Not so Canada. The perspective given by the width of the Atlantic is but an appropriate setting across which to view her greatness and her far reaching activity And this event, this academic celebration, this *dies festus* in your University to day, retains

on the hill above the port of Liverpool

Coming from a region where history is long and the land little, to this where written history is short and the expanse of land incomparably great one realises how relative is size And in regard to the event of to day the largeness of this country rises in my thought not as a matter of mileage, but that with you, more than with us in the old country, the size of to morrow is vaster than the size of to-day Each step of progress here more than with us, has to be measured by its ample consequences in a more rapidly widening horizon of the morrow These new laboratories have a field already demanding them and a still larger lies before them in an immediate and historic future

PURSUIT OF SCIENCE A CIVIC DUTY

Biology is the study of life in regard especially to growth and to organisation Every medical man is a biologist and as a biologist it may be but natural if I regard to day's event from a biological standpoint and the community as an organism and the university as a living organ essential to the healthy life of the community Science—especially medical science—is growing in importance to the community We must have organisation in science as in industry This University to day makes provision of first rate importance for the organisation of medical and allied sciences in the region which centres here Capacity to rear and to support men constitutes the extent

individuals, requires the vigilance of guiding hands Growth for it to take its course rightly towards perfection requires that provision for the security and expansion of the liberal arts and sciences forerun rather than halt behind the actual requirement of the hour Not only for their direct utilitarian service They form a whetstone for man s most universal tool —his intellect Also a discipline for character in the pursuit of truth for its own sake Scientific truth, when found, has often proved unpalatable to man—as when it dethroned him from his fancied seat at the centre of the whole perceptible universe, a universe he had imagined simply subservient to his needs, or again, as when it taught him that instead of being a creature altogether apart from brute creation there are flesh and blood bonds between himself and them Regardless of its cost to his cherished fancies man strives for scientific truth And, as the old Greek said, this purpose puts him further from the brutes and nearer to the gods *In nurturing science I would urge* that a community cultivates more than mere utility And even with regard to mere utility, as the fields of knowledge fall ripe under the ceaseless husbandry of the world's thought, those who would join in the great reaping and not only glean where others reaped before them must cultivate for themselves To do this requires more than the devotion of individuals It requires the intelligent cooperation of whole groups of individuals Organised scientific inquiry becomes in advanced countries a conscious aim of *the community as a community*

THE VARIOUS WORKERS

That society may draw due benefit from wells of natural knowledge three kinds of workers have to stand side by side First the investigator who, pursuing truth, extends discovery with little or no reference to practical ends He constitutes the fountain head of the knowledge that is for distribution Other hands may reap the harvest but his set and rear the seed After the investigator comes the teacher To him it belongs to diffuse the knowledge won This honourable and difficult task receives its best reward in seeing the small spiritual beginnings of a pupil widen into the spiritual beginnings of a master Thirdly, there is the applier of natural knowledge His part consists in making scientific knowledge directly serve practical needs It is this work which to the popular idea often represents the whole of science or all of it that is commonly termed "useful The practical results of this work are often astounding to those ignorant of the steps by which they have been reached The greatest of these steps however, is usually the first one, made in the laboratory of the investigator These three co workers are co-equal in the priesthood Science and the applications of science are one growth, united together even as the fruit and the tree The proper hearthstone round which the community should group these labourers, labouring for a common end is the university There the sacred flame of learning is fed from many sides by many hands

THE BIOLOGIST AS CITIZEN

It is sometimes said that pursuit of science renders a man deaf to the appeals of practical life—that it tends to withdraw him from the everyday interests of the people That I do not believe of any science certainly not of biology and the medical sciences Why, from their very outset these subjects draw the mind towards study of an organisation the most complex and the most perfect it can examine The ancient simile that our old school classic Livy, drew between the human body and the body politic the State, has not lost but won significance as the centuries have run The *achievement* of the microscope has been the discovery that living things whether plant or animal—all living things of more than minutest size—are commonwealths of individually living units These cells as they are called, are living stones that build the house of life In that house each stone is a self centred individually living microcosm individually born, breathing for itself feeding itself, consuming its own substance in its living, and capable of, and destined for, an individual death Each cell lives by exchanging material with the world surrounding it In other words, its bulk depends on its surface Hence surface increasing as the square and volume as the cube, cell size is circumscribed by tiny limits—microscopic limits. Had the dependence been greater than it is and the average size of the cell less and too small for resolution and discovery by the microscopes of 70 years ago it is hard to imagine where biology would stand to day For two generations every biologist has been accustomed to think in terms of the cell theory Every shred of the body he knows as an intricate interlacement, embodying coöperation and mutual support of associate thousands of individually existent cells Division of labour has gone on and with it differentiation of structure while this group of cells combines with its own inner life some special function subservient to the needs of the great commonwealth as a whole, another group is specialised for another duty again subservient to the general needs. Each organism, with all its solidarity, each one of ourselves here, is built up of living myriads. Each such organism consisted at the outset but of a single cell and from that in his life's growth have arisen the countless myriads composing him to-day. The blood relationship is close between all the cells of each one individual body. The cells of our nerves, of our muscles, of our lime-hardened bones are all blood relations through one common ancestor. Yet so far has specialisation of these unit lives gone on, so far does function reflect itself in microscopic form, that there is greater likeness between my nerve cells and the nerve cells of a fish than between my nerve cells and my own muscle cells, despite the blood relationship between these latter. And in the commonwealth of cells that constitute each one of us goes forward day long, night long, as in the body politic, the birth of new units to replace the ones outworn, the subordination of many individual purposes to one, the sacrifice and destruction of the individual life for the benefit of the many.

Trained in study of such an organism surely the biologist and the medical man will be the last to underrate the importance of organisation to the community for the common weal. Therefore I am rejoiced, but I am not surprised, that it is your Faculty of Medicine which to day in its public-spiritedness erects and instals these fine laboratories, this potent addition to the organisation of your community for its activities in medicine and biological science. I would also, as a friend among you, offer you my congratulations on the consolidation of your two schools of medicine. Union means not only greater strength but the more effective application of that strength.

TWO ASPECTS TO MEDICINE.

I need not extol medicine to this assembly. Many of her votaries are here; I venture to count myself as one. But to-day the relation toward her of education is a matter on which our minds are naturally set. Am I wrong if in regard to this it rises saliently to me that from the educational standpoint medicine, like Janus of old, in a good sense, bears a double face? On the one hand, she is an empiric. She has learned to cure by what the comparative psychologist calls the "method of trial and error"—conquests over sickness acquired purely as the result of experience without help either from *a priori* or from inductive reasoning. And great and glorious is the rôle of her achievement on these lines. Of her humanitarian triumphs probably still—certainly until a generation ago—the greater share is assignable to this part. The use of quinine in malaria, the curative effects of the iodides and various metals, the discovery of chloroform and ether as anæsthetics—these and the names of a long line of famous physicians from the Renaissance down to some as justly famous as the past and with us now to day suffice to certify the inestimable gifts that medicine as empiric has given to suffering mankind. This face of medicine may well wear a garland.

In her other aspect medicine is not an empiric but a scientist. Who will refute me if I assert that medicine is as well an art as a science? Somewhere it is said that woman is the last thing man will ever civilise. So the scientific aspect, the male face of two-visaged medicine, thinks of that female face, the empiric, with whom his lot is linked. He feels sometimes that his other half is the last thing science will ever render wholly rational. By dint of patient toil he improves her practice, showing her a reason now and then. No sooner that than she is off on a fresh flight into the inexplicable and he must cudgel his brains anew to find her a fresh logical position.

That feminine, ever-youthful trait in medicine has to the student an undying charm. But on the whole the countenance of medicine has of recent years for the student become masculinely severe. The masculine head of medicine has indeed become the larger. Hydrocephalic even in appearance, yet is it filled not with water but with reasoned facts. All this development proceeds in the main from certain data acquired in the century just passed. The chemist, in discovering that all the million-sided chemical diversity of the perceptible universe is composed from a few—some 70—substances, therefore called elemental, discovered also that living matter instead of containing elements different from and subtler than those of the dead world, consists of just a few of the commonest of those same ones. Further, the doctrine of the indestructibility of matter was demonstrated in a new form—namely, as the indestructibility of energy, and the convertibility of any one form of energy into other forms. Thus dead and living matter have become united as subject material for study. It became really possible to consider the living body as a chemical and physical machine, a machine to which the laws of chemistry and physics can be applied. But this scientific progress in medicine, fruitful of benefit to the community, lays on the community a burden of obligation.

HISTORICAL SKETCH.

The empirical part of medicine is at once the most easy and the most difficult thing to teach. The preparation for learning it requires but little training in other subjects. Its facts lean on nothing but themselves.

With the scientific part of medicine it is different. That is based upon initiatory studies. Medicine, historically traced, we find first drawing help from the simplest and nearest at hand of these adjuvant studies. First she bent to the study of the gross form of the parts and organs of the body. The gross form of these is significant chiefly where they are machinery for application of mechanical powers. The greater part of the corporeal machinery is, however, not destined for such work, but has its purpose in processes, chemical, thermal, and electrical, to which—marvellous appendage—mentality is adjunct. Medicine in the course of the seventeenth and eighteenth centuries sucked dry for the most part what the study of the gross form of the body's parts could yield her. She then turned to the study of microscopic form—examined what Bichat first named the *tissues*, the fabric of the body. In so doing she came upon a great generalisation, the cell doctrine, discovering an essential and visible similarity of microscopic structure in all that has life, differentiating it from all which has not life.

But even before the advent of the cell theory medicine had begun to ask of chemistry what it could give her. With the discovery of oxygen and of the nature of combustion the links between biology and chemistry began to be tightly drawn. The young Oxford physician, Mayow, had performed the fundamental experiments on respiration and had discovered oxygen more than a century before Priestley and Lavoisier. But the time was not ripe until the stupendous work of Lavoisier had founded modern chemistry. The cell theory was from the first not only morphological but physiological. It meant, for the application of chemistry to biology, that the chemistry of the body or of one of its organs was a chemistry resultant from a thousand tiny living furnaces, individual seats of oxidation, deoxidation, polymerisation, hydrolysis, and what not. Not only that, but the living laboratory of the cell itself manufactures even the medium in which the cells themselves exist: the saps and juices of the body. And we are beginning to know, thanks to pathology, that every species of animal produces an internal medium specific to itself. Further, your distinguished physiologist here, Professor Macallum, who has done so much to reveal the distribution of the chemical elements within the cell, tells us that the internal medium which the cells of even the highest animal forms produce, as appropriate for themselves, still approximates in its salts to the water of the ancient geologic seas in which their ancestry arose and still reveals in fact the composition of that ancient ocean. In that respect these living cells, with all their flux of change, have been more durable and constant even than ocean itself. The contrast brings home to us a deep distinction between dead matter and living—the latter a moving equilibrium, gaining stability from the very motion of itself.

The bonds between medicine and chemistry with Schwann and Pasteur were drawn still tighter by their discoveries concerning those subtle influences named "ferments." Pathology, the study of these processes of the body in disease, even more than physiology as yet has drawn help from this part of modern chemistry. If the processes of health are in fact the resultant of the due coöperation of ten million little foci of healthy chemical action in the body, the processes of disease are similarly divisible and have to be traced to the unhealthiness of certain of these minute centres of activity. How extreme is the importance of chemistry to modern medicine no single statement can perhaps emphasise so well as this—that is, I believe, acknowledged on all hands—that in virtue of his chemistry a chemist, Louis Pasteur, during the latter half of last century was able to do more to alleviate the diseases of mankind and animals than any single physician of his time. To the physicist also medicine has made appeal. From him she has got understanding of the body's heat, the basis of the knowledge of fever; she has learned the intricacies of the mechanism of the eye and refined methods of examining that organ and of remedying many of its defects , the laws that govern the circulation of the blood, and the subtlest means of detecting the forces liberated in the working of the nervous system In some cases as sciences grow, their discoveries seem to sunder them the further one from another In my belief that merely shows they are at the outset of their careers To day we find physics and chemistry converging and conjoining within a field of physical chemistry It early became convenient to have a specific name for living material wherever found The name given was ' protoplasm ' It might have been better to call it ' x " or " y " so far was it in many respects an unknown quantity Instead of looking forward to this material as a chemical entity we incline now to regard it rather as a *field for chemical action satisfying certain particular conditions* Probably discoveries regarding these conditions will fall to the physical chemist, perhaps in a future very near at hand Probably such discoveries will be among the most valuable that medicine has yet received from any source

MEDICAL EDUCATION

I have said enough to remind us how interlocked with science medicine has become She is applying sciences to her own problems and they form a vast capital fund from which she can draw wealth To give instruction in this part of medicine, to turn out men trained in it is now one of the duties of a medical school The earnest student has a right to expect such training from his *alma mater* But for it the requirements are importantly different from those that suffice as an introduction to empiric medicine In the first place as Pasteur said, we cannot have the fruit without the tree For scientific medicine the student must perforce be thoroughly trained in his sciences before he can really grasp instruction or truly profit from his medical *teaching One of the aims* of his instruction in empirical medicine is to teach him to observe for himself So in his instruction in scientific medicine one of its aims is to enable him to apply science for himself How small a fraction of all the realities of medical practice can be met in the few years of preparation of the student in the clinic as he passes through it in his school career His teacher knows that well and uses the cases there as types whereby the principles of medicine can be fixed as a beginning The rest must be accomplished by the man himself as his life's work The more necessary that the man go forth from his school equipped, not only with the present applications of science to disease but so possessed of root principles of the sciences adjunct to medicine that he may grasp and intelligently use the further developments of scientific medicine after he is weaned from his instructors and the school That is a way to obtain enlightened progress in professional practice What truer safeguard can a man have, alone it may be, and

sciences along whose lines the discoveries of medicine must develop ?

BURDEN ON TEACHERS

Therefore it is that the burden of obligation falls heavy nowadays upon the teaching resources of every faculty of medicine worthy of the name There is, in the first place the burden of increased intellectual labour For both the learner and teacher is this true To seize the proffered assistance of these great and complex sciences is not always easy These studies are more difficult than those that were needed once and they take longer to acquire The mere instrumentarium of modern chemistry and physics as applied to medicine, and of physiology and pathology and bacteriology and of hygiene of itself suffices to bring conviction of the increased difficulty and longer training due for these studies now preparatory to medicine Further, these initiatory studies have become vastly more costly than was all that formerly was required Experts have to be found who can devote themselves heart and soul and undividedly to their particular subject Laboratories have to be erected and equipped and on a scale that makes them a distinct feature of the modern world Those that we see now here are models of their kind , wise foresight has planned them , public spirited enterprise has constructed them accordant with that plan Nor does the achievement end with their erection The laboratories and their equipment are but the *factory and the plant , both fail in their purpose if they halt* for sustenance And beyond that the likeness does not go The factory, once started, if it be wanted, can expect to pay, to support itself Not so the laboratory The laboratory is both a school of instruction and a school of thought. Well, no higher instruction can be expected unaided to pay the expenses it involves , it can only do so at the expense of those who come to learn and that is to put its teaching beyond the reach of all but the wealthier few And the instruction is costly for it has to be practical

Another source of expense is that the laboratory has not only to distribute knowledge but to manufacture it The duties of a university do not begin and end with the disciplinary and didactic Besides schools of instruction they must be schools of thought To be this latter the laboratory must pursue research Even for the welfare of the class teaching this is essential Instructive lectures may be given *by men of ability the whole of whose knowledge is second* hand but it is doubtful whether the real life of science can be fully felt and communicated by one who has not himself learnt by direct inquiry from nature Nothing more augments the teacher's power of impressive and incisive teaching of a subject than to have faced problems in it himself as an original inquirer And after rudiments have been once fairly acquired there is for good students no training equal to that given by following even a small research under an experienced leader

SCHOOL OF THOUGHT

So, truly, does the laboratory become a school of thought Your laboratories are arranged with admirable provision for *research The student should enter on his study of a natural* science through the portal of its fundamental experiments The attitude his mind thus takes is the true one—the only true one—for further insight into the subject Too often humanistic studies at school have tended to kill the natural philosopher within the child—to destroy that innate curiosity for facts the healthy heritage of childhood He leaves school a little bookman Even as to the phenomena of nature he has been insensibly led to ask for statements upon authority rather than to turn his own senses and observation to the phenomena themselves To learn a science or to acquire an art resting upon sciences the first thing to do is to look at the fundamental facts for ourselves Our great teachers of medicine teach upon this plan They teach where they learned not in the library, but at the bedside of the sick In laboratories such as those raised here for pathology and physiology students can learn these sciences as medicine is learned in the hospital ward by direct inquiry into nature The teachers you give them are men who have won widely recognised distinction as themselves direct inquirers into *nature* Worthy students will appreciate this double boon their *alma mater* gives them—the means of learning at first hand those secrets of nature which lie at the root of their craft's skill and to learn them under guidance by men who excel in unravelling such secrets

ENGLISH ACTION

Only by enabling men to continue their learning after their teaching is over can we secure the greatest advantage any educational system can afford Your laboratories here will encourage post graduate work We look with keen interest to the researches that will flow from them No subjects offer finer fields for research than do the progressive studies, physiology pathology and hygiene, to which your new University buildings are *consecrated And of the functions* of a laboratory, research is not the least costly We in the old country find that Our central Government has done little to support research Our nation proud of its success in things practical, has been prone to despise the abstract and the theoretical We do so foolishly , we do so at our peril Behind all practical application there is a region of intellectual action to which though our practical men have contributed little they owe the whole of their supplies Theory if a goose is the goose of the fairy tale that lays the golden eggs No more such eggs if once you let her die To speak of theoretical knowledge slightingly is for the lips of the fool. The value of abstract research to a country is becoming more widely acknowledged among us than it was Sir John Brunner said the other day at Liverpool that there was no better investment for a business man than the encouragement of scientific research and that every penny of the wealth he possesses has come from the application of science to commerce and to manufacture And we find that munificent citizens have and do come forward among us and *meet* by their individual gifts the pressing needs in this respect of our community at large

NEW ERA DAWNING.

But we welcome a new era dawning on us. Liverpool, Birmingham, Sheffield, and other great centres begin to regard the local university as an institution entitled to support from the public means—for instance, by subsidy from public rates. Such subsidies can be used also for studies which do not come within allotment from the smaller subsidy from the central Government—medicine, for instance. Proud of the young universities—to which yours of Toronto is a time-honoured veteran—communities and local governments are encouraging research within our universities. They do not expect such research to be able to pay its own way, but they recognise that indirectly it does pay the community that gives it a home. They feel it a duty which they owe themselves. Is not the university a part of their own life, and is not research a part of the university's life blood? They feel it a right due to their own higher selves. It stimulates progress. Supported by the large-handed sympathy of the community and the local government, it means quicker advance, both material and mental, it means invention, and it means medical discovery. And *qui facit per alium facit per se* is a motto worthy of a State.

USES OF LABORATORIES.

What, then, are finally the uses of these laboratories now opened by your University? They will assist in training men for various honourable callings, especially for that most ancient one of medicine. They will assist, no doubt, also to render life by practical applications of science superficially still more different from what it was only a short generation ago. They will assist to bring home and to distribute to your community treasures of knowledge from all the quarters of the globe. They will themselves assist—and it is a thought dear to a high-spirited people—to add to the sum total of the treasures of knowledge of the whole human race. "Noblesse oblige" appeals to chivalrous nations as well as to chivalrous individuals.

But their highest office seems to me, perhaps, not even these high ones but a more difficult still. Genius cannot by any community, however wealthy and powerful, be made to order. In biblical language it is the gift of God. All a community can do toward obtaining it, be our riches and willingness a thousandfold what they are, is to ensure the rare and glorious plant a meed of freedom, light, and warmth for blossoming upon our soil. Who can doubt that in this population here genius exists—not sown, it is true, broadcast, for nowhere is it thus—yet existent, scattered up and down? This it is for the community to foster, to discover. By help of these finely built and complete laboratories this much in one direction can be done. The problem to which a wise country turns is the discovery less of things than of men. By these laboratories, adequately supported, your community can create opportunity for the exercise of powers which come from sources within itself but are utterly beyond its power to produce at will. Their loftiest function is creation of this opportunity. For that aim the studies in them must be followed with no single narrow technical purpose but must be wide of scope and full of access to every rank of student. So shall these laboratories prove a corner-stone for the upbuilding of a temple of knowledge and a touchstone for the best ore of intellect within the bounds of this great land.

CHARING CROSS HOSPITAL. — On Thursday, Dec. 10th, a dance will take place at the Whitehall Rooms of the Hôtel Métropole, under the patronage of Princess Louise, the Duchess of Argyll, President of the Hospital, the Duchess of Devonshire, the Duchess of Sutherland, the Duchess of Marlborough, and the Duchess of Portland, with the object of raising a fund for the renewal of the floors of the old wards of Charing Cross Hospital. The music will be supplied by the string band of the Royal Engineers.

MOUNT VERNON HOSPITAL FOR CONSUMPTION.—On Oct. 27th Lord Zetland, President of the hospital, formally opened the newly erected east wing. This hospital, which is situated on Hampstead Heath, contains 145 beds. The present extension has been erected at a cost of £16 000 and the cost of the whole building amounts to £43,500, or £300 a bed. Of the 45 beds provided in the new wing the committee does not feel justified in opening more than 25 at present as it still needs a sum of £10,000 to defray the cost of the extension, furnishing, and other charges.

The Bradshaw Lecture

ENTITLED

SOME OBSERVATIONS ON TUBERCULOSIS OF THE NERVOUS SYSTEM.

Delivered at the Royal College of Physicians of London on Nov. 5th, 1903,

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MR. PRESIDENT AND GENTLEMEN,—My first duty is to acknowledge the honour done to me in asking me to give this lecture and to express the hope that I may prove worthy of it. I propose to address my remarks (1) to the forms which the tuberculous infection may assume in the nervous system; (2) to the mode of infection of the brain and meninges; (3) to some points in diagnosis connected with spinal puncture; and (4) to the possibility of recovery. I have to express my obligations to my colleagues on the staff of the Leeds General Infirmary for permission to use the records of 114 fatal cases which have occurred during the past 20 years in that institution. I must also thank Dr. Ursula Chaplin for much able help in laboratory work. To Professor S. Delépine and Professor G. Sims Woodhead, Mr. G. Dean of the Jenner Institute, and Dr. Steegmann of the Royal Commission on Tuberculosis I am indebted for some virulent cultures of the tubercle bacillus and to the last named also for valuable references.

FORMS WHICH THE TUBERCULOUS INFECTION MAY ASSUME IN THE NERVOUS SYSTEM.

The various forms of tuberculosis of the nervous system consist of tuberculosis of the dura mater, tuberculous meningitis in its more general and limited forms, tuberculous masses in the brain and cord, and a possible miliary tuberculosis of the brain itself. An old question mentioned by Rilliet and Barthez[1] many years ago has been much discussed lately as to whether it is possible to have a tuberculous meningitis without the presence of tubercles, or at any rate with only a minimal tubercle formation. Such an affection has been compared to certain benign tuberculous affections of joints and serous membranes and the name of tuberculous meningopathy has been suggested to distinguish it from the ordinary fatal form of tuberculous meningitis. Poncet,[2] Patel,[3] Sepet,[4] and Galliard[5] are the chief exponents of this view and the subject has been well summarised by Bouclier[6] in a recent Lyons thesis. Among the 114 fatal cases at the Leeds General Infirmary there are 14 in which thickening or exudation is noted at the base of the brain without visible tubercles. Cerebral symptoms were present before death in 12 of these cases and abundant tuberculous lesions elsewhere in the body in all. I think it is fair to conclude that tubercle formation was at its minimum or even absent, at any rate in some of these cases, and that the changes noted were a manifestation of the tuberculous infection and were responsible for the symptoms. It has been suggested that the poisons of the tubercle bacillus may cause this more exudative or serous form of meningitis. Armand Delille has separated a poison which produced in his experiments productive tissue changes. On the other hand, the poisons of the tubercle bacilli injected intrameningeally may cause rapid death, as in Martin and Vandreuver's experiments.[7] Sicard[8] states that the tubercle bacillus and *its toxin* can produce exudation and granulations. In three instances of intrameningeal injection of measured quantities of tuberculin I found no local effects but progressive wasting ending in one guinea-pig in death. More information is obviously wanted about this benign form of tuberculous [illegible]

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[1] Rilliet and Barth [illegible] 1854.
[2] Poncet: Bulletin [illegible] 1902.
[3] Patel: Gazette [illegible] 902.
[4] Sepet: Médecine Moderne, 1902.
[5] Galliard: Société Médicale des Hôpitaux, 1902.
[6] Bouclier: Thèse de Lyon, 1902.
[7] Martin and Vandreuver: Société de Biologie, 1898.
[8] Sicard: Ibid., 1898.

[illegible] us meningitis the [illegible] ch cases have been recorded by Saenger[9] and in one case in my list the lesion was limited to one Sylvian fissure. But the limited meningitis described by French authorities (Chantemesse,[10] Combe,[11] Monnier,[12] and others) consists of a great thickening with tubercle formation over a limited portion usually of the motor cortex. It is said to occur in phthisis and its symptoms, as Combe points out, differ from those of ordinary tuberculous meningitis. There are nine cases in my series in which such localised thickening over a limited area of the cortex was noted. The most marked case was in a boy, aged seven years. The plaque occurred over Broca's convolution and difficulty in speech was noted during life. In this case there were miliary tubercles in the lung and in three other cases phthisis. This localised lesion may be produced experimentally (Sicard) and I have myself seen an instance of it.

Tuberculous masses in the brain are not infrequent. They were present in 33 of the 114 cases. In 15 they appeared to be recent and but little antecedent to the existing meningitis. In only 17 of the 33 cases were they multiple, a smaller proportion than usual. The largest number present in one case was four. In Middleton's case[13] there were 20, in Homen's case 12,[14] in West's case 12,[15] and in Henoch's case 12.[16] In size they vary from that of a millet seed to that of an orange and larger. They are mostly well defined and shell out with ease. Minute tubercles are often visible in the bed and on their surface, making recognition easy. They are often surrounded by an area of vascular engorgement but as a rule there is no definite capsule. They vary in consistency and when laid open display a yellowish and caseating centre and a peripheral growing zone made up of recent tuberculous tissue. Tubercle bacilli may or may not be found in this peripheral zone. As a rule, these masses show little tendency to break down and still less to calcify. They develop mostly in the grey matter and when they are situated more deeply they are often in relation with a process of the pia mater. Their favourite sites are the cerebellum, the pons, the crura, the cortex, and the central ganglia. Except in the pons, the medulla, and the cord, where they are usually surrounded by nervous tissue, they most often project on to the surface. The infection of the cerebro-spinal fluid is thus easily brought about as Ziegler[17] points out. Tuberculous tumours, indeed, sometimes give rise to no symptoms until this infection occurs. In 23 of my 33 cases there was present a tuberculous meningitis. In one of the cases there was a loose tuberculous tumour in the fourth ventricle. I have seen a section prepared from it by our pathological curator, Mr. J. A. Cairns Forsyth, and although there are no giant cells in the peripheral zone and no tubercle bacilli have been found, I do not doubt its nature. There were other tuberculous lesions in the body. Tuberculous tumours of the spinal cord are not common. Dr A. G Barrs had this drawing made of one and I have brought another specimen. It came from a child, aged three years, and there were other similar masses in the brain. Auiel and Rabot,[18] Müller,[19] Luce,[20] Gourand,[21] and Hunter[22] have recently related interesting cases of these tumours of the spinal cord.

In one of my cases an abscess possibly tuberculous was found in the pons along with tuberculous masses in the brain. Delafield and Prudden[23] state that these tuberculous masses may break down into abscesses There is at present a beautiful specimen on view in St. George's Hospital museum, which shows multiple tuberculous masses breaking down into abscesses containing tubercle bacilli. The relatively rare tuberculous tumours of the dura mater are nearly invariably multiple and grow from its inner vascular surface in the posterior fossa or from the falx cerebelli. One of the two specimens from our museum came from a child, aged six years, with tuberculous cavities in the lungs, caseous bronchial and mesenteric glands, and intestinal ulceration. Miliary tubercles of the dura mater were noted twice, once by Dr. T. Wardrop Griffith, to whom I am indebted for many valuable comments upon the necropsies made by him.

MODE OF INFECTION OF THE BRAIN AND MENINGES.

It is admitted that a complete examination almost invariably reveals an older tuberculous focus somewhere in the body. In only six of my cases was no such focus found and here the notes are incomplete. Under congenital tuberculosis I need only refer to Demme's well-known and unique case[24] of a tuberculous cerebellar tumour in an infant, aged 23 days. If our knowledge of the infection of the meninges and brain were at all complete, which is by no means the case, we should know where the infecting focus is, what brings about the mobilisation of the tubercle bacillus from it, what channels the bacillus travels by, and what determines its settling down in any given area in the brain. The actual infecting focus may exceptionally be small and easily overlooked and it is obvious that the oldest lesion is not necessarily the infecting one.

A direct infection through the nose is believed to be possible, as in Demme's case quoted by Cornet.[25] A spread from tuberculous disease of the ear may take place; it is not quite direct because the ear would appear to be infected through the lymphoid tissue of the nasopharynx. Some recent experiments and observations tend, however, to show that the tonsils and the lymphoid tissue in the nasopharynx do not contain tubercle bacilli (at least virulent bacilli) as often as has been urged (Macfadyen and Macconkey[26] and Ito[27]). Grimmer,[28] who has worked at the subject, puts down tuberculosis as the cause of middle-ear disease in from 65 to 70 per cent. in children under five years and 16 per cent. above that age. There was obvious ear disease in ten of my 114 cases which were mostly admitted under the care of Mr. H. Secker Walker and Mr. A. L. Whitehead. Although the ear disease was not proved to be tuberculous it is interesting to note that in seven of these cases there was another old possibly infecting focus in the body and in another two the state of the glands is not noted. Experimentally I believe that it is very difficult to infect the brain and meninges through the accessory cavities. Again, in spinal caries I take it that a general tuberculous meningitis is of infrequent occurrence. There are only four such cases in my series. In two the organs are said to be normal, in one the mesenteric glands are said to be enlarged, and in the other the glands are not noted at all. Miliary tubercles on the inner surface of the dura mater were noted in one case. In Dr. T. Churton's case of a large tuberculous tumour in the frontal lobes the spread from the bone to the dura mater and the brain seemed obvious, unlike a rather similar case recorded by Curtis and Booth[29] where the spread was said to be from within. Poli[30] suggests that the dura mater forms an important barrier against the spread from a neighbouring focus. In a single experiment devised to test this view I quite failed to confirm it.

The lungs were normal in 28 cases. It has been proved (as stated by Boinet[31]) that tubercle bacilli may pass through the lungs without leaving an obvious recognisable lesion. A miliary tuberculosis of the lungs was noted in 54 cases. 18 cases presented the lesions of phthisis, together with a miliary lesion in nine of them. Phthisis is said to be the most common cause of tuberculous meningitis in the adult. Personally I have had very little experience of this complication in obvious phthisis, although during the past four years I have had the opportunity of watching the course of phthisis in a considerable number of cases in connexion with the Leeds Tuberculosis Association. One case which I saw with Mr. B Wainman I have reason to remember as I failed to assign the quite early vomiting to its proper cause. Among the cases of phthisis there was a child, aged six years, with one large cavity and several small ones. There are four other cases in children with recent cavitation which are not classed as phthisis.

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[9] Sa [illegible]

[12] [illegible]

[15] [illegible]

[16] [illegible]

[19] M [illegible]

[20] [illegible]

[22] Hunter: Brain, 1902.

[23] Delafield and Prudden: Pathological Anatomy, 1902.

[illegible]

Joints and bones were affected in 23 out of the 114 cases—viz., the hip in 13, the ankle in three, the knee, the elbow, and the wrist each in one case, and in four cases two joints were involved. The hip disease was old in two cases. Recently Courtin and Lourde[32] have described tuberculous meningitis in quite early hip disease. The small amount of tuberculosis noticed in the body in some of these joint cases was striking. The bones affected were the spinal column in four cases and the frontal bone and the ribs each in one case. In four cases the kidneys were the seat of extensive tuberculous disease. It was associated in one case with pulmonary and laryngeal phthisis, in another with hip disease, and in a third with ear disease. The generative organs, no doubt not always examined, are noted as diseased in two cases, once in a man with a tuberculous testis and vas deferens and once in a woman with tuberculous Fallopian tube disease and tuberculous peritonitis. Simmond's statistics[33] show an extraordinarily high percentage. Thus in 60 cases of tuberculous meningitis one-third had genital tuberculosis. 35 of the 60 were men and here one-half were similarly affected. Ordinary tuberculous peritonitis was noted in eight cases and intestinal ulceration, mostly recent, in 28 cases. In another case there was extensive tuberculous ulceration of the colon and the rectum. Widenmann[34] reported a curious case of tuberculous meningitis in a man with primary ulceration of the intestine. In two of my cases there was an abscess about the vermiform appendix.

The relation of the lymphatic glands to tuberculous meningitis is of the first importance but unfortunately my records are distinctly incomplete in this respect. The lymphatic system constitutes a most important defence, especially in the child, against a general tuberculous infection. Manfredi and Fresco have been able to demonstrate even in so susceptible an animal as the guinea-pig the important rôle which the lymphatic glands play. There is a difficulty in connexion with these glands—viz., that they may contain virulent tubercle bacilli and yet appear as healthy to the naked eye. The glands which stand in the most direct relation to tuberculous meningitis are the mediastinal. Haushalter and Fruhinsholz[35] have recently found old and caseating lesions in the pretracheo-bronchial glands in 63 out of 67 cases of tuberculous meningitis. It is a particularly striking fact that in as many as 40 cases (35 with miliary tuberculosis) no old focus was present other than the adenopathy. This close relationship can only be connected with the all-important fact that the lungs constitute the port of entry of the tubercle bacillus in the large majority of these cases. Carrière[36] believes that the mesenteric glands may be the infecting focus in a goodly number of cases of tuberculous meningitis. It should be remembered that the infection of the mesenteric glands in a retrograde fashion from the mediastinal glands is obviously an anatomical possibility. We are obliged to appeal to this retrograde infection to explain some features in the spread of experimental tuberculosis. This mode of infection is more likely to be effective if there is any pressure upon the thoracic duct by enlarged and caseating mediastinal glands.

More puzzling still than some features connected with the infecting focus is the mobilisation of the tubercle bacillus from it. It has been suggested that tuberculin may bring about this effect. Rutimeyer's case[37] of phthisis in which tuberculous meningitis appeared at the close of a course of tuberculin treatment is very suggestive. I am aware that Cornet in his admirable work on tuberculosis will have none of this explanation. Simmonds[38] has seen cases of genital tuberculosis in which tuberculous meningitis ensued within from a few weeks to months after marriage. The occurrence of tuberculous meningitis shortly after an operation is a still more important matter. I have found eight cases of this class among the 114 cases. The interval between the operation and the meningeal infection forcibly reminds one of the incubation period in experimental tuberculosis. This interval has varied from one week to six or seven weeks; at least one case must be excluded as the interval is too short. The operations were upon the cervical glands, the ankle and the hip joints, also a laparotomy, &c. An absolutely satisfactory explanation is not forthcoming. Some have thought that tubercle bacilli have been liberated in the field of operation and have then gained access into the blood current. No doubt this view should receive practical attention. In the parallel case where an early phthisis blazes out after an operation into a fatal activity, of which I have recently seen two cases, one with Dr. Gordon Sharp, an explanation appears to me to be at hand. It may be attributed to an actual inhalation infection of hitherto sound parts of the lung brought about by the deep inspirations caused by the anæsthetic. Rhodonacki[39] has also recently published two cases of a fatal aggravation of the pulmonary lesion after operation. It has been suggested in cases of tuberculous meningitis following rapidly upon injury, as in a recent case by Mollard (quoted by Bouclier[40]), that the actual mechanical concussion may have led to escape of tubercle bacilli from the infecting focus but this explanation is not by any means convincing. There appears to be no satisfactory explanation of the occurrence of the disease at an interval after measles, whooping-cough, &c.

The route by which the bacilli travel from the infecting focus to the meninges or brain is far from satisfactorily worked out. It is either by the blood or the lymphatics. A striking fact in connexion with tuberculous meningitis is the marked alteration in the blood-vessels. In one case under the care of Dr. Barrs the Sylvian artery was blocked. Similar lesions have been recorded by several observers. In Cruchet's case[41] of at least a temporary recovery from tuberculous meningitis there were abundant old tubercles about the posterior cerebral and basilar arteries, the latter being almost occluded. In laying open the branches of the Sylvian arteries in one case I could see tubercles in the vessel walls. Sicard[42] has shown experimentally that the meninges may be infected, though with some difficulty, by injecting tubercle bacilli into the carotid artery; a pulmonary tuberculosis, however, is the common result unless the jugular veins are tied. Cornil, Bezançon, and Griffon[43] have studied the changes in the brain after injecting tubercle bacilli into the carotid artery of rabbits. No bacilli were found in the arterioles but they had multiplied in the perivascular sheaths which were filled with large swollen cells. The process illustrates according to the authors the development of tubercle at the expense of the lymphatic sheath. On the other hand, Sicard states as the result of his investigations that it is impossible to infect the meninges through the lymphatic system. These changes in the vessels, along with the experimental evidence, make it appear almost certain that the tubercle bacilli arrive by way of the blood stream. If they arrive in numbers they produce an ordinary general tuberculous meningitis, if few in numbers or perhaps attenuated they give rise to tuberculous tumours or even a meningitis *en plaque*—viz., an expression of a less virulent infection. Occasionally, and then I think only in the pons, the tuberculous tumour may look as if it had been formed, or was forming, by the coalescence of several foci of infection. Broca and Souques[44] endeavour to explain the frequency of tuberculous tumours in the paracentral lobule (and Dr. Churton[45] some years ago recorded a well-marked case of the kind) by the rich vascular supply and the slowing down of the blood current here. It is curious that the lesions of the ordinary tuberculous meningitis should usually focus themselves chiefly about the middle cerebral artery and its branches, whereas tuberculous tumours are more frequently found in the distribution of the basilar and posterior cerebral arteries.

EXAMINATION OF THE SPINAL FLUID.

Undoubtedly a most important addition to our resources in diagnosis consists in the examination of the cerebro-spinal fluid obtained by Quincke's spinal puncture. During this year I have examined the fluid from five cases of tuberculous meningitis. In one case, that of a boy, aged eight years, in the infirmary, whom I saw by the kindness of Dr. O. M. Chadwick, there was a pleural effusion present when the cerebral symptoms supervened. Ten cubic centimetres of clear fluid were drawn off. It contained a faint cloud of albumin and in the deposit lymphocytes alone were found and no tubercle bacilli. A small quantity of fluid, less than two cubic centimetres, injected subcutaneously tuberculised a guinea-pig. Another case, seen with Mr. H. J. Roper of Leeds, occurred in a boy, aged seven years, who had just passed through an attack of scarlet fever. The urine contained albumin and the vomiting in the very early days suggested a uræmic origin for the symptoms. On the second occasion on which I saw him there was a slight facial paralysis and the nature of the case seemed obvious. The clear spinal fluid contained very *little* albumin; the deposit showed many polymorphonuclear cells but no tubercle bacilli were found. The inoculation test gave a positive result. In a third case, that of a girl, aged four years, whom Mr. Norman Porritt of Huddersfield asked me to see, lymphocytes were present but *no tubercle bacilli were found in the fluid. The inoculation* test also gave a positive result. In another infirmary case the fluid was obtained after death. Albumin was present and lymphocytes were found in the deposit but no tubercle bacilli. A quite recent case occurred in a lad, aged 16 years, whom I saw with Mr. D. McCann and who was transferred to the infirmary under my care. He was punctured at my request by Mr. G. W. Watson, our resident medical officer, on three separate occasions and 15, 35, and 13 cubic centimetres respectively of spinal fluid were drawn off. On the second occasion the pressure (four and a half inches in terms of the fluid) was estimated by Krönig's apparatus. Death occurred about the seventeenth day. There was miliary tuberculosis of the meninges, the peritoneum, and the upper lobe of the left lung. The bronchial glands were caseating and the mesenteric glands were enlarged. *The spinal fluid was clear with a few small flocculi* in it on two occasions and on the third it was more straw-coloured. It was slightly alkaline and contained a considerable amount of albumin (3 per 1000 Esbach). The specific gravity was 1006; the cellular elements were few but consisted solely of lymphocytes. Some of the fluid was incubated at 37° C. after Laugner's method and flocculi were withdrawn from time to time and examined but no tubercle bacilli were found. One cubic centimetre was inoculated upon serum agar and glycerine agar respectively. About 2·5 cubic centimetres were injected subcutaneously, two cubic centimetres intraperitoneally, and about one cubic centimetre intrameningeally into guinea-pigs. Three tests were made with a view of comparing the results, as there has been some discussion about the best method. (As yet there has been insufficient time to obtain results from the *culture and inoculation tests.) The cryoscopic point* was 0·53, as against 1·03 obtained from some hydrocephalic fluid which was in my laboratory. The chlorides (one estimation) were 0·177 per cent. as against 0·223 (five estimations) of [illegible] The permeability test was negative. It [illegible] have never once been able [illegible] the deposit. In four of the five cases lymphocytes were alone found and in one only polymorphonuclear cells. The inoculation test gave a satisfactory result in three out of the four cases and is as yet incomplete in the fourth case. The points of importance in the examination of the spinal fluid are the presence of the tubercle bacillus and lymphocytes in the deposit and the results of the inoculation test. I look upon the cryoscopic and permeability [illegible]

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[32] Courtin and Lourde: Journal de Médecine, 1903.

[33] Simmond [illegible] dicinische Wochenschrift, 1901.

[34] [illegible] barité Annalen. 1899.

[35] [illegible] Archives de Médecine des Enfants, 1902.

[36] Carrière: Gazette des Hôpitaux, 1902.

[37] Rutimeyer: Berliner Klinische Wochenschrift, 1891.

[38] Loc. cit.

[39] Rhodonacki: Brit. Med. Jour., 1902.

[40] Loc. cit.

[41] Cruchet (continuation of Rocaz's case): Revue Neurologique, 1902.

[42] Sicard: Presse Médicale, 1900.

[43] Cornil, Bezançon, and Griffon: Société d'Anatomie, 1898.

[44] Broca and Souques: Ibid., 1891.

[45] Churton: Brit. Med. Jour., 1891.

The finding of [illegible] the deposit is by far the best [illegible] It requires little time. It has given positive results in the hands of various observers up to from half to three-fourths of the cases. I look upon my want of success as a matter of accident. The inoculation test is ve[illegible] delay. Slawyk and [illegible] of four cubic centi[illegible] advises lumbar inoculation as requiring less fluid. No doubt negative results may be due to the use of too small a quantity of fluid but less quantities than those named above have answered my purpose. It is well, however, to be on the *safe side. I take it that, if an acid- and alcohol-fast bacillus* resembling the tubercle bacillus is found in the deposit from the spinal fluid obtained from a case with symptoms of meningitis, the nature of that meningitis is determined even should the inoculation test subsequently give a negative result. Therefore I do not quite see the reason for Chipault's[48] hesitation in certainty of diagnosis in a case subsequently to be referred to. The tubercle bacillus may be cultivated from the spinal fluid. Slawyk and Manacatide recommend the use of a fairly large quantity of the fluid for this purpose. Laugner (quoted by Hellendall[49]) incubates the fluid at 37° C. and in eight days there is a rapid multiplication of the tubercle bacillus. In one of the cases where I tried this method I obtained a considerable streptococcus growth which I looked upon as a terminal infection. Much has been written lately about lymphocytosis in tuberculous meningitis. It certainly badly misled in Rendu and Gerand's case.[50] Nobécourt and Voisin,[51] Simon,[52] and others have found it in cases of tuberculous tumours without meningitis. They look upon it as a sign of irritation of the membranes. If any polymorphonuclear cells are present as well as lymphocytes a differential count should be made as recommended by Achard and Laubry.[53] Leri[54] pointedly *remarks that if the clinical and cyto-diagnosis are not in* agreement the cyto-diagnosis is not always right. This applies to one of my cases though fortunately the inoculation test settled it. The study of the spinal fluid obviously yields results which are of the first importance in the differentiation of the various forms of meningitis. If aspiration is avoided and the fluid allowed to escape slowly there is no danger in it in meningitis and I see no reason why it should not be used as a routine method in suspected cases of these diseases.

RECOVERY FROM TUBERCULOUS AFFECTIONS OF THE NERVOUS SYSTEM.

Very occasionally one has the good fortune to meet with recovery from symptoms of grave organic disease of the brain where a tumour has been suspected and syphilis can with almost certainty be excluded. I have notes of two such cases treated in the Leeds Infirmary and possibly of a third. Recovery is often incomplete, blindness remaining. Some great authorities (such as Gowers[55] and others) say that in tuberculous tumours arrest is not uncommon. Presumably some of the recoveries referred to above may be of this nature. It is therefore interesting to inquire what pathological evidence is forthcoming in favour of this view. In two cases from the records of the Leeds Infirmary with healed phthisis there was in one a nodule in the left lenticular nucleus which Dr. Barrs regarded as a healed tuberculous lesion and in the other a calcareous mass of the size of a pea attached to the dura mater. Sufficient proof as to the exact nature of these lesions is not forthcoming. I have only been able to find in literature a few cases of recovery from tuberculous tumours. In Williamson's case[56] there was a small yellowish mass which had caused Jacksonian epilepsy four years previously, in Ashby's case[57] there was a small cyst with cretaceous walls, in Bristowe's case[58] a hard mass was present in the cerebellum, and in Kahlmeyer's case[59] a cicatrix was found in the cerebellum in a man who had cerebellar symptoms 11 years previously. In the first three cases *there were other masses in the brain* and the patients died from tuberculosis and in the fourth case there was phthisis. The quiescent lesion showed a dense fibrous capsule in the first three cases. Oppenheim[60] says that these tumours may calcify and then become encapsuled, as if encapsulation were, as it probably is, the most important event. Calcification is nearly always a very limited process in the mass and other encephalitic lesions, as Oppenheim points out, may calcify. By the kindness of the authorities of the London Hospital museum I have looked through a relatively large number of tuberculous tumours but I cannot say that I have seen any which could be regarded as definitely healed. The very slender possibility of recovery from a tuberculous tumour is no doubt established by the above-named cases, but, as Ashby[61] well points out, we must set off against this chance *the possible development* of other masses in the brain or

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[46] Slawyk and Manacatide: Berliner Klinische Wochenschrift, 1898.

[47] Hellendall: Deutsche Medicinische Wochenschrift, 1901.

[48] Chipault: Neurologie Chirurgicale.

[49] Loc. cit.

[50] [illegible] Société Médicale des Hôpitaux, 1901.

[52] [illegible]

[53] [illegible]

[58] Bristowe: Brain, 1891.

[59] Kahlmeyer: Berliner Klinische Wochenschrift, 1890.

[60] Oppenheim: *Die Geschwülste des Gehirns*, 1896.

[61] Loc. cit.

the child may die from tuberculous meningitis or other form of tuberculosis.

In considering recovery from tuberculous meningitis a distinction must be drawn between the ordinary more generalised form and the limited meningitis *en plaque.* Monnier[62] and others strongly recommend operation for the latter when there are localising symptoms. Gee,[63] in his article on Tuberculous Meningitis, in 1868 graphically described recovery as a matter of science. Many great clinicians have related cases of recovery but up to recently the absolute proof was wanting unless the patient died later, when anatomical demonstration of the healed lesion was provided (Rilliet, Politzer, Barth,[64] Cadet de Gassicourt,[65] Carrington,[66] and others, and more recently Jannsen[67] and Rocaz and Cruchet[68]). Another proof, but not so satisfactory, is the presence of choroidal tubercles controlled by a skilled ophthalmologist (Dujardin-Beaumetz[69] and more recently Thomalla[70]). The presence of an unmistakeable tuberculous lesion such as phthisis elsewhere in the body, as occurred in the cases of Ouffier (quoted by Chantemesse[71]) and Chappet (quoted by Bouclier[72]), makes the diagnosis almost certain. Mr. E. Ward had a case in the Leeds Infirmary with tuberculous disease of the ankle in which the symptoms of meningitis developed. The child recovered, though unfortunately blind, and is still living.

Bacteriological proof of the nature of the meningitis has been provided in the cases of recovery recorded by Freyhan,[73] Henkel,[74] K. Barth,[75] Gross,[76] and Winkler and Gohl (quoted by Chipault[77]). Tubercle bacilli were found in the spinal fluid in all these cases. The diagnosis in the cases of Rocaz (subsequently anatomically proved by Cruchet[78]), Mottard (quoted by Bouclier[79]), and Sepet,[80] rests on the Courmont-Arloing serum reaction, the value of which is not by any means universally accepted. In his Bordeaux Thesis, 1903, Parrenin states that in October, 1902, the cases of Thomalla, Henkel and Barth were living and well, but that Gross's case had early phthisis; Freyhan's case was quite well when last heard of in 1899.

In inquiring under what conditions recovery has taken place it is only necessary to mention large doses of iodide of potassium, creasote, &c., without confounding cause and effect. Spinal puncture, though possibly of value in a simple meningitis (Hirsch[81]) is of quite doubtful utility in tuberculous meningitis. In the cases of Freyhan, Barth, and of Winkler and Gohl puncture was performed once in each, whereas in the cases of Henkel and Gross the puncture was repeated three times. Chipault[82] is inclined to attribute some value to it, but only a small quantity of fluid was drawn off in the case to which he refers. In Gross's case the patient felt much relieved after it. In my case referred to above, where three punctures were made, 63 cubic centimetres of fluid in all were drawn off but with no real effect. Excess of fluid is not responsible for all the threatening symptoms in tuberculous meningitis, as Peron[83] points out in his experimental investigations. Experimentally Martin[84] noted an improvement in a rabbit after withdrawing two cubic centimetres of fluid but it was only temporary. Some of my experiments were made with this object but mostly very little fluid was found. Operations have been undertaken for the relief of this disease by Lannelongue and Keen, quoted by Barlow,[85] Ord and Waterhouse,[86] Parkin,[87] Paget, Kendal Franks,[88] and others. A case under the care of Dr. Churton and Mr. A. W. Mayo Robson[89] has been quoted by some authorities as a possible recovery from tuberculous meningitis, although neither of these authors described it as such. I was resident medical officer at the time this girl was in the Leeds Infirmary and she attended my out-patient room with epilepsy for several years previously to her death which occurred last year. She was trephined on account of focal symptoms which it was thought might be due to abscess secondary to ear disease. The case was obscure and occurred during the influenza epidemic of 1889-90 In her subsequent history she contracted syphilis but never showed any manifestation of tuberculosis.

Notwithstanding the above-mentioned remarkable recoveries from severe tuberculous meningitis, the prognosis must still be looked upon for practical purposes as hopeless. If a benign type of disease really exists systematic examination of spinal fluid should bring it to light. With such a prognosis before us prophylaxis is worthy of the closest attention. The danger which a careless phthisical patient is in his own home has been placed beyond doubt (Cornet,[90] Coates,[91] and others). This danger specially menaces susceptible young children who crawl about the floor stirring up infected dust. The tubercle bacillus is inhaled and a potential infecting focus is established in the bronchial glands. *Dieudonné*[92] has actually found tubercle bacilli on the hands of children in phthisical homes. Clinical evidence has also furnished some striking examples (Variot[93] and others) in the same direction. The notification of phthisis with disinfection and the isolation in special hospitals of confirmed and careless consumptives (especially if there are young children in their houses) are indispensable steps in the prevention of tuberculous meningitis and general tuberculsis. I am glad to say that we are about to open a hospital of this kind in the centre from which I come.

The old adage that "prevention is better than cure" was never truer than in the case of acute miliary tuberculosis and tuberculous meningitis.

Presidential Address

ON

THE RELATIONS OF OPHTHALMOLOGY TO GENERAL MEDICINE AND SURGERY AND TO PUBLIC HEALTH.

Delivered before the Ophthalmological Society of the United Kingdom on Oct. 29th, 1903,

BY JOHN TWEEDY, F.R.C.S. ENG.,
PROFESSOR OF OPHTHALMIC MEDICINE AND SURGERY, UNIVERSITY COLLEGE, LONDON.

GENTLEMEN,—My first duty on occupying this position is to thank you for the great honour which you have conferred upon me by electing me President of this society. No one knows better than I that I owe this mark of distinction to your indulgent favour and not to any services which I have rendered, or can render, to the society. Be this as it may, I am deeply sensible that without your sympathy and goodwill it will be impossible for me to perform with any degree of efficiency the duties which you have intrusted to me. And I will at once put your compliancy to the proof. Upon my election I was somewhat disconcerted to find that it had been an unbroken custom of this society that the newly elected President should deliver an address. To the subtle suggestion that the time was come for establishing a precedent by omitting the address on this occasion our surgical secretary gently hinted that public opinion was not yet ripe for this new departure. Nevertheless, wishing to spare you the infliction of an address I at first thought that it might not be amiss if I culled some of the choicer thoughts from the addresses of past Presidents; but on reflection I thought it was scarcely fair to take these gems of thought from their logical context and from their literary settings At length a better alternative suggested itself—namely, that I should exhort all the members of the society to read or to re read for themselves *all* the addresses of my predecessors And indeed, seriously and in all earnestness this is what I do recommend There you will find some of the best thoughts of some of the wisest and most thoughtful men of our profession—Bowman, Hutchinson, Hulke Hughlings Jackson, Power, Argyll Robertson, Nettleship, Swanzy, Critchett and last in the order of time but not of merit, the late Dr D Little of Manchester The mere enumeration of these names at once awakens agreeable and even hallowed memories and intimates the high character, purpose, and mission of the Ophthalmological Society Among the past Presidents have been men not only foremost as ophthalmic surgeons in the three divisions of the kingdom but also two of the ablest and most accomplished of the general surgeons in this country, at least two who, in addition to their eminence as surgeons, enjoyed a considerable reputation as physiologists and one who stands almost pre eminent not only in this country but throughout the whole medical world as a philosopher and physician The presidency of Dr Hughlings Jackson must always be remembered as one of the most critical and significant events in the history of this society and I venture to hope that in the near future another physician, not, perhaps, of Dr Jackson's supreme merit—that is scarcely possible—but another physician, whether general or neurological, will succeed to this office The various qualifications of the several Presidents of this society afford striking proof of a catholicity of opinion and liberality of corporate constitution which I hope will never be materially altered, limited, or abridged

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[62] Loc. cit.

[63] Gee: Reynolds's System of Medicine, 1868.

[64] Barth: Société d'Anatomie, 1879.

[65] Cadet de Gassicourt: Revue Mensuelle des Maladies de l'Enfance, 1884

[66] Carrington: Transactions of the Pathological Society, 1887.

[67] Jannsen: Deutsche Medicinische Wochenschrift, 1896.

[68] Loc. cit.

[69] Dujardin-Beaumetz: L'Union Médicale, 1879.

[70] Thomalla: Berliner Klinische Wochenschrift, 1902.

[71] Loc. cit.

[72] Loc. cit.

[73] Freyhan: Deutsche Medicinische Wochenschrift, 1894.

[74] Henkel: Munchener Medicinische Wochenschrift, 1900.

[75] K. Barth: Ibid., 1902.

[76] Gross: Berliner Klinische Wochenschrift, 1902.

[77] Loc. cit.

[78] Loc. cit.

[79] Loc. cit.

[80] Loc. cit.

[81] Hirsch: Wiener Klinische Rundschau, 1900.

[82] Loc. cit.

[83] Peron: Archives Générales de Médecine, 1898.

[84] Martin: Société de Biologie, 1898.

[85] Barlow: Clifford Allbutt's System of Medicine, vol. vii.

[86] Ord and Waterhouse: THE LANCET, March 10th, 1894, p. 597.

[87] Parkin: THE LANCET, July 1st, 1893, p. 21.

[88] Kendal Franks: Brit. Med. Jour., vol ii., 1890.

[89] Mayo Robson: Ibid., vol. ii., 1890.

[90] *Loc. cit.*

[91] Coates: Victoria Thesis, 1901.

[92] Dieudonné: Munchener Medicinische Wochenschrift, 1901.

[93] Variot: Médecine Moderne, 1903.

I may, perhaps, venture to remind the younger members that this society was formed 23 years ago by a small body of earnest men who were interested in the study and investigation of diseases of the eye, not merely as local affections but also in their relations to general disease and more particularly to disease of the cerebro spinal system These colleagues comprised ophthalmic surgeons, general surgeons, general physicians, and neurologists, and also physiologists to whom the eye must always be not only an interesting object of study but one of the most important avenues of knowledge I trust that the society will never lose the impress of its early constitution and of its primary intention and endeavour Soon will devolve upon the younger members of this society the duty of preserving and perpetuating the honourable traditions of the society unsullied and unimpaired During the 23 years which have elapsed since the formation of this society many of the original members have already passed away, the last to leave us being one who was teacher, colleague, and friend to many here—George Lawson—of whom it may be well and truly said —He was an upright man and one who feared God In the course of nature few of those of us who still remain will survive another period of 23 years Other times will bring other men and, perhaps, other ideas and other aspirations In the growing complexity of social and professional relations temptations may present themselves to narrow the scope of the operations of the society These temptations will, I hope be strenuously withstood, not only by the enlightened policy of those who practise as ophthalmic surgeons but by the controlling influence of those general physicians and general surgeons whom it is hoped the society will never cease to attract

Specialism, however, there must be In the evolution of thought, in the increasing differentiation of social and economic functions, and in the consequent subdivision of labour, the growth of specialism is inevitable, and indeed necessary The increase of knowledge, the elaboration of the means and methods of investigation, the more minute *differentia* of disease and diagnosis, and the complexity and potency for good or for evil of modern therapeutics, whether pharmaceutical or surgical must eventuate in a specialisation of knowledge and in specialism in practice This tendency is observable in the whole world of thought and action, in philosophy no less than in physiology, in politics and in economics, in architecture and in engineering no less than in medicine and surgery, but it behoves the more enlightened members of our profession to take care that our specialisation shall be the legitimate and reasoned outcome of the growth of knowledge, the separation, as it were of a subject in order to develop it to the utmost. More than any other specialty ophthalmology should be rational and rest upon the sure and firm basis of a wide and thorough general and professional knowledge When we consider the importance of diseases of the eye, their incapacitating character, their grave economic effects and when we observe the enormous difference between skilful and unskilful treatment it must be obvious that the ophthalmic surgeon for the efficient discharge of his duties needs a good mental equipment, great intellectual and physical resources, and a sound professional training He needs the *courage and the dexterity of the* surgeon combined with the learning and acumen of the physician Doubtless there are few of us who even approach this ideal But no one who does not keep this ideal standard of requirement constantly in view can be regarded as fulfilling his whole duty, either as an ophthalmic surgeon or as a good citizen

The exigencies of modern life preclude most of those who practise as ophthalmic surgeons from also engaging in the actual practice of so-called general medicine and surgery, but we may all keep in intellectual touch with the developments of modern medicine and with the general progress of pathological knowledge and all that this implies Ophthalmology is a subject at once so fascinating and so complex that there is always a danger that those who are attracted by it may specialise too soon and specialise too much I fear that there is even within the ranks of the profession, and still more outside professional ranks, an undesirable disposition to split up practical ophthalmology into two parts, the optical and medico surgical This disposition ought, I think, to be jealously resisted, not only in the interests of our Art but in the interests of the public health The eye is not as the mere optician is too apt to consider, only an optical instrument, it is a living organism, made up of the most elaborate and most highly differentiated structures in the body, in intimate and constant relation with the cerebro spinal system, the blood vessels, the lymphatics, and the other organic systems of the body, living the life of the whole body, observing its modes of nutrition, participating in its diseases, and responding to its various pathological manifestations No one, then, can safely or intelligently deal with even the optical defects of the eye unless he has an adequate knowledge not merely of the structure and diseases of the eye but of the various relations of the eye to the whole organism.

It is a maxim of English law that every accused person shall be deemed innocent till he has been proved guilty Now, in practical medicine we adopt, or ought to adopt, a maxim the reverse of this Every organ should be considered unsound till it has been proved to be healthy And of no organ is this so true as of the eye We owe it, then, to ourselves, we owe it to this society, we owe it to the public to maintain and to proclaim *hic et ubique* that ophthalmology is one and indivisible, an integral and essential part of the Science and Art of Medicine

Gentlemen, this society has hitherto maintained a high ideal of knowledge, of technical skill and of professional achievement I would fain hope that this ideal will never be lowered or tarnished, that with increase of years the society may increase in numbers, in importance, and in influence, and that after the lapse of another 23 years it will have attained a position in professional and public esteem even higher than that which it occupies to day

SOME POINTS IN THE OPERATIVE TREATMENT OF TUBERCULOUS DISEASE OF THE KNEE-JOINT.

By K W MONSARRAT, M B, C M, F R C S EDIN,

SURGEON TO THE NORTHERN HOSPITAL LIVERPOOL.

DURING the last three years of the cases of tuberculous disease of the knee joint which I have had under observation I have had occasion to operate on some 14 Of these I have been able to follow the subsequent history in 11 and to estimate the result of the operative procedure I wish to make these cases the subject of some remarks relative to one or two points in the operative treatment of the condition The extent and localisation of the disease present in these cases when first seen are shown in Table I

A summary of the table shows in three cases synovial membrane alone, in two cases synovial membrane, capsule, and ligaments; in one case synovial membrane, with ulceration of the cartilage; in two cases femoral epiphysis alone; in two cases femur, tibia, capsule, and synovial membrane; and in one case tibia, patella, synovial membrane, ulceration of femoral cartilage and capsule. In six cases the disease was primarily synovial and in five cases it was primarily osseous. This proportion is not representative according to some surgeons whose experience of the disease has been large.

TABLE I.

No. of case.	Disease present when first seen.
1	Internal condyle of the femur, internal tuberosity of the tibia, synovial membrane.
2	Internal condyle of the femur.
3	External condyle, outer tuberosity of the tibia, synovial membrane.
4	Synovial membrane, erosion of cartilage covering the femur.
5	Synovial membrane.
6	Synovial membrane.
7	Synovial membrane, fibrous capsule, and ligaments.
8	Outer tuberosity of the tibia, patella, synovial membrane, capsule, and femoral cartilage.
9	Synovial membrane, capsule, and ligaments.
10	Outer part of the lower femoral epiphysis.
11	Synovial membrane.

Mr. Rushton Parker in his article in the "International Textbook of Surgery" says "practically always the primary focus is in the bones"; Mr. W. Watson Cheyne says the primary centre occurs "probably more frequently in the bone"; Mr. A. E. Barker says "in the very young the femur is most frequently the starting point, next the tibia, then the synovial membrane, lastly the patella; the older the patient the greater the probability of the synovial membrane being first affected." Whatever the actual proportion may be it is plain that in a large number of cases arthritis is secondary to osteomyelitis. It is in connexion with this that I wish to make the first point of my remarks—the great importance of the early recognition of tuberculous foci in the neighbourhood of the lower epiphysis of the femur and the great value of early surgical interference dealing with it. In Cases 2 and 10 this was the limit of the disease when first seen and I will briefly relate the history of each.

CASE 2.—The patient, a boy, aged three years, was brought to hospital in February, 1900. In the previous September the mother noticed that the right "knee" was swollen although the child complained only occasionally of slight pain. When examined the whole of the lower end of the femur was enlarged, particularly that part corresponding to the internal condyle. Pressure over the front of the condyle caused considerable pain. The depressions around the patella and the general outlines of the joint were normal. The diagnosis was tuberculous osteomyelitis in the lower femoral epiphysis The limb was fixed on a Thomas's knee-splint of the ordinary pattern and the child attended the hospital as an out-patient but irregularly until the following November. The condition appeared to improve for a time, at any rate, and his symptoms became quiescent, but before admission in November the disease had insidiously invaded the joint. On Nov. 29th I performed an arthrectomy and found an irregular cavity in the internal condyle of the femur communicating with the joint and collateral destruction of the cartilage covering the inner tuberosity of the tibia; the synovial membrane was but little affected. The bone disease was removed with the spoon and the surface of the cavity was rubbed with liquefied carbolic acid; the synovial membrane was also removed by dissection. Two months later it was necessary again to open the joint; unhealthy granulation tissue was removed from the cavity in the internal condyle and carbolic acid was again used. The result—fibrous ankylosis—was satisfactory. The child developed tuberculous vertebral disease later from which he has also recovered.

CASE 10.—The patient, a boy, aged four years, was admitted to hospital on June 4th, 1902. For about a month he had complained of pain in his knee and the mother had noticed swelling for the same period. On admission the lower extremity of the right femur was enlarged, particularly the outer condyle; it was tender on handling and the skin covering it had a glazed appearance. The child was well nourished and had a healthy appearance. I decided to temporise and fixed the limb in plaster. By the end of three months it was evident that the disease was not quiescent, although the joint remained unaffected. I therefore decided to attack the disease in the epiphysis and did so on Sept. 20th. Some weeks after primary healing I removed some unhealthy granulation tissue by reopening the wound. The present condition is satisfactory and the joint remains sound and unaffected.

This case supplies a suitable commentary on the first. Had I in the first attacked the disease at once when it was confined to the epiphysis the child might now have a moveable instead of an ankylosed joint. I think it is sound surgery to deal with such a focus as soon as the diagnosis is clear without any temporising or treatment by rest and for the following two reasons: (1) it is difficult to estimate in any given case how near to the joint the disease has encroached and a short delay may just make the difference between escape and involvement of the joint; and (2) the focus is as a rule accessible and can be thoroughly dealt with.

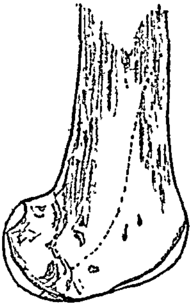
The recognition of this condition of tuberculous epiphysitis is simple: the symptoms being enlargement of the femoral extremity usually chiefly affecting the inner part, with some swelling of the overlying soft parts; complaint of dull aching pain; tenderness on handling or percussing the epiphysis and a normal distinctness of the para-patellar depressions. Passive movement of the joint is at the same time either unattended by pain or causes this to only a slight degree. I ask the question whether treatment by rest and general hygienic measures is not attended by unfortunate results in a considerable number of cases similar to the above. The indications for early operative treatment in a tuberculous focus of this situation differ from the indications for such interference when the disease is in the neighbourhood of the upper epiphyseal line, the difference being chiefly due to anatomical considerations. The tuberculous focus in the neck of the femur can in most cases be reached only through the joint, though cases are on record where such a focus has been reached and eradicated through the great trochanter. On the other hand, the focus in the neighbourhood of the lower growing line is accessible without encroaching on the joint and favourably situated in regard to drainage, though perhaps in most cases the latter will not be called for.

Amongst hospital patients it is, unfortunately, the exception to meet with these cases before the joint is infected and Table I. illustrates the fact. This, no doubt, is to some extent due to delay on the part of parents in bringing children for treatment but also, I think, to a too great confidence in the efficacy of treatment by rest and to the inadequate carrying out of instructions given by medical men.

Anatomically the most important point in operating on such a case is the outline and limits of the synovial membrane. I have constructed Figs. 1 and 2 from examinations on the cadaver which show the following points: (1) that in extension the lateral reflection leaves uncovered the greater part of the lateral and posterior aspect of the femoral condyle both externally and internally; and (2) that on flexion these aspects are almost entirely covered.

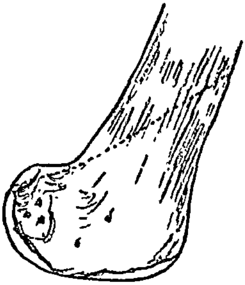
In Case 10 I gained access to the focus from the outer posterior aspect; a two-inch incision was made parallel with, and in front of, the biceps tendon downwards as far as the lower extremity of the outer condylar ridge; inwards and downwards from this incision the surface of the bone was reached to the inner side of the outer head of the gastrocnemius. In a similar case I would in future make an incision through the skin over the outer side of the condyle and having exposed the capsule strip this and the synovial membrane forwards; I have found on the cadaver that by this means ready access may be obtained to the outer aspect of the condyle without penetrating the synovial membrane. Inasmuch as the tuberculous focus is more commonly situated in the neighbourhood of the inner condyle a route from the inner side will more often be called for. Mr. W. Watson Cheyne recommends a curved incision with its convexity upwards at the junction of the condyle with the shaft; this outlines a skin flap which is turned up and a vertical incision through the muscular fibres towards the back of the condyle exposes the capsule which is stripped downwards. I have found on the cadaver that simple vertical incision similar to that which I have described for the outer aspect of the joint gives quite satisfactory access to the postero-internal aspects of the condyle. After exposing the bone the outer compact layer may be penetrated by a gouge or a spoon and the disease focus thoroughly scraped out. The cavity remaining should be treated with some satisfactory antiseptic, such as 1 in 500 biniodide of mercury in spirit; hæmorrhage may be checked by tight gauze packing for a few minutes and the wound may then be entirely closed without drainage.

FIG. 1.



Line of reflexion of the synovial membrane in extension.

FIG. 2.



Line of reflexion of the synovial membrane in flexion.

I wish next to refer to the results of treatment in the ten cases in which the knee-joint was opened: first, as to the recovery from the disease and, secondly, as to the subsequent functional value of the limb. The results as to recovery are shown in Table II.

TABLE II.

No. of case	Operation.	Interval since operation.	Ultimate result.	Remarks.
1	Erasion	2 years and 8 months.	Recovery.	—
2	,, (2)	2 ,, 3 ,,	,,	Pott's disease; recovery.
3	,, (2)	2 ,, 1 month.	,,	—
4	,,	2 ,, 1 ,,	,,	—
5	,, (2)	2 years.	Amputation.	—
6	,, (2)	1 year and 10 months.	Recovery.	—
7	,,	1 ,, 10 ,,	,,	—
8	Excision.	1 year.	,,	—
9	Erasion.	10 months.	,,	—
11	,,	10 ,,	,,	—

By recovery I mean present freedom from local disease. In three cases in which recovery ultimately ensued I had to perform erasion twice; in one case (No. 5) the joint went to the bad altogether owing to septic infection. The history of this case is as follows. The primary erasion was done on Feb. 14th, 1900, and the patient was discharged with the limb in plaster on March 9th, primary healing having taken place. Unfortunately, he was not brought again to the hospital until the following May 25th and when the plaster was removed the wound was found to have reopened and was obviously infected. In spite of a second erasion it was never afterwards clean and I performed amputation through the middle of the thigh on April 5th, 1902, with a satisfactory result as far as his general condition is concerned. With regard to the other cases freedom from disease has been verified by the tuberculin test in Cases 2, 4, and 11; and the others with one exception I have seen within the last few months and there are no signs of recurrence. The exception is Case 7, which remained under observation for seven months after operation, up to which time no return of the disease had taken place. All that I wish to remark about these results is that they show that erasion is a satisfactory operation as far as recovery from disease is concerned, even if it be found necessary to repeat it. Such repetition must be due to the overlooking of some of the disease at the first operation. It is hardly necessary to say that asepsis is all-important and that a knee-joint the subject of mixed infection is practically doomed.

The second aspect of the result is the after usefulness of the limb for purposes of locomotion. The present state of the limb in these cases is shown in Table III.:—

TABLE III.

No. of case.	Present state of the limb.	Remarks.
1	Ankylosis.	—
2	Fibrous ankylosis.	Flexion corrected.
3	Bony ankylosis.	No flexion.
4	Fibrous ankylosis.	Flexion corrected.
5	—	—
6	Fibrous ankylosis.	No flexion.
7	(?)	,,
8	Fibrous union.	,,
9	Fibrous ankylosis.	,,
11	,, ,,	Flexion corrected.

It is almost of the nature of a surgical axiom that what is to be aimed at after erasion or excision of the knee is firm ankylosis of the joint. With regard to excision this is not only undoubtedly always the desired end but also in most cases attained without difficulty. With regard to erasion the question is more complicated. In the first place, after this operation, and in spite of a long subsequent immobilisation of the limb, an ankylosis that will resist all tendencies to flexion is not easily obtained; in fact, unless the union is one of bone it must always remain in doubt. With regard to the retention of mobility Mr. W. H. A. Jacobson says: "The frequency with which this has been obtained and its advantage have been in my opinion much exaggerated. I have no doubt whatever that a large number of published cases will show that where movement is sought for the risk is run of a certain degree of permanent flexion, of attacks of pain and swelling, and of the formation of troublesome sinuses. The argument against attempting to retain mobility in the joint is based therefore on two grounds: first, *the risk of permanent flexion* and, second, the *risk of recurrent disease*, and if these two risks can be avoided it may conceivably be justifiable to endeavour to obtain a functioning joint."

With regard to the question of flexion I may compare Cases 6 and 9 with Cases 2, 4, and 11. In the one group there was never from beginning to end any tendency to flexion; in the second flexion occurred and had to be corrected. In the first group I erased the joint by transsection of the patella with reunion of the fragments; in the second I opened the joint by dividing the ligamentum patellæ. From this comparison and on general grounds I believe that flexion is always likely to occur when the integrity of the extensor is interfered with and can be largely discounted by leaving this intact. If the extensor is thrown out of action the muscular balance is disturbed and the hamstrings and the gastrocnemius are given unnatural advantage, the only resistance to flexion being the illustrated. This criterion, valuable as it was for the last half of the nineteenth century, is now seen to be of less importance in judging of the nature of the disease than is the infection of the organism with Eberth's bacillus; whilst more recently even this bacillus itself is found to have congeners whose pathological relationships to the organism of man are yet undistinguished from that of Eberth's, and thus as a criterion of the significance of groups of clinical phenomena it has certainly ceased to be absolute. With Bretonneau the presence of false membrane on the fauces or upper air passages was a necessary antecedent to the postulation of the diagnosis diphtheria—a distinction long held—but Sanné in 1877 was already suspicious of the narrowness of this boundary and taught from his experience that there was a clinical entity that he called "diphthérie sans diphthérie." Klebs and Löffler by their bacillus set up a new standard of reference in this disease, a standard of great potential worth, which gave our views of diphtheria a catholicity that Bretonneau's forbade. No sooner, however, was a new tribunal erected than a mass of fresh difficulties were synchronously engendered and the path of the would-be dogmatic diagnostician is now at least as thorny as before. We now know that besides being present in the diphtheria throat the bacillus diphtheriæ may exist in an otherwise normal throat or in a throat which exhibits pathological changes quite unlike those of diphtheria, or even in a throat which is obviously the concomitant of a condition that is not diphtheria—scarlet fever, for example. These facts but exemplify in the domain of medicine the same principle that obtains in all departments of knowledge; absolute truth is an ideal, a metaphysical abstraction; finality is unattainable. It behoves one none the less to search for the greatest possible certainty, but this is unattainable by employing the methods of Procrustes, tempting as those methods are.

If we recognise that there are not, and cannot be, hard-and-fast lines in the biological sciences, that the types from which we learn are idealistic means, and that an organic continuity exists between all phenomena, we may find the illustration of this principle in the morbid states of the human body with very little application, and the purlieus of diphtheria, scarlet fever, and tonsillitis (using that word in its broadest significance) afford many interesting and instructive examples of departures from the type so various as to lead by an almost sensible mergence into one another.

If diphtheria be regarded for argumental purposes as at one end of a scale and scarlet fever at the other, and we confine our attention to the gradations between, we shall need to enumerate briefly those characters by which we are accustomed to differentiate the one disease condition from the other. Briefly, then, diphtheria is disease of a mucous membrane, generally of the throat and upper respiratory passages, proximately allied in its etiology with the pathogenic manifestations of the Klebs-Löffler bacillus, characterised by the formation of an exudation on the affected surface generally continuous in extent, inaugurated and accompanied by mild febrile phenomena, of short course, followed by great depression of the vital powers, followed also by a train of symptoms due to the absorption of certain toxic products of the metabolic activity of the Klebs-Löffler bacillus and to the degenerations of various tissue cells induced by those products, the more common of which are myocardial, central and peripheral nervous, gastric, renal, and hæmic degenerations.

Scarlet fever, on the other hand, is a disease in which, after preliminary invasion of the throat and upper respiratory passages by a certain putative coccal bacterium, certain inflammatory changes are caused in those tissues of which the most common is the formation of an exudation on the tonsils and fauces; by the passage of this coccus or its products into the circulation a dermatitis is induced, this dermatitis beginning in the upper parts of the body and proceeding to the lower and being generally punctiform in appearance and erythematous in nature; the disease onset is ushered in, and accompanied by, well-marked febrile symptoms; whilst, later, infection of many organs by pyogenic bacteria occurs, this being especially the case with the ear, the joints, the submaxillary lymphatic glands, and the kidney, in any of which organs marked inflammatory changes may ensue; the disease is followed, as a result of the early dermatitis, by the shedding of the cuticle, most characteristically of the palms and soles, and is not infrequently complicated by the supervention of rheumatism.

One is accustomed to speak, too, very freely of tonsillitis as though that were a specific entity in itself, and acute throat affections which present anomalous concatenations of symptoms that do not tally satisfactorily with the book features of any of the classical diseases are apt to be brushed contemptuously aside with the label "tonsillitis" affixed as a final designation. Yet what varieties of throat infections there are and what various organisms associated with them. Diphtheria itself is only a specific tonsillitis and there are myriads of other organisms that may affect pathologically the tonsil and throat tissues. The recognition of the relationship that exists between many of these organisms and the various pathological phenomena that present themselves to us in inflammatory faucial conditions has as yet made little progress; some, such as the pneumococcus, seem to have a fairly definite etiological relationship with certain clinical conditions, but in cultures from the ordinary case of "tonsillitis" we find cocci of many shapes, sizes, and forms, principally staphylococci and streptococci, with a smaller proportion of other micro-organisms such as sarcinæ and yeasts. It is impossible at present to assign a definite value to the presence of each or any one of these bacteria. The word "tonsillitis," then, as ordinarily used here must be taken as signifying an inflammatory condition of the faucial tissues with a discrete follicular exudation on the tonsils that yields on culture a growth of coccal bacteria indistinguishable morphologically from the pyogenic cocci, this condition being accompanied, *bien entendu*, by fever and its co-existing and consecutive disturbances.

These definitions must be regarded as not more than broad working bases upon which the subsequent framework may be erected and from what has been said already it is obvious that they are no more than tentative half-truths, used, as shillings are used, as current tokens the intrinsic worth of which is far less than their face value. They must constitute, however, our verbal currency for present purposes.

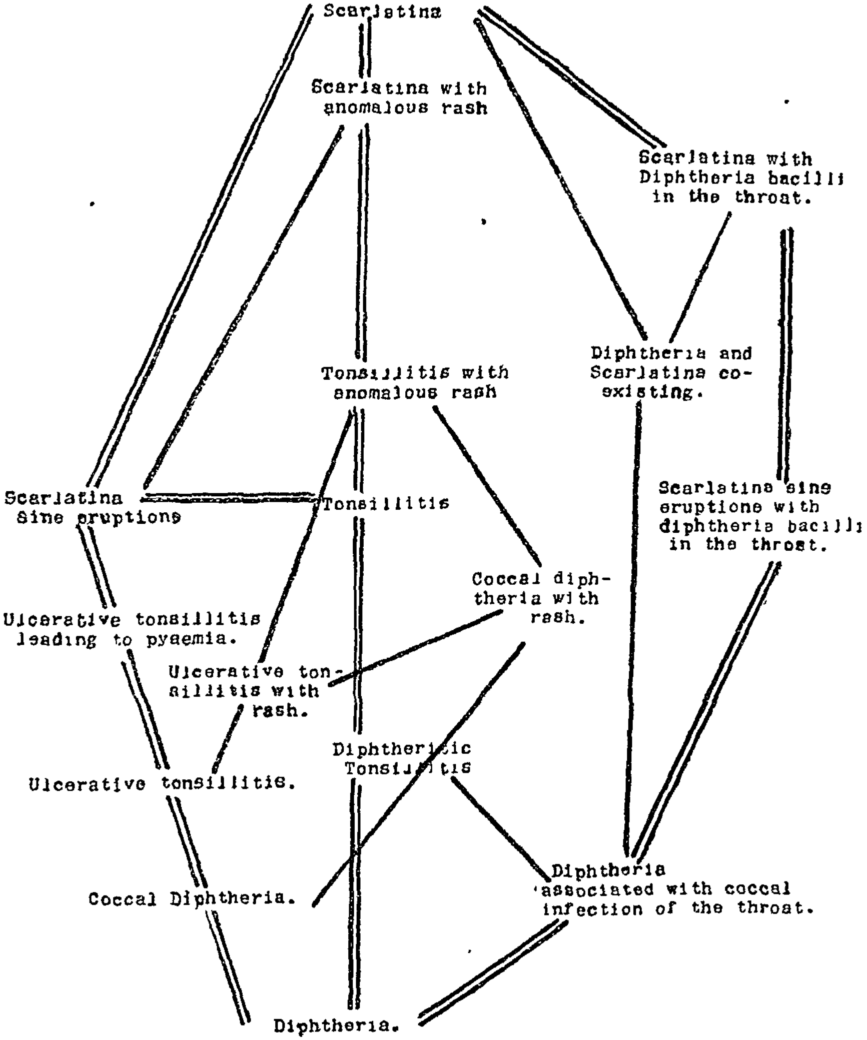
Now as it is necessary to start with some fixed points I have chosen the disease means that are conventionally known as scarlet fever and diphtheria and propose to take a line through another arbitrary mean—tonsillitis, distributing around and between these groups those cases that do not bear the absolute features of any of these and yet have relation, firstly, to each other; secondly, to some other group or groups; and thirdly, to the chief groups. In order to supply the mind with a graphic conception of these various groups, their coördination and inter-relationships, I have drawn up the accompanying simple diagram.

It must not, however, be assumed that any of the groups set forth in this diagram is a whit less arbitrary than any of the original or main groups; it is submitted that the exact opposite is the case; the aim is to illustrate the fact that between the more clearly defined means lie many less clearly defined means about which the less commonly occurring cases may be aggregated, and that each of these aggregations has relationships with one or more of the neighbouring aggregations. No single case of sickness is an exact replica of any other case of sickness any more than any particular man's face is an exact replica of any other's, and the best classification of disease (or physiognomy) will always be the most supple and comprehensive one. In the subject under notice it is only sought to point out how very imperfect and ill-adapted to its function the most elastic of classifications must of necessity be, for it cannot be contended that the groups indicated in the diagram are by any means all that might be formed.

In order to demonstrate the actuality of the signified groups I propose to exemplify each, whenever it may be necessary to do so, by reference to specific cases that have been under my observation, but it must be remembered that the instances given are only selected examples out of a wealth of material. In a turnover of a large number of cases of infectious diseases instances of these variations are always present and form a by no means inconsiderable proportion of the total bulk, and though it is necessary here to restrict oneself to one or two examples of each kind it would be easy to multiply these twenty-fold in most instances. For present purposes, too, it will be necessary to state the points of each case very baldly, giving only the briefest possible summary, though detailed clinical accounts would demonstrate the points urged far more luminously.

Scarlet fever itself has already been defined and its main features are so widely observed and so generally recognised as to call for no further description or exemplification. Not quite so well accepted are those cases which with some of

PLAN OF RELATIONS OF SCARLET FEVER WITH OTHER INFECTIONS.


Scarlatina
Scarlatina with anomalous rash
Scarlatina with Diphtheria bacilli in the throat.
Diphtheria and Scarlatina co-existing.
Tonsillitis with anomalous rash
Scarlatina sine eruptione
Tonsillitis
Scarlatina sine eruptione with diphtheria bacilli in the throat.
Coccal diphtheria with rash.
Ulcerative tonsillitis leading to pyaemia.
Ulcerative tonsillitis with rash.
Diphtheritic Tonsillitis
Ulcerative tonsillitis.
Coccal Diphtheria.
Diphtheria associated with coccal infection of the throat.
Diphtheria.

the traits of scarlet fever combine other characters not usually associated with scarlet fever, especially those in which the rash is ill-marked, fleeting, anomalous in appearance, or of unusual distribution, perhaps even combining one or more of these attributes. Often so little like scarlet fever are these cases that their relationship to that disease may be either overlooked by the most experienced or may be absolutely indeterminable. Nor will time always solve the question. If profuse general desquamation ensue in due course, especially if the palms and soles exfoliate their coating of epithelium in bulk, the diagnosis is practically certain, but from the nature of the original dermatitis it is improbable that this will occur and a little ill-defined peeling—or even none at all—may leave one in as much doubt at the end of the case as one was at the beginning. A legion of examples illustrating every phase of these conditions might be adduced, but one must suffice. It is chosen for the reason that it was so anomalous as actually to deceive and yet demonstrated its real character by its subsequent course.

CASE 1.—The patient, an assistant nurse, aged 22 years, had never had scarlet fever. 14 days after arriving at the Grove Hospital, during which time she was employed in a scarlet fever ward, she was taken ill with sore-throat, malaise, and fever. The tonsils and soft palate were swollen and injected and there was some speckly exudation on the tonsils. The tongue was moist and thinly furred. The submaxillary lymph glands were natural. The pulse was 84. On the evening of the third day some blotchy indefinite erythema, principally visible on the limbs, was observed. By the fifth day this had disappeared, never having presented any other characters than those mentioned. The soft palate was still a little injected and the fungiform papillæ were rather prominent. No organisms beyond the ordinary cocci were found in her throat on culture. By the eighth day the throat tissues were pale and free from exudation. Although in this case scarlet fever was strongly suspected at the onset, the subsequent course appeared to justify her discharge on the eleventh day with the diagnosis of tonsillitis. On the twenty-third day, however, she had pin-hole desquamation of the palms of the hands; on the twenty-fifth this desquamation was well marked and the fingers were peeling; on the twenty-ninth there were feathery desquamation of the toes and pin-hole desquamation of the soles of the feet, whilst the hands were peeling freely. During the whole of her illness she was under close medical observation.

It may appear that this case should have been regarded throughout with more suspicion than was actually entertained, but a somewhat extensive experience of sore throats among members of the staff of a fever hospital has taught one how extremely frequent these anomalous rashes are with every form of tonsillitis. The routine procedure that I adopt after examining a sore-throat is to inspect carefully the skin for any lesion that may be present, and I have been vividly impressed with the frequency with which erythemata of all kinds, shapes, and distributions occur in these circumstances. From a little mottling of the chest to the most intense general blush such rashes vary, and over and over again scarlet fever has been suspected where it did not exist. On the other hand, it is quite possible that many of these cases have been mild cases of scarlet fever in which the diagnosis has never been cleared up. The distinction is not possible with our present equipment—witness, for example, this case.

CASE 2.—The patient, a male, aged three years, was taken ill with sore throat and swelling of th[illegible] lands of the neck and was sent to [illegible] The throat was injected and swollen [illegible] nd exudation about the tonsils and [illegible] glands were a little enlarged and the tongue was coated with moist fur. The temperature was 99·8° F. On the trunk and limbs irregular, blotchy erythema was spread, showing some punctiform arrangement in patches. No diphtheria bacilli were found in two cultures of the throat, only the ordinary coccal organisms. By the fifth day the throat was clean but the rash persisted till the sixth and was followed by no desquamation except a little shagginess of the skin of the outsides of the legs on the thirteenth day. Altogether he was in hospital for 11 weeks, the latter part of the time because he had contracted measles.

Here, again, a large number of instances in point could be brought forward if space permitted, all cases of acute throat infections accompanied by erythematous rashes, none followed by peeling. The differentiation of such cases from the milder and less characteristic forms of scarlet fever is in our present state of knowledge impossible.

The ordinary throat infections, or instances of tonsillitis, have to be considered, too, in relation to a specific throat infection which is likewise unaccompanied by rash—I mean that form of scarlet fever that is known as "scarlatina sine eruptione." I long had grave doubts as to the existence of this condition as a distinct entity but I have seen it too often now to be able to doubt its actuality. The specificity of the condition can only be established by its occurrence in connexion with cases of undoubted scarlet fever with rash, and not only is this seen but cases are found precisely similar arising sporadically. Scarlatina sine eruptione usually comes to hospital with a certificate of diphtheria and if admitted to a diphtheria ward is very apt to inaugurate an outbreak of scarlet fever among the diphtheria patients; its recognition is, therefore, a matter of some little moment. On the whole it seems to affect the very young and the adult more than those inhabiting the age periods on which the scarlatinal incidence more commonly falls. Thus it happens that in an outbreak of scarlet fever in a family, whilst the children from, say, three to 12 years of age suffer from well-marked scarlet fever, the father or mother (who may have had scarlet fever when young) escape with tonsillitis (scarlatina sine eruptione) and the baby has a similar but more severe throat infection which is really scarlatinal also. As instances of scarlatina sine eruptione may be cited the following cases.

CASE 3.—The patient, a female, aged three years, was taken ill with vomiting, sore throat, and rhinorrhœa, and was sent to hospital as suffering from diphtheria. On admission the skin was pale. No rash had ever been seen by the mother or by the medical attendant. The throat was much swollen and injected and both tonsils were capped by patches of continuous white exudation. The mouth and the throat were filled with stringy muco-purulent secretion. The submaxillary lymph glands were much swollen and the tongue was thickly coated. Three cultures from the throat and the nose showed an abundant growth of coccal forms but no diphtheria bacilli. The temperature remained raised till the eleventh day; there were much delirium and restlessness and the tongue became ulcerated. Throughout the illness there was no desquamation. On the ninth day of the illness the patient's sister, aged 11 years, was admitted with well-marked scarlet fever with rash which was followed by desquamation in due course.

CASE 4.—The patient, a male, aged two and a half years, was taken ill with sore-throat, headache, shivering, rhinitis, and submaxillary lymphadenitis but no rash. He was brought to the hospital certified as having diphtheria, whilst his sister, who was taken ill at the same time, was sent in with ordinary scarlet fever. The boy had no diphtheria bacilli in his throat as evidenced by two successive cultures, in which, however, there were abundant growths of cocci. His throat was reddened and œdematous; a few specks of exudation were visible in the tonsillar crypts; there were much slimy secretion about the throat and abundant rhinorrhœa. The tongue was furred, there was no rash, and there was marked submaxillary lymphadenitis. It was not till the twelfth day of the illness that the fever subsided, when the throat became clean and the adenitis ceased. There was never any desquamation.

Two very similar cases were under treatment about the same time—a father, aged 41 years, and a son, aged 12 years, who in addition to these symptoms both showed the strawberry tongue.

These and such-like cases shade gradually into another condition that is very little dealt with in the systematic text-books and very little recognised generally but which is an almost daily experience in a fever hospital. I know of no heading in the official nomenclature to which they may be assigned and am forced to content myself with the inept designation "ulcerative tonsillitis." Not arising in association with any similar affection as a rule, these cases may or may not be infectious, but they are usually marked examples of throat infections and often run a severe, occasionally a fatal, course. Their chief character is the exhibition of a large ulcer or ulcers on the tonsils and surrounding tissues, some of considerable extent and depth; the adjacent lymph glands are inflamed and there are fever and general constitutional disturbance. The local process sometimes leads to considerable destruction of the throat tissues and the system may become infected by the pyogenic cocci. The great difficulty at first is the distinction of these cases clinically from diphtheria which they resemble strongly in the throat appearances; when this difficulty is disposed of by the progress of the case the suspicion of scarlet fever begins and is often, indeed, present to the end, so similar are the later lesions of the fauces and palate. The general symptoms, too, are of the sthenic type—delirium, restlessness, and considerable pyrexia—which suggest a much closer relationship to the latter disease than to the adynamic, algid diphtheria. The following cases are excellent instances.

CASE 5.—The patient, a female, aged two years, was taken ill with sore-throat, swelling of the glands of the neck, and constitutional disturbance and was sent into the hospital certified to have diphtheria. On admission she was found to have a temperature of 102·8° F.; there was no rash, the tongue was dry and furred, the throat was injected and a little swollen, whilst on both tonsils were masses of membrane-like exudation which on the left side overlapped the anterior pillar of the fauces and ran along the edge of the soft palate. The submaxillary lymph glands were a little enlarged and there was a little bronchitis. T[illegible] the throat showed various growths of cocci b[illegible] Before these had been made, however, she w[illegible] antitoxic serum. On the sixth day of illness the exudation began to separate and it was now seen to be composed of necrotic tissue covering ulcers in the subjacent parts. On the seventh day the slough re-formed but separated on the ninth day, leaving excavated, ragged ulcers of the tonsils and of the pillars of the fauces and soft palate. The temperature reached the normal line that night. The [illegible] ulcers occupied three weeks, the thro[illegible] earance till the thirtieth day. General [illegible] *pari passu* with the repair of the local damage. There was never any desquamation.

CASE 6.—The patient was a male, aged five years, who was taken ill [illegible] glands of the neck, and [illegible]
to have diphtheria.
[illegible] upper surface of the
[illegible] palate, extending on
[illegible] rane like exudation.
[illegible] rged and tender and
[illegible] sent. He was given
[illegible] hree cultures of the
throat, taken on successive days, showed growths of streptococci only. [illegible]
palate. There was no evidence of syphilis in this case and no further treatment than simple lavage with chlorine water was adopted. There was never any desquamation.

Closely as these cases resemble scarlet fever in their subsequent stages it occasionally happens that the parallelism is still further marked by the supervention of pyæmic phenomena, as took place in the following case.

CASE 7.—The patient was a female child, aged one and a half years. This case may cause some dissension from the fact that some diphtheria bacilli were found in the throat but the case was far removed
[illegible] appropriate
[illegible] with vomit-
[illegible] gh, and was
[illegible] On admis-
[illegible] overed with
[illegible] were much
[illegible] iorrhœa and
[illegible] both sides.
[illegible]
still unhealed sinus behind the right ear.

The resemblance of this case in which no rash was present to the severe form of scarlet fever in which there are combined local destruction of the throat tissues and septic infection of distant structures is well worthy of notice. Even without proceeding to the length of a general infection of such severity an ulcerative tonsillitis may be accompanied by an eruption of the skin which bears no distinctive character and is quite unlike the general eruption of scarlet fever These rashes vary widely. The following case may be taken as showing what may occur.

CASE 8.—[illegible] female, aged 21 years, was taken ill with
[illegible] and rash, and was
[illegible] On admission the
[illegible] red, macular rash,
[illegible] but composed of
smaller and more closely aggregated lesions. The throat was reddened and œdematous and showed a film of slough on the right tonsil The tongue was coated with thick fur. On the next day the rash had spread in extent; it had coalesced in places on the arms, was still discrete on the thighs, but was continuous on the legs. On the sixth day the rash was fading and the slough on the tonsil had separated, leaving an exposed ulcer. No diphtheria bacilli were found in three successive cultures and there was no desquamation.

The features of this group of cases that I wish to emphasise are that whereas the throat appearances are most puzzlingly akin to those of diphtheria the course followed by the throat lesion is very different, *for rarely indeed do we find* any ulceration, except the most superficial and transitory, in straightforward, frank diphtheria. This local necrosis of tissue divides this group of cases from the next which I have called, for the sake of convenience, "coccal diphtheria" (the *diphtérie à streptocoques* of Variot). I do not mean to imply more by this term than that a disease indistinguishable from diphtheria is not uncommon in which repeated cultivations of the throat fail to bring to light the Klebs-Löffler bacillus. The following case, *inter alia*, is in point.

CASE 9.—A female, aged 20 years, was taken ill with vomiting and sore-throat and was admitted to hospital on the next day certified to have diphtheria. The throat was reddened and œdematous; on both tonsils were continuous [illegible]
was clothed by a sheet [illegible]
phatic glands were sor[illegible]
furred. There was no r[illegible]
101° F. 12,000 units of [illegible]
cultures were made fro[illegible]
discovered. The temp[illegible]
[illegible] any ulceration. The subsequent
[illegible] There was never any desquamation.

This form of illness may also be attended with eruption on the skin and also with laryngeal infection. The appended case exhibited both of these features.

CASE 10.—The patient, a male, aged two years, was taken ill with sore throat, swelling of the neck, and croup, and was sent to hospital as a case of diphtheria. On admission he was found to have a husky [illegible]

Having passed in review these several gradation forms from the standpoint of scarlet fever, it may be profitable to recommence at the bottom of the scale in the diagram, taking diphtheria as the fixed point and moving gradually in the direction of scarlet fever to reach the point where the two blend in the individual patient—that is to say, till those two arbitrary means are so commingled in the same subject that a fresh mean is established equidistant from each.

Of diphtheria *proprement dit* it would be supererogatory to speak; a definition has been hazarded; the condition is a well-known one and forms an admirable *point d'appui* for the argument under consideration. The only minor variety of diphtheria of which preliminary mention is necessary is one, too, that is so widely recognised that the production of individual instances would be tedious I refer to the state clinically indistinguishable from tonsillitis, in which culture of the tonsillar exudation shows diphtheria bacilli to be present in such large numbers as to make it reasonable to believe that this organism has causative alliance with the malady. The activity of this factor and the relationships of these sore-throats are among the many valuable results of the discovery of the bacillus diphtheriæ, though their nature was shrewdly suspected at least 25 years ago by Sanné, as has already been remarked. Having, however, referred to its occurrence, we may pass on to consider the association of the diphtheria bacillus with other organisms, especially the pyogenic cocci, in the production of illness.

It is matter for surprise that the part played by these bacteria—albeit subordinate to that of the protagonist, the Klebs-Löffler bacillus—attracts so little attention, for the modification in type-diphtheria which they introduce when taking an active share in the illness is a by no means negligible one. As has been previously remarked, diphtheria is a depressant, asthenic malady. When suffering from it the patient is quiet, languid, and *triste*; its course lasts but a few days, the temperature is but little raised, and the ancillary features of pyrexial disturbance are feebly marked. Quite otherwise is it with those illnesses in which the pyogenic cocci are much concerned. In them fever, restlessness, and delirium are present; the patient is active and struggling and the course is of uncertain duration. Regarded from another point of view diphtheria is, in the main, a toxæmia and even if the specific bacilli are scattered by the blood stream no fresh lesion is produced by the metastasis. The pyogenic cocci, on the other hand, tend to reproduce their lesions in different parts of the body and suppurations of various tissues, adjacent or remote, are common sequelæ of a septic infection. Now, although an attack of diphtheria in which a pure culture of the Klebs-Löffler bacillus is obtained is comparatively uncommon, the prevalence of that factor in the diseased condition can usually be gauged to a certain extent, even though other organisms be present. In a good many instances, however, diphtheria bacilli are present in comparatively small numbers, and though their functional activity may be undoubted from various signs and symptoms there is a deviation from type-diphtheria towards the condition naturally associated with septic infection. In such instances, whilst the throat appearances are akin to those of diphtheria, and diphtheria bacilli are present in the throat, there will be superadded various local and general effects which may be reasonably referred to the presence of the luxuriant growths of the pyogenic cocci that accompany and vastly outnumber these bacilli themselves. On such occasions will be looked for a marked rise of temperature, a longer and more irregular course, feverishness and delirium, persistent submaxillary lymphadenitis ending perhaps in suppuration, otitis media, and other septic lesions. Locally are seen without surprise a more marked inflammatory reaction in the throat tissues and perhaps some ulceration of those tissues when the membrane has separated. The proportionate part taken by the two factors varies greatly, of course, sometimes one element prevails much, sometimes the other; in some instances a fairly even balance is struck between the two. The following case illustrates some of these facts.

CASE 11.—The patient, a boy, aged three years, was taken ill with sore-throat, vomiting, and eruption on the skin, and was brought to hospital, under a certificate of diphtheria, on the fourth day of illness. Impetiginous sores were scattered about the face; there were several pustules on the neck and the left ankle and a whitlow of the left thumb was present. The throat contained much slimy mucus but when this was removed it was seen to be markedly swollen whilst membrane covered both the tonsils and the uvula. The left submaxillary lymph glands were considerably swollen and hardened, the tongue was thickly coated, and there was profuse rhinorrhœa. The child was delirious and restless; the temperature ran a continuous course between 103° and 102° F. till the fifteenth day and there were present during this time the usual febrile symptoms. Diphtheria bacilli were found in certain numbers in the nose and throat but there was an enormous number of cocci associated with them. By the tenth day the local symptoms had abated, the rhinorrhœa was less, the throat was less swollen, the membrane had separated, and some superficial ulceration of the tonsils was seen. *The right tonsil healed readily, but an* excavated ulcer of the left tonsil formed and the left sided lymph glands became harder and more painful and remained so for a long time. On the sixteenth day right otitis media ensued and this was followed by right otorrhœa.

Cases such as this are by no means infrequent and they illustrate very clearly the two disease elements at work, the diphtheria element and the septic element (if I may call it so). Every *nuance* in the association of these elements may be observed in the study of diphtheria patients and the relative importance of the two, both for purposes of diagnosis and of assessing their infectivity to others, is a matter that cannot be too carefully dealt with. Space will not permit the pursuit of these fascinating themes and we pass from it insensibly to the association of the diphtheria bacillus with another septic throat infection, in this case a specific infection—namely, scarlet fever. The nexus passes most naturally through those scarlatinal throat infections which have been spoken of above under the title of "scarlatina sine eruptione." When this variation from type-scarlet fever is associated with the presence of a certain number of Klebs-Löffler bacilli in the inflamed throat, especially when it arises sporadically, its distinction from diphtheria with prominent septic element and subordinated diphtheritic element may indeed baffle the most astute. The separation of such a case from one of ulcerative tonsillitis in which diphtheria bacilli are casually (as opposed to causally) present is, I think, impossible apart from collateral circumstances. Some of the difficulties that such cases of scarlatina sine eruptione with diphtheria bacilli in the throat may present are shown in the following case.

CASE 12.—A male, aged 13½ years, was taken ill with vomiting, sore-throat, headache, and shivering and was admitted to hospital on the next day certified to have diphtheria. On admission no rash was seen nor did any appear throughout the illness except as detailed below. The throat was œdematous and on each tonsil patches of membranous exudate were present. The submaxillary lymphatic glands were somewhat enlarged and the tongue was covered with dry, caked fur. The temperature was 104·2° F. A few diphtheria bacilli were found on culture from the throat, together with many cocci of various forms. The patient was given 12,000 units of antitoxic serum. On the following day the throat exudation had become continuous in extent, there was profuse rhinorrhœa, much stringy mucus blocked the mouth, and the submaxillary lymphatic glands, especially on the right side, were larger and more tender. There were much restlessness and delirium and the evening temperature was 105°. He was then given 18,000 units of antitoxic serum. On the fifth day of illness the tongue was clean, dry, glazed, and showed marked prominence of the fungiform papillæ, and there was an eruption of small discrete papules over the knees, the elbows, and the sides of the trunk. Delirium was very violent. The temperature was 103·6°. After this gradual improvement took place, the temperature reaching the normal on the eighth day, when also left otitis media, followed later by otorrhœa, occurred. The exudation cleared from the throat without leaving any but superficial ulceration. There was never any desquamation.

The true nature of this case might not have been revealed had it not been that the patient gave rise to a little epidemic in the diphtheria ward to which he was sent, in the course of which no less than ten patients developed scarlet fever, an occurrence which demonstrated pretty clearly that he had been suffering from scarlatina sine eruptione, complicated by the presence of diphtheria bacilli in the throat.

From such cases as these the transition is easily made to the group of cases in which well-marked scarlet fever, with its characteristic phenomena, occurs in association with the Klebs-Löffler bacillus. It is a great pity to lump these cases with others and to label them scarlet fever and diphtheria; such action implies that they are cases of diphtheria as much as of scarlet fever, whereas diphtheria itself is a disease of which the possession of Klebs-Löffler bacilli in the throat is only one feature and if any, or some, of these cases present no other feature of diphtheria than the possession of Klebs-Löffler bacilli in the throat the connotation becomes so narrow that the denotation (diphtheria) is worthless. If a routine practice be established of making cultures from the throats of all patients suffering from scarlet fever seen in succession it will be found that a large number have diphtheria bacilli along with other bacteria in the throat; the actual percentage varies with many circumstances—age, class of society, time of year, and so on—so that an actual figure, being so inconstant, is not of much account. A large enough number of cases will always furnish plenty of particular instances. This is a matter of such common experience as not to need exemplification. It leads, nevertheless, by insensible gradation to the consideration of the question whether scarlet fever and diphtheria can co-exist in a patient—both these conditions, that is to say, reaching their maximum at or about the same time. For scarlet fever to attack an individual recovering from diphtheria or diphtheria one recovering from scarlet fever is not only not surprising but is even a common event, especially in fever hospitals. There is no co-existence, properly so-called, about such events, for they succeed each other. For the synchronous occurrence of these diseases to be asserted in any instance there must be predicated for diphtheria some other attribute than the mere possession of Klebs-Löffler bacilli in the throat of a sufferer from scarlet fever; indeed, the finding of these bacteria even in an inflamed scarlatinal throat covered with continuous exudation in no way justifies an absolute assertion, as such a throat condition is quite consistent with the diagnosis of scarlet fever. Although some of these cases, doubtless, are instances of the synchronous occurrence of the two diseases, in order to assert the fact with any degree of assurance it is necessary to show that each element plays some part in the succeeding phenomena and it is very seldom that this can be satisfactorily accomplished. Here again, as in the argument of mixed infection by diphtheria bacilli and pyogenic cocci, we find much difficulty in apportioning its due share and influence to each of the elements involved, sometimes one being the leading feature, at other times the other. An equipoised coincident attack of diphtheria and scarlet fever I believe to be very rare—as rare, probably, as the contemporaneous efflorescence of two acute specific fever eruptions. Still, in watching many hundreds of cases of each disease instances are occasionally observed in which this occurs. Apart, however, from these, it is a matter of the greatest difficulty to assess the share that diphtheria bacilli take in the pathogeny of a condition in which symptoms of scarlet fever are pre-eminent and in many cases they probably exercise no traceable influence at all in the acute stage. Patients suffering thus may, however, infect with diphtheria bacilli fellow patients suffering from scarlet fever, which may result in their being attacked in their turn by diphtheria, and not improbably such patients may themselves suffer from diphtheria in convalescence from a rousing of the diphtheria bacilli in their own throats into activity by those extraneous influences which have this effect.

I have chosen the subjoined case, though owing to its late arrival in hospital the fact of the original scarlatinal rash is not well established, for illustration of the concurrent course of scarlet fever and diphtheria, for not only was the desquamation undoubtedly such as occurs after scarlet fever but the paralyses that ensued were of a character to warrant the assumption that the diphtheria bacilli found in the throat were of active pathogenicity.

CASE 13.—A male, aged 13 years, was taken ill with headache, sore-throat, swelling of the glands of the neck, rhinitis, and shivering and was brought to hospital certified to have diphtheria on the sixth day of disease. On admission there was well-marked coarse punctation of the outer sides of the arms and the same condition, but not quite so prominent, was present on the outer sides of the legs. There was also some erythema over the front of the neck due to poultices that had been applied. The throat tissues were much injected and very œdematous and continuous grey exudation covered both tonsils and pillars of the fauces, while similar but thinner exudation extended over the soft palate. The [illegible] iatic glands and the surrounding tissues w [illegible] d tender, and thin watery fluid ran from the [illegible] was 100·2° F. and the patient was delirious [illegible] s of antitoxic serum were injected. The first [illegible] diphtheria bacilli but one made on t' [illegible] T [illegible] d- [illegible] t. [illegible] superficial ulceration was observed. A macular rash appeared on the hands and feet—probably an early serum manifestation. [illegible] the patient became gradually bette[illegible] remittent and never rose over [illegible] throat resumed its natural app[illegible] and neck was noted on the t[illegible] desquamation was more genera[illegible] the hands. On the twenty-fift[illegible] soles of the feet were peeling profusely, as were also the trunk and limbs. On the thirty-third day there was paresis of the ciliary muscles. On the forty-first day paresis of the palate was noticed, [illegible] regurgitation of [illegible] This case surely [illegible] can both produce [illegible]

I have now shown, or endeavoured to show, that the principle of relativity obtains in a very striking degree in the knowledge possessed with regard to scarlet fever, diphtheria, and tonsillitis, and that it is a fatal error to suppose that anything approaching absolutism can ever prevail from the inherent nature and interdependence of these morbid states. The cleavages which time and circumstances have introduced into the series of beings of which biology treats have, to a certain extent, eased the labours of the systematist by fixing certain characters, with correlative sub-characters, and these are available for purposes of classification. Their kingdoms, phyla, genera, species, and what not have value in virtue of the distinctiveness of these factors. In medicine this is less so and in the subject of which we are speaking the interlacings, overlappings, and interfusions are such that no schema can be satisfactory, consistent or final. It is impossible to find the *fundamentum divisionis* for each group, in the absence of which the *differentia* of the species are only remarkable and not distinctive. The inference to be drawn then from what has been set forth is that no different characters of these morbid conditions, scarlet fever, diphtheria, and tonsillitis, are mutually exclusive, and that though these nosological terms may be employed for the sake of convenience and for the interchange of ideas they must not be deified into absolute entities. Such considerations as these have very practical bearings—bearings which bring us to no less a conclusion than that the diagnosis of these several conditions is an art with very severe limitations and it is wise, if humiliating, to recognise this fact. If the diagnostician have the broadest experience and the sharpest acumen he cannot assign a sickness to a group when no group exists for it, and if he grasp at once the nature of some of these cases he cannot place his particular case in a pigeon-hole when no pigeon-hole exists for its reception.

Much has been said of late, said glibly enough too, about errors in diagnosis in the infectious diseases. One wonders if it is realised by those who speak thus that, apart altogether from clinical difficulties, such as eliciting physical signs, recognising rashes, and so forth, there are an appreciable proportion of these cases which are undiagnosable. Such, nevertheless, is the fact, as I have endeavoured to point out, and its general recognition would be of great service. It is, indeed, only those who have not had considerable experience and given close attention to the subject who would expect every case to be referred to any of the three categories mentioned for any other than statistical purposes. The inherent impossibilities of such a course have not occurred to them.

Are experience and study of no value, then, in the diagnosis of these states? I think they are of very great value. Merely to realise the possibilities and contingencies involved in the examination of an individual case is to be on one's guard, and even though no definite diagnosis can be made the error of making a definite one is avoided. But there is more than this to be expected. If each case be intelligently regarded on its own merits and in the light of experience it will often be possible to say what no tyro can say—namely, that this or that particular case seems so far out of line from the generality of instances of diphtheria or scarlet fever, as the case may be, as to make it wise to treat it separately, and furthermore to err on the safe side therapeutically; as, for example, by giving antitoxic serum in a case that may possibly prove to be an aberrant one of diphtheria. One of the great difficulties in the administration of fever hospitals is the constant breaking out of scarlet fever in diphtheria wards and of diphtheria in scarlet fever wards, and in most instances such outbreaks can be traced to some individual the equivocal nature of whose illness had caused its real bearing to be overlooked. The mere fact of noticing that such a case was ambiguous would have prevented the outbreak. There are many minute points, often difficult to describe in language and quite impossible to impart fully, that one gets to look to for help after a time, and intangible as these may be to an outsider or one not constantly in contact with these diseases they are of great practical moment. The tint of the skin will often suggest scarlet fever; the comparative pallor of the throat diphtheria; decubitus, again, septic infection, and so on. After all has been said diagnosis in these diseases is only capable of being taught up to a certain point, and it is not till the knowledge has become intuitive that the fine points which suggest aberrance from one mean and approximation to another can be appreciated, and even this instinct is only capable of limited discrimination.

The fact remains, then, that the *nuances* between these conditions—scarlet fever, diphtheria, and tonsillitis—are so gentle that each shades off into the other not at one but at many points, and whilst this continues to be so, with the most consummate skill and the widest experience, the diagnostician can never attain a certainty in his art which its inherent disabilities forbid.

AN OBSCURE CASE OF INTESTINAL OBSTRUCTION DUE TO AN OBTURATOR HERNIA; LAPAROTOMY; ENTERECTOMY;

DEATH IN 27 HOURS FROM CARDIAC SYNCOPE AND PERITONITIS.[1]

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THERE are few subjects of more interest than those which deal with the condition of the alimentary canal producing intestinal obstruction. I have therefore thought that the case which I am about to relate might prove interesting on account of the obscurity of the symptoms and of the rarity of the form of hernia and the absence of any localising symptoms which made it possible to form any accurate diagnosis beyond the fact that there was obstruction most probably involving the small intestines. This difficulty has appeared in similar cases reported. Most of such cases appear to have been females, the attacks were generally sudden, and there has not been much distension or tenderness of the abdomen. My case illustrates the fact that it is possible to empty the rectum and colon by enemata, although complete obstruction is present higher up. The patient's extreme obesity obscured any fulness in the thigh, though a hernia was looked for. She had her bowels opened naturally the day before admission into the infirmary but had not passed flatus.

The patient, a woman, aged 61 years, was admitted into the St. Marylebone Infirmary on the evening of Dec. 30th, 1902. She stated that she had always enjoyed good health until the 28th, when she had a sudden pain of an acute nature in the abdomen, followed by sickness, which vomit appeared to be the normal contents of the stomach. She had had no constipation nor had she passed flatus. On admission her general condition was good; she was very obese, weighing about 14 stones. Her pulse was regular, her temperature was normal, and her respirations were 20. Her tongue was clean and moist, the abdomen was not distended, nor had she any localised pain. The skin was slightly jaundiced. The patient had a right reducible femoral hernia and there was nothing definite to be made out on the left side. The rectum was emptied by means of an enema and the vagina was examined. She was dieted and given a mixture of bismuth and opium and a fomentation was applied to the abdomen. On the 31st another enema of warm oil was given to the patient but was not successful and nothing was felt by the rectum. She vomited some semi-digested food at intervals. On the evening of the 31st she began to vomit some doubtful fæcal matter, her tongue was dry, and her pulse was rather suggestive of peritonitis.

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[1] A paper read before the West London Medico-Chirurgical Society on May 1st, 1903.

On Dec. 31st it was decided to perform laparotomy, before which the stomach was washed out and some very offensive matter was removed. The patient was given an injection of strychnine and morphia before the operation and she was well wrapped up. After the usual precautions had been taken the abdomen was opened in the middle line and its contents were explored systematically; the appendix was normal and the gall-bladder was not distended. On opening the abdomen distended dark small intestines presented at the wound which were covered with recent lymph. On tracing the distended gut downwards towards the left iliac fossa collapsed small intestines were seen, apparently bound down to the back of the os pubis, and while examining the intestines and surrounding parts immediately a flow of fæces welled up from the left iliac fossa; intestinal clamps were put on the intestines above and below where the fæces appeared to be escaping. On examination of the collapsed intestines (where the perforation seemed to be) they were found to be adherent to the parts just below the horizontal ramus of the os pubis, towards the direction of the obturator foramen. The upper part of the left thigh was examined just below Poupart's ligament and a distinct fulness was found on deep pressure internal to the femoral vessels. An incision was then made over the swelling and the tumour was found to consist of a piece of gangrenous omentum and was very adherent to the surrounding tissues. This was ligatured and removed; the ruptured sloughing intestines had been acutely strangulated at the entrance of the obturator foramen and on introducing the finger into the thigh wound it was found to pass into the abdomen through the obturator foramen. The clamped intestines were then brought up into the abdominal wound and it was found that the whole lumen of the strangulated gut was ulcerated through with the exception of about a quarter of an inch. The mesentery was stitched in the ordinary way and about two inches of the intestines were removed on each side of the perforation and a Murphy's button was introduced into the gut in the usual way. The abdominal cavity was thoroughly washed out with a sterilised saline solution at a temperature of 100° F. and was then closed with silkworm gut sutures. The wound in the thigh was drained with a small Keith's glass tube and iodoform gauze was passed through its lumen and the wound was closed in the thigh.

The patient stood the operation of two hours very well and she passed a good night; she passed flatus by the rectum. The temperature was 98·4° F., the pulse was 120, and the respirations were 20. She took some soda-and-milk by the mouth in small quantities at intervals of two hours during the night. On Jan. 1st, 1903, the patient's tongue became furred and she complained of abdominal pain She vomited some dark offensive fluid about 11 A.M. and died somewhat suddenly at 2 P.M. from cardiac failure and peritonitis.

At the post-mortem examination the small intestines showed signs of intense inflammation (peritonitis) and they were covered with lymph and some portions of the gut were in a gangrenous condition. The Murphy's button gave perfect anastomosis; the drainage tube was not blocked and had passed through the obturator foramen.

The sloughing condition of the gut in this case must have been produced by the arrest of the circulation and paralysis of the muscular coats; it is evidently unnecessary for the whole circumference of the bowel to be included in the stricture to produce strangulation, as in Richter's hernia; indeed, symptoms of strangulation occur when omentum only is contained in a hernia, which I myself have seen, a fact somewhat difficult to explain, as constriction of omentum by a ligature does not give rise to symptoms and most likely these cases of strangulation depend upon the reflex irritation of the omental nerves or upon a knuckle of intestine having been strangulated at the neck of the sac and having slipped back unperceived. The above case somewhat resembles one reported by my friend and late assistant, Dr. H. Sinigar,[2] which was not diagnosed during life, when a small knuckle of intestine not more than one inch in length was strangulated in the obturator foramen. The ring of the constriction showed that the entire calibre of the intestines was not included though the strangulation must have been very severe, as shown at the post-mortem examination by the sloughing condition of the gut. One of the difficulties of reducing these obturator herniæ is evidently due to the obliquity of the canal and the small size of its deep pelvic orifice. Mr A. A. Bowlby, C.M.G., points out in his Purvis Oration[3] that the absence of the passage of flatus is in all cases of greater significance than is mere constipation. Acute pancreatitis, volvulus, colitis, enteritis, gall-stones, appendicitis, and new growths were all considered before the operation as being one of the causes of the obstruction.

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A CASE OF RETROPERITONEAL PELVIC SARCOMA.

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MR. J. H. TARGETT, assistant obstetric surgeon to Guy's Hospital, who made the microscopic examination of the tumour in the laboratory of the Clinical Research Association, regarded this case as so interesting and rare and of so great clinical importance as to deserve to be recorded in the pages of THE LANCET. No attempt is made to write a learned disquisition on the diagnosis of tumours of the abdomen—that "happy hunting ground" for elaborate clinical diagnoses—but simply to give a short record of what passed through the mind of a very ordinary general practitioner during the progress of the case.

The patient was an unmarried woman in her sixtieth year, though she looked much younger. I had seen her off and on for the last few years for various slight ailments, but there were no symptoms suggestive of pelvic disease, either of the pelvis itself or of its contents. It was only on Jan. 5th of the present year that something seemed to go wrong but it was most difficult to tell what it was. One very marked symptom was an unconquerable aversion to bread, of which up to that time she was very fond. One sometimes wonders whether such marked aversions or cravings for out-of-the-way things ought not to suggest to one that there is probably some trouble in the uterus or its appendages, or at least in their near neighbourhood, so near as to incorporate them in the mischief. I once had a case of undoubted cancer of the uterus where the patient was only happy when she had the coal-scuttle by her side and could break lumps of coal into small pieces, a great many of which she ate with evident relish. My patient being a maiden lady one shrank from suggesting a vaginal examination, nor, indeed, was there any special call to do so except that every other part of the body had been examined in the search for the cause of the symptoms but without success.

My patient did not complain of anything until Jan. 5th, when her appetite failed and she could not sleep and complained of not feeling well and of inward weakness and exhaustion, not able to talk or to bear being talked to. She had a feeling of great fulness but not much pain and could not lie on either side; after this she began to take to her bed. There was a slight evening rise of temperature and this fact, together with the great weakness and exhaustion, made me suspect that pus was being formed somewhere. I searched for it without success, once, indeed, inserting a hypodermic needle into a dull spot in the chest in case it might be an encysted empyema Some time after this I thought that the abdomen was increasing in size and it was very evident that the superficial veins on the lower part of the abdomen on the left side were much larger than those on the other side. The left iliac region also was dull on percussion and this dulness extended for a considerable distance in an indefinite way over the abdomen, but the right iliac region was quite resonant and remained so to the last. The position and extent of the dulness did not vary with change of position. Malignant disease of, or abscess in the region of, the cæcum was therefore put out of court once for all, as well as the existence of free fluid in the peritoneal cavity, at least to any appreciable extent.

Various questions now presented themselves: Was it a tumour, malignant or otherwise, of the left ovary? The dulness, which began in that region, and the enlarged superficial veins seemed to lend support to the idea that it might be malignant disease of that organ. I did not think it could be a simple ovarian cyst. Could it be malignant disease of the fundus of the uterus? Certainly not of the ordinary kind, though it might be a case of malignant disease starting [illegible] erus and the upper part of [illegible] and again there had been [illegible] elling discharge both from the vagina and the rectum. This, however, was by no means constant and was small in quantity. Was it some form of peritoneal cancer? The apparently sudden onset might have indicated the rupture of a malignant ovarian tumour and general infection of the peritoneal cavity. Was it a colloid cancer of the peritoneum? The patient had that special temperament with which I am wont to associate peritoneal cancers—intensely sympathetic, with a heart ever ready to bleed for the woes and sorrows of others. The absence of a well-defined growth, the softness, and yet withal some general tenderness of the abdomen seemed to lend some support to the idea of a generalised peritoneal growth. Soon after this, however, I was able to make out a definite central tumour which eventually reached the size of an eight months pregnancy and the dulness in the left iliac region disappeared. The tumour was rather tender to pressure so that one dealt very tenderly with it; this was specially fortunate, for the post-mortem examination showed that any rough handling must necessarily have resulted in rupture of some part of the tumour. I ought to mention, however, that for some weeks she had been liable to "heart attacks" and was unable to lie down in bed except at rare intervals and had to be propped up with pillows into almost a sitting posture. This I was inclined to attribute to reflex action due to irritation of the filaments of the vagus which I believe pass into the great sympathetic plexuses of the abdomen and pelvis and through them to the sexual organs. The post-mortem examination, however, showed that a more probable explanation was that it was due to a gradually increasing hydrothorax though both factors may have played a part. The dyspnœa was usually in the early hours of the morning and one can hardly understand why dyspnœa due to hydrothorax alone should vary in that manner. Further, the dyspnœa was much more severe and persistent in the early stages of the hydrothorax than it was when the hydrothorax had attained a large size. The chest was very carefully examined in the early stage of the illness for fluid or pus in the pleural cavities, yet one is apt to forget that though absent then there is no reason why it should not be present a month afterwards. The patient, however, was so feeble and so easily exhausted that one did not push the physical examination to too great a degree, more especially as by that time I had made up my mind that there was a malignant tumour in the abdomen. She was also very averse to any operation, even of the simplest character—preferred, in fact, to die a natural death. It was well, too, that no operation was attempted in this case, for any such attempt must have resulted in a surgical disaster of the most deplorable kind. It was well that I did not even attempt to tap it.

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[2] Brit. Med. Jour., March, 1897.

[3] Ibid., January, 1903.

It may be of some interest to the Psychical Research Association to know that the month of April is a peculiarly fatal one to the family to which this lady belonged. During the last days of March we thought that it was impossible that she could live to see April, though her sister persisted in saying that she would. She did, and then, curiously enough, began to improve—the breathlessness lessened, the feeling of tightness in the abdomen was less marked, she could sleep better, she could lie down and was able to take more food and to enjoy it, and the desire for bread returned; all this even though the hydrothorax must have been increasing. It was thought now that she might live for many months, provided that the heart did not fail, for at times it was very weak. Suddenly, however, on April 30th, just after eating and enjoying a good dinner (for her) she rang her bell, and her sister on entering the room found her fighting for breath and just able to gasp out "air," "brandy," "water." She rapidly became deeply cyanotic and in a few minutes the struggle was over. On being told of the manner of her death I wondered whether it was due to sudden asystole, rupture of the heart, or pulmonary embolism.

Necropsy.—The examination was limited to the abdomen and thorax. Being in a private house and in the absence of skilled assistance the examination was not so minute as one would have liked. On opening the abdomen the first thing that struck me was the absence of the great omentum and the presence of a central tumour of the size already indicated rising up out of the pelvis. The tumour was very friable in parts, it being scarcely possible to handle it without rupturing some part; such ruptured parts to the naked eye had the appearance and consistence of thick porridge; there were also many cysts in it containing a bloody, grumous fluid, no doubt degeneration cysts. There was a small quantity of bloody fluid in the peritoneal cavity. The upper part of the tumour was white and firm and almost cartilaginous in texture. In the pelvis, where it had evidently originated, it was firmly attached to apparently the whole of the anterior aspect of the sacrum and could not be separated from it, and it was impossible to trace the large bowel or the great veins into the pelvis. The uterus was firmly welded to, and partly incorporated with, the anterior surface of the tumour, though its fundus and anterior surface could be easily traced. The Fallopian tubes were also firmly attached to the tumour though the ovaries were quite free. In fact the tumour occupied the space between the sacrum and the posterior layer of the broad ligament. On opening the chest the most striking fact was the small size of the lungs and next the large amount of bloody fluid in the pleural cavities, especially the left. Indeed, it was a wonder how the patient could have lived in comparative comfort so long with such a limited breathing surface. Had it not been that she was most carefully tended and nursed she could not have done it. The heart was small and flabby but there were no naked-eye appearances of fatty degeneration, though I regret now that it was not examined for "brown degeneration"; it was entirely free from blood clots and blood. I could not discover any sign of pulmonary embolism though the relations of the tumour to the iliac veins, together with the mode of dea [illegible]

Appended is " [illegible] the microscopic appearances of [illegible] f the specimen submitted to microscopic examination had an imperfect capsule of fibrous and unstriped muscular tissues. Histologically the growth was a soft spindle-celled sarcoma of loose texture. In some places the cells were arranged in interlacing bundles, in other parts they were irregularly disposed and widely separated, as in myxomatous tissue. Small nodules and strands of hyaline cartilage were found in the firmer areas, due to the chondrification of the growth. But the most striking feature of the section was the comparative abundance of polynuclear giant cells, or myeloids; as many as 20 of these large cells could be counted in some fields, especially where the growth had a softer texture. From these facts it may be concluded that the tumour originated from the periosteum of the spine or from some fascial structure in the pelvic cavity."

In conclusion, I would only add the query, Is it possible, or probable, that this tumour originated in a "dermoid cyst"?

Oxford.

ON THE VALUE OF ASPIRIN IN ACUTE RHEUMATISM.

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IT will be agreed, I think, that most practitioners treat acute rheumatism by salicylates in some form or dose and with good success as to the relief of pain, &c., but also with occasional drawbacks such as sickness, depression, or head symptoms. It was experience of these that led me to employ the acetic ester of salicylic acid (commonly known as aspirin) and with results which I think worth a brief record by the side of the many favourable reports from abroad. The remedy is now sufficiently known to make its description unnecessary here, but its advantages may be summarised in (1) its slightly acidulous, pleasant taste;[1]

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[1] Dr. F. G. Hopkins in Hale White's text-book remarks on this point: "Salicylate of soda ($C_6H_4OH\ COONa$) has, as is well known, [illegible] sickly sweet quality. That this depends on the [illegible] that methoxy-benzoate [illegible] sweetness. This latter [illegible] erties of salicylates, but [illegible] ed by a negative (acetyl [illegible] rom sweetness ...... and [illegible] salicylates"—(i.e., aspirin $C_6H_4<OCOCH_3$).

(2) slight or non-decomposition in the gastric juice, so that it passes without causing nausea or irritation of the stomach into the intestine from which the active acid is absorbed; (3) consequent probably on differences in absorption and elimination there is much less liability to head symptoms, of which indeed the only one I have noticed, and that rarely, is tinnitus; and (4) less cardiac depression, so that although it lowers the pulse with the temperature it can be continued more steadily and with less anxiety than the soda salt. It relieves pain and pyrexia quite as well, if not better, but does not cause such copious sweating, although such effect is well enough marked after full doses.

Whilst not now discussing the etiology of rheumatism, whether meteorological or bacteriological—or the mode of action of remedies through nerve centres, or vaso-motors, or as antiseptic to microbes—a reasonable conclusion is that the disorder mainly results from unhealthy metabolism contaminating the blood and secretions with toxins, and such products as glycocine, which are neutralised by, and in the case of the latter combined with, salicylic acid, to form salicyluric acid, as which, or free, it is chiefly excreted.

Some observers—Osler, for instance—recognise little or no advantage in salicylates beyond some power in relieving pain (he gives only 15-grain doses), and Pribram and others state that cardiac complications are *more frequent* than under alkaline treatment directed to lessening acidity and fibrinous coagulation.[2] Fuller's proportion of cases in which cardiac complications ensued when treated with alkali was 1 in 48, Dickinson's (without alkali) 9 in 28, and statistics from St. George's Hospital show, of cardiac cases under salicylates 1 in 12 and under full alkaline treatment 1 in 54, though the duration of acute rheumatic symptoms was much lessened under the former.[3] Hence many authorities, W. Ewart, Luff, and Burney Yeo, advocate the giving of alkalies *with* salicylates, and this plan I have sometimes adopted with aspirin, though many writers object to the combination as incompatible. It is better to give the two remedies alternately at intervals of a few hours.

It has been plausibly argued that what is good for rheumatism of the joints is so for that of the endocardium, and therefore if aspirin or salicylic treatment is sufficient for the one it ought to be so for the other; but there are these points of difference—the heart cannot be rested and it is more exposed to the influence of the contaminated blood; so whilst agreeing with Burney Yeo that hospital statistics represent more than the *average* percentage of heart mischief in rheumatism, yet I think they indicate that it will be safer to conjoin both treatments in severe cases.

The following abbreviated notes are subjoined as illustrative. For some of them I am indebted to Mr. Foster and Mr. Henderson, house physicians.

CASE 1.—A youth, aged 17 years, was admitted into the Sussex County Hospital on Oct. 4th, 1901, with pain and swelling of the hands, the feet, and the knees, and a temperature of 103° F. He was ordered 20 grains of aspirin every three to four hours and a small blister to the right knee. On the 5th the temperature was normal; on the 6th it was subnormal. The patient was free from pain and was sweating profusely; he was ordered to continue the dose thrice daily; on the 11th once or twice daily, and to take hæmatogen for anæmia. On the 23rd he was well and was able to leave the hospital, the attack having been shorter than several previous ones.

CASE 2.—A man, aged 32 years, was admitted into the same hospital on Oct. 31st, 1901, with pain and swelling of several joints, pyrexia, sweating, &c. The attack first began nine days previously after exposure. He was ordered 20 grains of aspirin every three to four hours. He was relieved by the next day and on Nov. 4th was free from pain and the temperature became normal or subnormal and continued so. On the 18th he complained only of stiffness in the joints for which he was ordered alternate doses of iodide of potassium.

CASE 3.—A man, aged 25 years, was admitted into the hospital on August 7th, 1901, with his first attack of acute rheumatism. 14 days previously he had sore-throat; six days before he had pain and swelling of the ankles, the legs, and the shoulders; he was now very helpless and pain prevented sleep. His temperature was 102° F. and his pulse 92. He was ordered 30 grains of aspirin every four hours. On the 8th he slept well. His temperature was normal. He was ordered 20 grains pro dosi. Steady improvement continued and by the 15th he complained only of weakness in one leg and of depression. The pulse was 44. He was ordered effervescing potash mixture with quinine and ammonia and was discharged well on the 31st.

CASE 4.—A man, aged 34 years, was admitted into the hospital on March 15th, 1901. He had had several attacks of rheumatism since 1886. This one began three weeks before his admission. He got better but had a relapse four days ago with pain and swelling, especially of the wrists, and now had a systolic apex bruit and friction sound. His temperature was 103° F., his pulse was 120, and he was sleepless. 20-grain doses of salicylate of sodium every four hours were prescribed and he was better by the 19th, but he had a relapse on the 23rd and again, after improving, on the 30th. On April 3rd 15-grain doses of aspirin thrice daily were ordered with benefit. On the 11th, when convalescent, this was changed for quinine with iodide of potassium, but resumed next day on account of a relapse. He was not up until May 1st. In this severe case some comparison between the remedies is possible but aspirin was not given in doses large enough or continued so steadily as it should be.

CASE 5.—A man aged 44 years, was admitted into the hospital on Feb. 5th, 1901. His first attack of acute rheumatism occurred two years before; this one began with tonsillitis in December, 1900. He had now pain and stiffness in the ankles, the arms, and the shoulders. His temperature was 100° F., his pulse was 88, and he had a presystolic bruit, probably old. He was treated by aperients, opium, and salicylates in 20 grain doses and was much easier with a subnormal temperature on the 8th, but he had a relapse on the 20th when aspirin—15 grains thrice daily—was prescribed. On the 23rd he felt much better; his temperature was 99° but the heart's action was weak and the urine was alkaline. The medicine was reduced to twice daily. On March 4th quinine with iodide of potassium was substituted but a relapse occurred on the next day. Aspirin was resumed in *combination* with the last with relief and continued till he was discharged well on the 21st. In this case also the dose should have been larger and more continuous.

CASE 6.—A woman, aged 31 years, was admitted into the hospital on June 7th, 1901. She had had rheumatism at the age of 15 years. The present attack began five days previously with pain and swelling of the knees and ankles, sweating, &c.; now the temperature was 102° F., the pulse 120, and there was a systolic bruit. She was ordered 30 grains of aspirin, which dose was placed dry on the tongue; the second dose relieved all pain but the third irritated the stomach and was rejected. The quantity was then halved and taken readily in soda-water with a little brandy every four hours. (In other cases it was given with mucilage or a little acetic acid.) On the 9th she was free from pain and slept; her evening temperature was 100°. On the 13th she was doing well and the remedy, given now in sugared water, was reduced to twice daily. On the 20th some relapse occurred (the menses also) and it was again ordered every four hours. On the next day the patient was better and on July 6th she went out well. The bruit was not heard; during the last fortnight the patient had also had byno-hæmoglobin and citrate of iron with quinine.

CASE 7.—A man, aged 33 years, was admitted into the hospital on Dec. 16th, 1901. 14 days previously he had sore-throat, and for four days pain and swelling of the right foot, the knee, &c. His temperature was 102° F. and his pulse was 84. He was ordered 20 grains of aspirin every three hours and aperients. On the 17th the pain was much less and he was sweating profusely. The medicine was given every four hours. A blister to the knee was also prescribed. On the 20th he was free from pain. His temperature was normal. From the 23rd the dose was lessened and the temperature was subnormal and it remained so till he was discharged well on the 30th.

CASE 8.—A girl, aged 17 years, was admitted into the hospital on Jan. 3rd, 1902, with pain and swelling of the joints (mostly the knees and ankles) which began a month previously, when she went to bed for 14 days, then to work again, and soon relapsed. The temperature now was 100·2° F. and her pulse was 96. The tongue was coated and she was constipated and sleepless. The heart sounds were not clear and there were râles in the lungs with cough. She was ordered aperients, one blister, and 20 grains of aspirin every six hours. *On the next day the pain was* relieved and the temperature was normal. On the 5th the dose was ordered thrice daily and on the 6th it was lessened to 15 grains, the pulse being 60. The effective dose for such a case was thus lessened too soon and on the 8th some relapse occurred (the menses also). The 20-grain dose was resumed every four hours and, together with salicylate of opium lotions, quickly afforded relief. On the 15th, the pulse being again 60 and the temperature being subnormal, the dose was reduced to 15 grains thrice, and later twice, daily. On the 19th and 23rd slight relapses occurred, which yielded at once to increased doses. On the 19th stiffness of the joints only was complained of, which was treated by Tallerman-Sheffield baths and quinine with iodide of potassium. On Feb. 8th she was discharged well, except for slight valvular mischief, probably old.

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[2] Nothnagel: Spec. Pathol. u. Therap., Band v., S. 99.

[3] THE LANCET, March 17th, 1900, p. 761, et seq.

CASE 9.—A girl, aged 18 years, was admitted into the hospital on Jan. 20th, 1902 She had had a previous attack of acute rheumatism when seven years of age; the present one began a month previously, but she had kept up till the last three days. She complained of pain in the feet, the wrists, and the hands. Her temperature was 101° F. She was constipated and had a coated tongue. There were effusion in the left knee and a systolic apex bruit, probably old. She was ordered aperients and 20 grains of aspirin every three hours. On the 21st her temperature was normal, her pulse was 76, and the pain was much less. On the 23rd her temperature was subnormal and her pulse was 68. On the 25th her temperature was 97·2° and her pulse was 68; she had little pain, so the dose was halved. On the 29th the treatment was alternated with iodide of potassium for stiffness. On Feb. 11th the patient was discharged well, except for the bruit.

CASE 10.—A youth, aged 17 years, was admitted into the hospital on Jan 17th, 1902, with his first attack of acute rheumatism of one week's duration. His temperature was 102·4° F. and his pulse was 72. He had a systolic apex bruit and there were pain and swelling mostly in the ankles and the knees. He was ordered 20 grains of aspirin every four hours, a blister to the knees, and an aperient. On the next day he was much easier, his temperature was subnormal, and his pulse was 60. He was ordered to alternate an alkaline iodide with the aspirin, and a blister to the region of the heart. He progressed well till Feb. *7th, when tonsillitis occurred. He was con*valescent on the 14th, when syrup of hydriodic acid was substituted and he was discharged on the 20th, the bruit only remaining.

CASE 11.—A man, aged 38 years, was admitted into the hospital on Feb. 10th, 1902. In July, 1900, he was an in-patient for three weeks with acute rheumatism and mitral affection; he was treated by salicylates and the temperature fell from 102° F. to normal in 36 hours. In *August he was readmitted for another three weeks and* again in October till the middle of December. with relapses which were more or less controlled by salicylates. (His father died from rheumatism and his brother has it.) Three weeks before admission he had sore-throat; one week previously the feet and legs became painful and then other joints. The patient was sleepless and his temperature was 103°. He had a systolic apex bruit and an increased area of cardiac dulness. He was ordered 30 grains of aspirin every *four hours and a blister to both knees. On the next day,* after five doses, he had great relief, "much more," he said, "than from salicylates." His temperature was 96 4°, his pulse was 80, and there was no marked depression. He was ordered to halve the dose. On the 12th the patient perspired much in the night; he was now free from pain: the temperature was subnormal and the urine alkaline, with a specific gravity of 1020 On the 15th the bruit was as before; the dulness was normal. The aspirin was continued every six hours, then thrice daily, and he recovered well without relapse, being up on the 21st and out on March 2nd. He has, however, been readmitted once since then to go through a similar experience.

Considerations of space prevent the printing of notes of some 30 or 40 somewhat similar cases, including some of pleurisy and neuralgia Subacute and chronic cases react less favourably, but the preceding suffice to show the power of the drug to relieve without discomfort and also the necessity of using sufficient doses continued sufficiently long if relapses are to be avoided.

Hove.

THE PREVENTION OF THE RECURRENCE OF NASAL POLYPI.

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THE pathogenesis of recurrent nasal polypi, together with that of the primary growths, is still somewhat involved in mystery. It is true that the attractive field of speculative pathology has been diligently tilled, but with a few exceptions I do not think the harvest of definitely proven facts has been a very rich one. On the other hand, a study of this interesting subject, both in this country and on the continent, has convinced me that in the matter of the evolution of successful methods of treatment the labours of the clinical *observer have been distinctly more fruitful. By successful* methods of treatment I do not mean those procedures only which have for their aim the mere initial removal of the polypi, but rather those whose object it is to prevent the tendency to recurrence which these growths exhibit in such a marked degree. In some instances the recurrence of nasal polypi is only apparent and is due to the inaccessibility of their site of origin. The growths seem to arise most commonly from the concavity of the middle turbinated bone, *from the lower part of the infundibulum, the uncinate* process, or the bulla ethmoidalis—in other words, from the region of the middle meatus. Less frequently they may spring from the long free border of the middle turbinal. When, therefore, all visible polypi have been removed from the nose, others may still be packed away in the recesses under the middle turbinal and may rapidly enlarge and develop after pressure has been removed.

Polypi tend to return so long as any polypoid tissue is left, so that the removal of all such residual tissue which may be visible with forceps, snare, galvano-cautery, or chromic acid is a necessary part of the treatment. The cauterisation of the particular pedicles of the excised growths is recommended by some authorities but this manœuvre has, in my experience, been very frequently impracticable as the growths often sprang from areas which were hidden from view. The coincidence of polypi with suppuration in the accessory sinuses, especially the ethmoidal cells, is a common one. One observer[1] *believes that nearly all cases* of nasal polypi are due to suppuration in the sinuses, but this conclusion is not in accordance with the experience of the majority of surgeons; the polypi have, indeed, in some instances been considered to be the cause of the sinus disease, chiefly by preventing free drainage from the cavities. It would be possible to quote a considerable number of instances within one's own personal knowledge in which the two conditions of sinus disease and polypi had been found in the association of probable *cause and effect but the following* may serve as examples.

CASE 1.—A man, aged 25 years, was sent to me at the Hospital for Consumption and Diseases of the Throat for obstruction of the left nasal cavity, discharge of pus from that side, and unilateral headache. The cavity contained several large polypi and [illegible] of the left frontal sinus and of the [illegible] obstruction had not bee[illegible] the nasal discharge *had begun to be troublesome.* A modified Kuhnt's operation was done on the frontal sinus and the anterior ethmoidal cells were also curetted. When last seen, one year after the operation there had been no recurrence of the polypi

[illegible] year [illegible] on [illegible] to an attack of inflammation in the left sphenoidal sinus and posterior ethmoidal *cells 18 months previously from* which time he dated his nasal symptoms. The nose had gradually become blocked on the left side and at the time of examination the obstruction was very marked. A collection of polypi was found towards the posterior part of the cavity projecting into the naso pharynx The polypi were removed and the posterior ethmoidal cells were curetted. Great relief was experienced and up to the present there has been no recurrence either of the growths or of the suppuration.

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[1] Grünwald: Nasal Suppuration. Translated by Lamb London, 1900.

CASE 3.—This patient was a man, aged 32 years. There were a small collection of polypi on the right side and empyema of the corresponding antrum. The polypi were removed and the antrum was opened by alveolar puncture. The polypi recurred later. Six months after the first operation, as the antrum had not healed and the patient was anxious to get rid of the discharge, the radical (Caldwell-Luc) operation was performed and the nasal cavities were again treated. When last seen (six months after the last operations) the patient appeared quite cured of his nasal and antral disease.

Lambert Lack[2] has comparatively recently made some valuable observations on the origin and the radical treatment of polypi. He believes that these formations usually owe their origin and their tendency to recurrence to disease of the underlying bone—the morbid condition being an osteitis and a periostitis of the ethmoid. These observations have been practically confirmed by Thurston, Martin, Cordes,[3] and others, although the last-named writer (Cordes) did not in his investigations always find bone disease in mild cases of polypi on microscopic examination. The growths, therefore, according to the foregoing theory, do not arise as independent morbid formations but are of the nature of outward and visible signs of morbid processes in the subjacent bony tissues. Clinical testimony in support of this statement appears to be provided by the fact that the inclusion of a portion of underlying bone, when removing a polypus with the snare, is found to be of distinct value in reference to the prevention of recurrence. Still further evidence is forthcoming in the excellent results in many cases of systematic treatment of the whole bony area from which the polypi grow.

It is a matter of common experience that when the polypi are few in number, are of long standing, and are not complicated by sinus suppuration, treatment with the snare will often effect a cure. In these instances the initial bone disease may be presumed to have subsided. More commonly, however, and especially if the growths are numerous and a radical cure is wished for, further treatment will be required. When all visible polypi have been removed it will be necessary to expose the parts from which they grew and to cut away the diseased tissues. This will probably involve as a preliminary the removal of a considerable portion of the middle turbinal or of what represents that structure. With local anæsthesia the undermentioned procedure[4] has seemed, in my experience, to be the most rapid, the most effectual, and the least painful method of carrying out what is desired. The manner of applying the cocaine is of importance. Two long strips of sterilised gauze are dipped in 20 per cent. cocaine solution; one of these is inserted between the middle turbinal and the septum, the other is pushed within the concavity of the turbinal, well into the middle meatus, and a third strip is insinuated between the former two under the inferior border of the turbinal After a lapse of ten minutes the operation is commenced. Luc's flat nasal forceps of the largest available size is introduced into the nasal cavity, passed to the insertion of the middle turbinal, and the portion seized is twisted and rapidly withdrawn. The major part of the turbinal can be removed by three or four such applications of the forceps, which should be made in rapid succession, the whole process only occupying a very short time. After drying the parts by packing with gauze the region which has been exposed by the removal of the turbinal can be examined and polypoid remnants and other diseased tissues removed by the same forceps or by a ring knife. Luc[5] additionally advises the opening of the posterior ethmoidal cells at the same sitting with his forceps.

The results of this procedure, with regard to the prevention of recurrence, have been very favourable, cases being cured in two, or at most a few, sittings, which would otherwise have had to endure weeks of treatment. If a recurrence does take place it is not of a severe nature and is usually more easily treated than is the primary condition on account of the modification which has taken place in the anatomy of the parts Other methods differing in detail but having the same object as the above—viz, the treatment of the parts from which the polypi grow—have been attended with good results General anæsthesia may, if necessary, be employed.

Lastly, the most advisable method of treatment for severe cases of multiple polypi, with a history of several operations for their removal, is still somewhat *sub judice*. On the one hand, there is little doubt that when polypi are thoroughly removed in the ordinary way the intervals between the recurrences in certain cases tend to become longer and longer. On the other hand, one knows of instances where it has been felt necessary to clear out the nasal passages at comparatively short intervals for a period of years. For the severer cases of polypi, especially if associated with suppuration and extensive ethmoidal diseases, Lack[6] has recommended a procedure which, briefly stated, is as follows. Under a general anæsthetic all polypi are removed, as is also the middle turbinal if still present. When there are many polypi but the extent of the disease is unknown, Lack advises commencing treatment by removing some of the larger growths with the snare under cocaine. This often enables a better view of the parts to be obtained and a more accurate estimate of the extent of the disease to be formed. The essential part of the operation is the thorough scraping of the lateral mass of the ethmoid with a large ring knife, by which large masses of polypi, degenerated mucous membrane, and fragments of bone are got away. Scraping is continued until all friable tissue is removed, the finger being introduced from time to time to ascertain the condition of the parts and the progress made. The field of operation is undoubtedly a perilous one, the vicinity of the cribriform plate being especially worthy of respect. It is, of course, highly advisable that the operator should have a very intimate knowledge of the region and that he should carefully abstain from using any force in an upward direction; also that a large ring knife should principally be employed. My own experience of this operation for severe cases of polypi, although somewhat limited, has, on the whole, been very encouraging. In no instance have any dangerous symptoms occurred. A temporary black eye has resulted on one or two occasions and in a case at present under observation there was after the operation a considerable outgrowth of granulations in the right nasal cavity which looked like a rapid return of the disease. These, however, have become considerably less and seem to be in process of spontaneous disappearance. The operation would not appear to be applicable to elderly patients.

Manchester.

ON THE NATURE OF CURSCHMANN'S SPIRALS.

BY E. E. LASLETT, M.D. VICT., B.SC. LOND.,
SURGEON TO THE HULL AND SCULCOATES DISPENSARY.

CONSIDERABLE difference of opinion still exists as to the nature of the spirals present in the sputum of asthmatic persons. Dr. J. F. Goodhart in his article on asthma in Allbutt's System of Medicine[1] expresses the opinion that they are allied in nature to the plugs in the sputum of plastic bronchitis. So far as I have been able to find he is the only writer who holds this opinion. I have for some time had under observation a patient who suffers from asthma-like attacks and whose sputum presents features which lead me to believe that some forms (if not all) of the spirals are, as Dr. Goodhart suggests, of similar origin to the casts of fibrinous bronchitis.

The patient is a woman, aged 26 years, of delicate constitution. There is nothing of special interest in her family history. She first began to suffer from attacks of dyspnœa 18 months ago. At first the attacks occurred at rare intervals but gradually they became more frequent and prolonged until at one time she was almost constantly troubled with wheezing and troublesome cough and the more severe attacks occurred at intervals of about a fortnight. The patient was always forewarned of the onset of an attack by a feeling of tightness in the chest with diminution, even to cessation, of the previously abundant sputum. This discomfort increased during the day until towards midnight the dyspnœa became severe and the cough had

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Lack: Proceedings of Laryngological Society of London, December, 1900, and Journal of Laryngology, July, 1900.

[3] Cordes: Archiv fur Laryngologie, 1900.

[4] "Luc's method.' The forceps is made in three sizes by Vaast, 22, rue de l Odéon, Paris.

[5] Luc: La Presse Oto-Laryngologique Belge, May, 1903.

[6] Lack: Cheyne and Burghard, Manual of Surgical Treatment Part v., London, 1902.

[1] Allbutt's System of Medicine, vol. v., p. 296.

entirely ceased. After an interval of from 12 to 24 hours the cough reappeared, the difficulty in breathing gradually subsided, and the characteristic sputum gradually increased in quantity. Cyanosis was never marked but the distress was severe, with profuse perspiration and subsequent prostration. During the next day or two cough was frequent and the sputum was very copious but afterwards gradual improvement took place, though the bronchitic symptoms never really disappeared before another attack occurred.

The most striking characteristic of the sputum is the large number of Curschmann's spirals present. Shortly after an attack as many as a dozen are coughed up in the course of 24 hours, but they gradually diminish in number until shortly before the next attack only one or two are coughed up in the same interval. Associated with these spirals there are casts of the smaller bronchi. These I have never observed very complete in their branchings. The parent stem is usually of about the diameter of a crow quill and may or may not have small side branches but it always divides dichotomously and the resulting divisions again branch, but further than this I have rarely seen, and the casts in this case have never shown the finer ramifications of the bronchial tree seen in the very complete specimens that have been described. Nevertheless, there can be no doubt about the nature of the plugs in this case.

Examined in the fresh state the parent stem of the casts appears to be practically solid but the branches are hollow. This is also well shown by hardening in a mixture of equal parts of methylated spirit and glycerine and subsequently soaking in 50 per cent. glycerine which swells up the tissue, shrunken by the action of the spirit, to its former size. By this treatment the arrangement of the branches is well preserved and their tubular character is quite evident. A portion of the main stem hardened in alcohol, sectioned in paraffin, and stained, shows a structure of irregularly concentric layers probably of a fibrinous nature in which are embedded numerous nucleated cells. In the fresh state the smaller branches show a well-marked spiral arrangement indistinguishable practically from that of the true spirals. In the parent stem this spiral arrangement is absent. The spirals resemble those figured in von Jaksch's[2] "Clinical Diagnosis" and are all of the coarse variety without a central thread. The spiral markings both in the casts and in the true spirals seem to be due to the arrangement of the cells as much as to the spiral mucus (?) threads. The cells, which are very numerous and of varying size and character, are arranged in the form of a dense spiral band. Many of them show eosinophile granules.

There is one important point which has not, I believe, been previously described. I have noticed that some of the spirals show a division into two distinct branches at one end. There is no doubt of this. Spirals often interlace in a manner which suggests branching but is not really so. In true division the branches occur at the end of the spiral, are short (about one centimetre) and of equal length, and are not more than half the diameter of the main stem. Weak alkalies dissolve the greater part of the translucent envelope of the spirals as of the casts, leaving a much finer thread which retained the spiral arrangement quite unchanged. This is no doubt due to the fact that the spiral is so largely formed by organised cells which are unaffected by the weak alkali. Strong solutions of caustic potash dissolve both casts and spirals almost completely.

The present case appears to be, if one may use such a term, a "half-way house" between true asthma and plastic bronchitis. The character of the dyspnœa—forced inspiration followed by very prolonged and difficult expiration—is that of asthma. On the other hand, the long duration of each attack and the presence of true casts in the sputum point to fibrinous bronchitis. It is well known that occasionally spirals are found in the sputum of patients suffering from the last-named disease (Osler[3]), and also that fibrinous casts sometimes show spiral markings on their terminal branches. In my case the spirals are undoubtedly the more prominent feature of the sputum.

The following quotation from Hoffmann[4] is of interest in this connexion: "I am forced to assume that the terminal branches of the bronchial tree end in spirals. For when we consider that in the act of inspiration the lungs are distended and that the bronchi must follow this distension, can it be imagined that a long straight tube should be distended longitudinally? It is much more probable that they resemble corkscrews and it is thus readily explained how the bronchi can follow the distension of the lungs. A very beautiful metallic cast of the bronchial tree which I saw at the Leipsic Pathological Institute shows this corkscrew like course of the larger branches of the bronchi and suggests the assumption that the finest branches have a similar course. ...... It is now understood how the fibrinous casts which originate in the fine bronchi occasionally show a spiral arrangement."

The most generally accepted theory of the formation of asthmatic spirals is that they are due to a twisting movement given to a mass of mucus in one of the bronchial branches. Yet it is difficult to understand how this spiral movement may arise. The present case leads me to suggest that these structures are in reality casts of the smaller bronchial branches similar in nature to the casts in true plastic bronchitis. In support of this theory I may draw attention to the following points: (1) fibrinous casts frequently show spiral terminations; (2) these terminal spirals are practically identical in structure with the true Curschmann spirals, also present in the sputum; (3) the spirals, at least in this case, owe their peculiar structure largely to the arrangement of the great number of cells present; and (4) some of the spirals terminate in two equal branches of smaller diameter than the parent stem. This fact alone makes it difficult or impossible to believe that these structures are formed by a spiral movement.

Hull.

NOTES ON A CASE OF CHRONIC ULCER OF THE STOMACH; EXCISION OF ULCER; POSTERIOR GASTRO-ENTEROSTOMY; CHOLECYSTOTOMY.

By W. McGREGOR YOUNG, M.A., M.D. GLASG.

Now that the operation of gastro-enterostomy has become so common the publication of a single case of the kind may seem uncalled for, although the case, even from the operative point of view, is not without its noteworthy features, but I have thought it might be of sufficient interest to bear reporting if, reversing the usual order of precedence, an account were given of what was found at the time of operation and the lesions present were compared with the signs and symptoms noted previously and the history of the case up to that time.

The patient, a man, aged 54 years, a sufferer from long-continued dyspepsia, had lost weight to the extent of two stones within the last year and showed on examination evidence of pyloric obstruction. An operation was advised after consultation with Mr A. W. Mayo Robson and Dr. A. G. Barrs and to this he consented. Accordingly, on Feb. 18th Mr. Mayo Robson operated, the patient having been on sterile food for two days beforehand and the mouth attended to with a view to oral asepsis. The stomach was found to be considerably dilated, the gall-bladder tense and full, and the tumour which had been imperfectly felt was a much enlarged and thickened pylorus. So hard and dense did this latter feel that it was impossible to say from sight or touch whether it consisted of new growth or not. In order to determine this Mr. Mayo Robson opened near the pylorus by an incision in the long axis of the stomach and exploring with the finger found it to be what it certainly did not look like from without, merely hypertrophy. A search was made further along the lesser curvature for the cause of this overgrowth and a very well marked and typical specimen of chronic ulcer was found on the posterior wall two and a half inches from the pylorus. The portion of stomach on which was the ulcer was clamped, the ulcer itself, of about the size of a sixpence with hardened edges and a bluish grey floor, was excised, and the mucous membrane was brought together by a continuous suture of green catgut. The incision in the wall of the stomach was stitched up vertically in the usual way with a double row of sutures, mucous and serous. Although the evident cause of the trouble had been discovered and removed it was thought wise lest other ulcers were present to perform a gastro-enterostomy. This proved, however, a matter of no little difficulty, for on attempting to reach the posterior wall of the stomach it was found that owing to an evidently long persisting perigastritis numerous adhesions had formed which prevented an easy exposure, the lesser peritoneal sac being obliterated and the transverse mesocolon firmly adherent to the stomach. A sufficient free surface of stomach for manipulative purposes was hard to find. A considerable amount of tension was consequently present after the junction of the jejunum and stomach was effected. There is little left of moment to relate; the patient made an excellent and uninterrupted recovery. It should, however, be added that the gall-bladder was emptied of its dark inspissated meconium-like bile, in which were innumerable tiny little gall-stones, and was drained in the ordinary way for two or three weeks.

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[4] Hoffmann [illegible] ases of Bronchi and Lungs, p. [illegible].

I saw the patient the other day and he told me that his appetite and digestion were "simply marvellous"; he ate and drank anything not alone with impunity but with enjoyment. The patient had suffered for 20 or more years from dyspepsia, at first with intermissions of good digestion, but for the last two or three years almost constantly. Going back on his old symptoms—that is, prior to a year ago, so far as his memory could serve him—they come to this: heaviness, then epigastric pain, but not severe, shortly after a meal, continuing up to the next meal when relief came again for a time, belchings which sometimes gave him ease, regurgitations of sour mouthfuls and pyrosis, vomiting very rare, appetite good, and bowels constipated. These are evidently the symptoms of hyperchlorhydria and later chronic gastric catarrh

The lesions which showed themselves at the operation were an ulcer near the pylorus, which does not preclude the possibility of others being present elsewhere, great hypertrophy of the pyloric sphincter, a much dilated stomach, posterior perigastric adhesions, and a gall-bladder showing signs of biliary catarrh, full of inspissated bile and tiny gall-stones or grit. What part the latter played in his symptoms it is impossible to say, but at any rate I could elicit no story of attacks of biliary colic. How far, then, did the lesions found correspond to the symptoms complained of by the patient and the signs presented on examination?

1. *Pain*.—It was seldom severe, it was never intense, nor was it of a burning or sharp cutting kind, but rather there was present a sense of constriction and intense discomfort and distension; it began half an hour after a meal and increased during the next two hours It was felt first in the pit of the stomach and afterwards lower down but also across the chest and radiating to the shoulders. It was relieved completely by the next meal, so much so that for half an hour he thought he was going to escape in spite of all his past experience to the contrary. It was not made worse in the dorsal decubitus. These are not the symptoms one would expect from pyloric ulcer, but the posterior perigastric adhesions by hindering the motility of the organ may help to explain them.

2. *Hæmatemesis*.—He never vomited blood nor so far as he knew did he ever pass any by the bowel. This is against a diagnosis of ulcer.

3. *Vomiting*.—He very rarely vomited and only after attempting to take something heavier than usual. It was always a most painful process; the latter is not surprising in view of the adhesions, but in view of the dilatation one would have expected frequent vomiting.

4. *Belching*.—This was most troublesome and distressing too, in so far as it seldom brought much relief.

5. *Regurgitation*.—This was a constant sequel to every meal. It consisted of a greasy fluid with undigested bits of food.

These are quite in keeping with stagnation of food in a dilated stomach.

And now as regards signs.

1. *Tenderness*.—There was very little elicited anywhere, not at all over the pyloric end of the stomach. The only tender spot was over the greater curvature, its lower border, and to the right.

2 *Tumour*.—I think this was very doubtfully palpable at the pyloric end. Mr. Mayo Robson thought he could detect an enlargement there.

3. *Dilatation*.—This was thought likely from the obvious splashing three hours after a meal and was proved by distension with gas, the lower border extending from two and a half inches to three inches below the umbilicus.

4 *Peristalsis*.—This was very clearly seen as a well-marked wave along the whole length of the stomach and did more to convince the observer of pyloric obstruction than any other sign or symptom.

5. *Loss of weight*.—This was the most alarming symptom of all. He had lost two stones in weight in the last year. It was really this that made him come to me and it was this that made me urge the advisability of immediate surgical interference. It more than suggested malignancy but yet, as events proved the loss in weight was really the result of starvation. He had so reduced his rations in quantity and specially in nutritive value that he was literally starving himself, living as he did on beef-tea and gruel to escape pain, although not able to avoid discomfort. Obstinate constipation and a certain loss of strength and vigour may also be noticed. Lavage he bore badly, but a washing out of the stomach showed free hydrochloric acid.

To sum up, a diagnosis of ulcer of the stomach near the pylorus could evidently only have been made by deduction. The dilatation pointed to pyloric obstruction and the peristalsis made it fairly certain. As the obstruction was only partial and intermittent this was probably due to spasm. The most likely cause of this spasm was ulcer. So that, after all, one might have arrived at a correct diagnosis on general grounds, apart from such refinements as are implied in a chemical analysis after an Ewald's test breakfast of the contents of an Einhorn's stomach-bucket, although one would have to confess that many of the symptoms were of no help but rather a hindrance to such a conclusion.

Leeds.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF PLEURO-PNEUMONIA ACCOMPANIED BY ABDOMINAL DISEASE.

BY PERCY ROSE, L.R.C.P. LOND.,
PRESIDENT OF THE PLAISTOW AND CANNING TOWN MEDICAL SOCIETY.

THE patient was a healthy, well-nourished girl, five years of age, and was last at school on Feb. 2nd. Her mother had noticed that the child's face, legs, ankles, and body were becoming swollen and took her to a hospital on Feb. 5th, where she was examined, given a bottle of medicine, and told to come again in two weeks' time if she was no better. On the evening of the 9th local medical advice was sought as the "child seemed choking." She was then in bed and complained of pain over the lower half of the abdomen, which was tender on pressure; she called out frequently for the chamber utensil but passed nothing beyond a little flocculent stained mucus. There was considerable straining but no melæna. A lump was felt in the right iliac fossa. Her temperature was 98° F., her pulse was rapid, and her respirations were 50 per minute. The face was pale and the throat and the pharynx were normal. There were râles all over the front of the left chest and the resonance of both lungs was impaired posteriorly. A diagnosis of early intussusception was made and her removal to a hospital was advised. During the night the straining ceased and on the following morning the child's condition was lower. Her temperature was 98° and her pulse and respiration were respectively 180 and 80 per minute. At the hospital tubular breathing was noted at the left base and no intussusception was felt. The child died the same evening from pneumonia.

On the next day a post-mortem examination showed both lungs to be entirely solid and shrunken in appearance, and in many places, chiefly over the left apex, there was a layer of purulent lymph. On opening the abdomen no intussusception was apparent, but on removing and laying open the intestines the region of the ileo-cæcal valve was seen to be affected. For about one inch to one and a half inches on both sides of the valve there were recent crimson extravasations of blood in the submucous tissue, presenting flame-like patches half an inch in diameter. The lower inch of the ileum was œdematous and the crowded solitary glands were swollen and presented a sago-like appearance with a crimson background of extravasated blood. There were similar extravasations in the adjoining mesentery. The remainder of the intestine and other organs were normal The intestinal appearances were only compatible with the theory of a small intussusception which had slid back

The case presented several interesting features—namely, the preliminary general swelling the absence of serious symptoms four days before death (as was shown by the child s dismissal from the hospital for two weeks), the sub normal temperature, the pallor of the countenance and the post mortem appearances of the lungs and ileo cæcal region These all point to a pleuro pneumonia of excessive virulence and the virulence in my opinion was caused by the intestinal condition

Seven cases of pleuro pneumonic diseases simulating abdominal trouble were published in The Lancet[1] last year and the abdominal symptoms were explained on the theory of referred pain The present case might have been put under the same heading if the post mortem examination had not revealed a definite abdominal lesion It is noteworthy, however, that out of the seven cases two had sustained blows on the abdomen, one had non perforated gastric ulcer, another had a definite history of the same complaint and a fifth patient had been constipated for 12 days In the present case the abdominal trouble probably acted as a culture ground for pathogenic organisms which, when set free, aided and increased the virulence of the pleuro-pneumonia from which the child died, and the thought occurs that those seven reported cases of pleuro pneumonia may not merely have simulated but have been actually accompanied or preceded by abdominal disease

Canning town F

SEPTIC CONJUNCTIVITIS

By R W Doyne, M A Oxon, F R C S Eng,

READER IN OPHTHALMOLOGY IN THE UNIVERSITY OF OXFORD CONSULTING OPHTHALMIC SURGEON RADCLIFFE INFIRMARY SENIOR SURGEON, OXFORD EYE HOSPITAL AND ASSISTANT SURGEON ROYAL EYE HOSPITAL SOUTHWARK

From time to time among private patients of the better class one sees cases of acute inflammation of the conjunctiva with great thickening of that tissue and marked enlargement of the papillæ of both upper and lower lids, resembling somewhat in this respect, only more so a very acute follicular condition provoked by atropine, the inflammation is usually limited to the palpebral conjunctiva, but there is a tendency for it to pass round the fornices and to involve the ocular conjunctiva There is free lacrymation and the discharge is more serous than purulent Ptosis, more or less marked, is present There is generally tenderness or enlargement of the pre auricular glands and a good deal of constitutional disturbance is present The condition is generally limited to one eye Ophthalmic surgeons of experience will I think, at once recognise the affection I am attempting to describe, but those text-books that notice it are, as a rule, rather vague and some, I believe, classify the condition under acute trachoma, with which disease, however, it has hardly any thing in common It yields slowly but with certainty to nitrate of silver, sulphate of copper, or, better still, to argyrol (30 per cent) in the course of from three to eight weeks It is only when treated by hot fomentations, cocaine or tying the eye up (too often the case) that the affection becomes exaggerated and extends to the cornea, producing a "soppy" condition of that structure and sometimes small infiltrated ulcers towards its margin

I have for many years seen isolated cases of this form of conjunctivitis occurring so far as my memory serves me in the spring, summer, and autumn rather than in the winter My reason for drawing attention to it now is the fact that this summer, at any rate in the Oxford district there has been quite an epidemic of such cases In two days recently I have seen three severe instances quite unconnected with each other It would be interesting to know if this has been the experience of surgeons in other parts

The bacteriology of this affection should be interesting, it cannot be very contagious for with only ordinary pre cautions it is limited to one eye The train of symptoms suggest a septic origin and I have sometimes imagined I could trace a connexion with mangy dogs or cats but this is little more than speculation Perhaps others will be able to define a cause with more authority

Oxford

A Mirror

OF

HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via nisi quamplurimas et morborum et dissectionum historias tum aliorum tum proprias collectas habere et inter se comparare —Morgagni *De Sed et Caus Morb* lib iv Proœmium

ST GEORGE'S HOSPITAL

A CASE OF GANGRENOUS APPENDICITIS WITH PNEUMONIA AND EMPYEMA, THREE OPERATIONS, CONTINUOUS IRRIGATION OF THE PLEURAL CAVITY, RECOVERY

(Under the care of Mr H S Pendlebury)

For the notes of the case we are indebted to Dr A J Jex Blake house surgeon

The patient, a boy, aged 17 years, was admitted into St George's Hospital on Oct 21st, 1902, complaining of acute pain in the abdomen vomiting, and constipation The attack began very suddenly on Oct 17th, while the patient was working a carrier tricycle up hill, with severe pain in the lower part of the abdomen On the morning of the 18th he started work but he soon had to desist because of the violent pain and vomiting that ensued and he took to his bed The pain and vomiting continued on the 19th 20th, and 21st, and when he was admitted his temperature was 104 4° F, his pulse was 125, his respirations were 50, and his bowels had been confined since the 18th

On examination the abdomen was found to be quite rigid and board like, not moving at all on respiration There was no distension and marked tenderness in the right iliac region was present. Immediate operation was decided upon gas and ether were given, and Mr H S Pendlebury opened the abdomen in the right iliac region by an oblique incision three inches long The deeper layers of the abdominal wall were œdematous and as soon as the peritoneal cavity was opened a small quantity of thin, brown, puriform very offensive fluid welled up from it Considerable matting of the parts about the cæcum was observed and the appendix itself was not found, but about an inch above the cæcum a whitish gangrenous patch of the size of half a crown was seen on the outer aspect of the colon, with a corresponding gangrenous area on the abdominal wall in contact with it Further disturbance of the parts was deemed inadvisable, the cavity was packed with gauze and the lower three quarters of the wound were closed with fishing gut sutures and dressings of cyanide gauze and wool were applied The plug was removed under gas 48 hours later, the wound being dressed daily and the general condition of the patient showing considerable improvement His temperature was down to the normal on the 24th when a few of the stitches were taken out, and on the 28th the remaining stitches were removed On each of the latter dates several drachms of whitish inoffensive pus came away from the wound On the evening of the 29th the patient s breathing suddenly became embarrassed and he complained of acute pain over the right chest in front, there was no rigor but slight herpes was observed on the upper lip On examination there was dulness to percussion over the right base and axilla, with loss of vocal fremitus and breath sounds and a few sticky râles were heard, no friction sounds were detected The temperature ran up to 103 4° and on the next morning it reached 104 2° Dr W Ewart was called in consultation to the case and diagnosed empyema Aspiration was performed in the right posterior axillary line in the dull area but nothing more than a few drops of blood could be drawn off On the 31st the temperature was down to 100°, the pulse was 148 and the respirations were 48 and laboured Aspiration was [illegible] inch below and [illegible] creamy brown [illegible] next morning chloroform was administered and Mr Pendlebury resected one and a quarter inches of the fifth right rib just outside the nipple line, 25 ounces more pus escaped The empyema cavity was found to lie in between the lobes of the lung and consolidated lung tissue was felt behind it A large empyema tube (No 14) was inserted and the usual dressings were applied

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[1] The Lancet, August 2nd (p 280) and 16th (p 440) 1902.

During the next eight days the temperature was 102° to 103° in the evening and not below 100° in the morning. A small amount of pus came daily from the abdominal wound and a few ounces of offensive blood-stained discharge issued from the empyema cavity. The patient's general condition remained fairly satisfactory and he perspired a great deal. During the night of Nov. 8th his temperature, taken twice under the tongue, fell from 102·4° to 95° and he became a little cyanosed and collapsed and vomited slightly three times. On the next day his aspect had improved considerably and his temperature was normal; his appetite was good, he was free from pain, and he had a slight cough with occasional expectoration of white frothy mucus. Three days later the sputum increased considerably, being pink in colour and typically pneumonic in consistency. On the 16th Dr. C. Slater, bacteriologist to St. George's Hospital, reported that the sputum contained "numerous organisms which are morphologically identical with the diplococcus pneumoniæ," and it retained its pneumonic character for the next 16 days.

Throughout the rest of the month of November and through December, 1902, and for the first half of January, 1903, the patient showed little sign of improvement; the empyema cavity remained open and able to hold over a pint of water and discharged a few ounces of pus daily; the abdominal wound refused to heal in its entirety and a sinus passing directly downwards for two and a half inches was formed. In the middle of December gas was given and the sinus was opened up and a few minute fæcal fragments were washed out from the bottom of it. At the end of December a system of continuous irrigation for the empyema cavity was set up at Dr Ewart's suggestion; a stream of boiled water at a temperature of 100° F. was run into the cavity at a depth of six inches from the surface of the chest through an indiarubber tube and was allowed to flow out again by a second tube from a depth of an inch. The rate of flow was regulated by a stopcock to about a gallon per hour; after the flow had continued for about half an hour the effluent was quite clear. The current was maintained usually for 24 hours at a time and caused little discomfort beyond an aching in the top of the chest and at the root of the neck on the right side; the pain was not diminished by the substitution of normal saline solution or boric lotion for the boiled water but was not sufficient, as a rule, to keep the patient awake at night. After a fortnight's trial the continuous irrigation was abandoned as it did not appear to benefit the patient materially.

On Jan. 9th Mr. Pendlebury opened up the appendicular sinus by a three-inch incision along the scar left by the operation of Oct. 21st and the appendix was found to be scarred and fixed by matted adhesions deep in the false pelvis, while there were also a number of adhesions about the cæcum. He removed the appendix, sewing a peritoneal sleeve over its stump, and closed the wound with fishing gut sutures All the stitches were out by the eleventh day and the wound healed satisfactorily. The empyema cavity continued to discharge a few ounces of pus daily and the patient's temperature was still raised at night; his general condition, however, improved and his weight increased from 6 stones 2 pounds on Dec. 17th to 7 stones on Feb. 11th, when he was sent to Atkinson Morley's Convalescent Home at Wimbledon for three months. At this time the upper part of the right lung showed some signs of re-expansion but the right chest wall had fallen in considerably and it showed marked deformity. During March and April the discharge from the empyema cavity grew less and less and finally ceased about the end of May, at which time the patient weighed 9 stones.

Remarks by Dr. EWART.—I was asked by Mr. Pendlebury to see the case at two critical stages—first on the second day of the acute symptoms, when the orthopnœa, the cyanotic flush, the profuse sweating, and the prostration were such that there seemed to be but slender hope, and again after many weeks when the prospect appeared to be one of progressive exhaustion. The patient's recovery from both dangers is no less remarkable than the ultimate complete re-expansion of his thorax.

1 The diagnosis of "latent empyema," to which I was led by the clinical history and the physical signs, was borne out by the character and the quantity of the pus which was pumped out of the chest two days later. The partial pneumothorax which was also diagnosed may be regarded as an explanation for the sudden accession of respiratory distress, in addition to the pneumonia identified by the pneumonic character of the expectoration which persisted for two weeks. It was obvious from the result of the first aspiration that the lung extended low down and that it must have been compressed as well as congested. The failure to reach the pus which was situated in front of the lower lobe might have led to the dulness being attributed entirely to pneumonia. As, however, aspiration had been practised only posteriorly the diagnosis of empyema was not abandoned but on the strength of it I recommended the anterior operation which proved successful.

2. Continuous irrigation with boiled water, the details of which were so skilfully carried out by Dr. A J. Jex-Blake, suggested itself to me as a method of treating an unhealthy empyema and a lung which I believed to be ulcerated, and of favouring the re-expansion of the thorax. The first of these objects was attained and I was impressed by the appearance of general improvement which I observed in the patient. But judged by the temperature chart, by the weighings, and by the patient's own report, the treatment could not be regarded as a success. Yet it did no harm and its cessation was followed by sufficient improvement to enable the patient to undergo the radical operation, after which the gradual drying up and the closure of the empyema were to be merely a matter of time.

Remarks by Mr. PENDLEBURY.—From the surgical point of view this case is distinctly of interest. First, it illustrates once again the fact that a large perityphlitic abscess may be formed without destroying the appendix, and I have little doubt that even if the abdominal wound had healed the boy would have had other attacks of appendicitis and would have had to undergo a subsequent operation for the removal of his appendix. It would probably have been yet another of those cases from a number of which Mr. W. H. Battle drew so many useful and valuable deductions. As it was, the persistence of a sinus obliged me to perform a second operation to remove the appendix. Secondly, as Dr. Ewart has pointed out, the operator should never be satisfied with aspirating the chest from behind only. After resecting a rib and examining the chest I was at once struck with the position of the abscess. I could feel compressed lung above and compressed lung below, and behind the great fissure being held open by the purulent material.

It is very difficult to say from such data as pulse, temperature, and respirations whether continuous irrigation was a positive help to recovery, but I have little doubt that it prevented a good deal of septic absorption by continually diluting and washing away the septic material. At any rate, the general condition of the patient improved.

In June I saw the patient after his return from the seaside. His weight had increased to over nine stones and the re-expansion of the chest was almost complete.

LIVERPOOL STANLEY HOSPITAL.

A CASE OF MEDIASTINO PERICARDITIS.

(Under the care of Dr. J. LLOYD ROBERTS.)

A BOY, aged five years, was sent into the Liverpool Stanley Hospital with general anasarca and was said to be suffering from Bright's disease. From his history he appears to have been a healthy child up to three months before admission, his only illness having been an attack of bronchitis when nine months old. About three months before his admission the patient began to lose his appetite, to stay indoors more, to be less inclined to play, and to become, as his mother said, "very quiet, which was an unusual thing for him." At this time it was also noticed that he was getting thinner. A medical man was consulted and he advised a course of cod liver oil but no improvement followed. Five weeks before admission the boy complained of abdominal pain and had diarrhœa and vomiting The pain ceased after a day or two but the diarrhœa and vomiting continued for some time. The mother noticed, also, that the boy's face began to swell and that his urine was diminishing in quantity. At that time the abdomen was not swollen but about a week later it was discovered to be so and his feet and legs also began to swell. Three weeks before admission an occasional cough came on and this had latterly become worse. The swelling of the legs and abdomen had gradually increased and the urine had continued to diminish.

On admission the patient, in spite of the history of wasting, was found to be a fairly well-nourished boy with well-marked anasarca all over the body. His face and eyelids were puffy. His hands, feet, and legs were swollen and œdematous. His scrotum and abdomen were distended. The temperature was subnormal, 97·2° F. His respirations were rapid and short, 34 to the minute. There was no dulness over any part of the lungs. Coarse râles and rhonchi were audible on inspiration and expiration over the whole of the chest, front and back. His pulse was small and regular, 82 per minute Cardiac dulness was increased slightly upwards and to the right. The cardiac sounds at the apex were normal; those at the base seemed somewhat faint. There were no bruits and no pericardial rub. The abdomen was distended and the umbilicus protruded. There was no tenderness. The liver dulness extended three and a half inches below the ribs in the nipple line. There was dulness on percussion in both flanks and a thrill was easily obtained There was considerable œdema of the abdominal walls. During the first 24 hours in the hospital the patient passed only two ounces of urine. This was high coloured, acid, deposited a large proportion of urates, and contained no albumin.

The diagnosis did not at first seem at all clear. The appearance of the patient with the puffiness of his face and the swelling of the legs and scrotum immediately suggested the correctness of the diagnosis of Bright's disease; but the condition of the urine, which was quite free from albumin and differed from the normal only in quantity, precluded that view. The slow, regular pulse with absence of cardiac murmurs negatived the suggestion of cardiac disease. The slight increase of cardiac dulness with feebleness of the cardiac sounds at the base suggested the possibility of pericardial effusion, but that in itself would not account for the patient's condition. It was clear that there was some serious obstruction to the boy's circulation and that obstruction could after a time be more or less accurately located. It was evidently above the junction of the hepatic veins with the inferior cava, as shown by the enlargement of the liver. Then the œdema of the face and hands showed that it also affected the superior cava. It appeared, therefore, that the obstruction was either in the right auricle or pressed against the auricle and kinked the inferior cava in its passage through the diaphragm. The absence of any bruit made the latter the more probable explanation. The patient lived only 13 days after admission. During this time, with occasional apparent improvement, the failure of circulation gradually increased and the boy became more and more water logged, the œdema being particularly marked in the abdominal walls and the lumbar region. During his stay he had a constant troublesome cough with respiration ranging from 28 to 48 per minute. The temperature was subnormal throughout except on the day of death, when it reached 100 8°. The pulse was regular, and varied between 82 and 120, being as often below 100 as over it In spite of the extreme backward pressure on the kidneys the urine throughout was extremely scanty, the average daily amount being only four and a half ounces, and only once was a trace of albumin found.

Necropsy —On removing the chest wall there was seen immediately behind it an irregular mass filling the anterior mediastinum. This was firmly adherent in front to the sternum and ribs and behind to the outer surface of the pericardium and the structures in the median line. The consistence was generally fibrous but in several parts the mass was caseating and in two or three places had actually broken down into thick caseous pus. The largest of these cavities was almost globular in shape, of about the size of a hazel nut, and had imbedded itself under the arch of the aorta. The mass also insinuated itself backwards, pressing against the right auricle, the vena cava superior, and the pulmonary veins, the obstruction of which vessels had produced all the symptoms noticed during life. Microscopically, thymus gland tissue was found in the mass and the inflammatory process appeared to have originated in the neighbourhood of that organ. The two layers of the pericardium were firmly adherent throughout and considerably thickened. The heart and its cavities were small and there was no evidence of endocarditis. The liver was very much enlarged and typically nutmeggy. The kidneys were congested but to the naked eye presented no pathological change There was no evidence of tubercle in the lungs or mediastinum

Remarks by Dr. LLOYD ROBERTS —This case presents a very fair instance of the typical signs of the acute form of mediastino-pericarditis as met with in children and illustrates the termination when the acuteness of the process leads to caseation and softening instead of the chronic indurative changes met with in the case of adults. The actual formation of pus, however, must be a rare occurrence, for although several cases of caseation have been reported in children in none of them is there any mention of further softening. One point of interest in the physical signs in this case was that the œdema of the abdominal wall was much greater in proportion to the amount of ascites than is usual in cases of anasarca from valvular disease. I have noticed the same thing in another case of intrathoracic obstruction and it occurs to me that it may be a point which might be of help at times in arriving at a correct diagnosis.

One other point. At the necropsy on my patient it appeared that it might have been a very feasible operation to trephine the sternum and to evacuate much of the caseating and breaking down material and thereby relieve the pressure on this boy's circulation. Should I meet with another case as acute as this I should certainly consider the propriety of surgical exploration.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Presidential Address.—Tumour of the Choroid in an Eye with old Choroiditis.—Tumour of the Choroid associated with Iritis.—An Anomalous Case of Tobacco Amblyopia.—The Pathological Anatomy of the Plaques in Epithelial Xerosis.

A MEETING of this society was held on Oct. 29th, Mr. J. TWEEDY, the President, being in the chair. The presidential address will be found in full at p. 1280.

Mr. E. NETTLESHIP described a case of Tumour in the Choroid in an Eye with old Choroiditis. A woman, 24 years of age, had lost the use of the right eye from inflammatory glaucoma. The eye was removed in 1894 and when last heard of six years later she was in good health The possibility of tubercle was indicated by a half-sister suffering at the age of 12 years from peritonitis and an abscess in the pubic region. Vision in the eye in question was defective at 15 years of age on account of detachment of the retina and secondary cataract. As it remained painful for from eight to ten years and a bulging behind the ciliary region with dilatation of vessels was observed the eye was removed. On examining the globe a staphyloma was found extending nearly from the attachment of the external rectus to the optic nerve, the corresponding portion of the choroid being occupied by an angiomatous sarcoma made up of round, oval, and spindle ween them wide blood olesterin-bearing stratum covering about a quarter of the surface. The optic nerve was atrophied and there were outlying nodules in the sclera. These features and the history suggested an origin in tubercle and hæmorrhage —Mr. PARSONS thought that such a case was almost unheard of. Fuchs described sarcomatous growths associated with cholesterin but they were of doubtful nature Leber cited cases of this association with shrunken globe and definite cyclitic changes. He thought himself that the condition resembled necrosis in a sarcomatous growth.

Mr. J. H FISHER described a case of Tumour of the Choroid associated with Iritis. A woman, aged 52 years, had her left eye excised on Oct. 5th, 1902 Six years before there were detachment of the retina and cataract apparently traceable to a blow The eye was blind and painful and the tension was raised. There was a small vascular spindle-celled growth near the entrance of the optic nerve with hæmorrhage and pigment showing signs of necrosis. A column of tumour cells could be traced along the tract of a ciliary nerve. Mr. Fisher described the lymph spaces and currents and the continuity of the two sides at the chiasma and suggested that sympathetic irritation might be due to transudation from the sound eye to supplement the nutrition of the injured one and cited several cases in support of this view.

Major F. O'KINEALY, I.M.S., described an anomalous case of Tobacco Amblyopia in a man, aged 42 years and single, who had had syphilis In August, 1900, he tried spectacles but his vision deteriorated and in September, 1901, it was greatly impaired. He had been a great smoker for nine years, accounting for 500 Burmah cheroots of a cheap and rank quality per month. With a reduction in the use of tobacco and alcohol and the use of strychnine he regained his sight and also weight which had diminished. Vision in each eye was reduced to $\frac{4}{60}$ and Jaeger 18 There were central defect in each eye and limitation of fields both for white light and colour with a large scotoma in the right eye and several smaller ones in the left. Tobacco and alcohol were cut off and strychnine and iron were given with pilocarpine. On Jan. 19th, 1902, vision was $\frac{6}{9}$ and Jaeger 1 in each eye with the aid of glasses, though the fields for white and red were still contracted and the multiple scotomata had run together into a complete ring, colour perception being still defective. Major O'Kinealy also cited another instance in a Eurasian from the same cause Vision was $\frac{6}{18}$ and Jaeger 18 in each eye with loss of fields for green and yellow, improving in two months to $\frac{6}{9}$ and Jaeger 1 with disappearance of scotoma and return of colour appreciation.—Mr W. LANG referred to a statement by Dr. V. H. W. Wingrave that he had observed a corresponding defect in hearing in tobacco-smokers suffering from amblyopia, which had improved with the vision on giving up smoking.—Mr. NETTLESHIP commented on the peculiarity in the reduction of the fields as vision improved —Mr. W. T. HOLMES SPICER asked whether syphilitic retinitis had not something to do with both cases.—Mr. JOHNSON TAYLOR combated the observation as to tobacco deafness; he had observed no such defect in his own cases.

Mr. M. S. MAYOU described the Pathological Anatomy of the Plaques in Epithelial Xerosis, which he attributed to the adhesion of a Meibomian bacillus resembling that in smegma, the presence of kerato-hyaline granules, and mucoid changes with keratinisation of the epithelium, citing six cases.—Major H. HERBERT said similar changes occurred in other mucous membranes. He had met with many characteristic instances where there appeared to be a tendency to desquamation of mucous membrane. The eye was first affected, then the larynx, causing a peculiar alteration in the voice; the urinary tract was also attacked as evidenced by the occurrence of large epithelial flakes in the urine. He attributed these bad cases of xerosis to an absence of mucous cells in the epithelial lining.

The following cases and card specimens were shown:—

Dr. G. H. GOLDSMITH: A case of Retinitis Proliferans.

Mr. W. ADAMS FROST: An Ophthalmoscope for Demonstrating the Fundus Oculi.

Mr. R W. DOYNE: A case of Varicose Retinal Veins with Thrombosis.

Mr. R. W. DOYNE and Mr. S STEPHENSON: A case of Retinitis Circinata.

Mr. W. H. H. JESSOP: A case of Proptosis.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Presidential Address.—Simulation of Hip Disease.—Ruptured Ovarian Cyst.—Personal and Family History of Patients —Exhibition of Cases and Specimens.

THE first meeting of the present session of this society was held on Oct 23rd, Mr. C. RICHARDSON, the President, being in the chair.

The PRESIDENT in his inaugural address referred to the importance of encouraging cheerfulness in many forms of illness and said that the medical attendant could not do this effectually if his own nerves were below par. In restoring jaded nerves nothing was so effectual as pleasing exercise in fresh air. Walking alone was not sufficient. It was wanting in the needful zest and apt to grow monotonous. He considered that golf was the pastime best adapted to the needs of the medical man and instanced the opinion of a leading American surgeon who said that "it was his duty to his patient that when operating he should be at his best and that his nerves could not be at their best unless he had regular doses of golf." Whatever the form of exercise it should be taken regularly and the pastime must be sufficiently entrancing entirely to lure the thoughts for the time being from the groove of the daily task. Whilst alcohol was not needed by the young and vigorous it might be useful to the weakly and those in the decline of life, if taken with care and discretion. He was strongly of opinion that usually it should be taken only with food and he gave a striking instance of the effect produced on the brain by a small quantity of alcohol taken on a perfectly empty stomach. Alcohol taken before exertion was detrimental, but afterwards in the stage of exhaustion by restoring equilibrium to the jaded nerves it tended to give comfort, cheerfulness, and health.

Mr. T. PRIDGIN TEALE read a paper on Disease of the Bursa over the Trochanter Major and its Simulation of Disease of the Hip.—The PRESIDENT, Dr. A. A. MCNAB, Mr. E. WARD, and Mr. E. TROTTER joined in the discussion and Mr. TEALE replied.

Dr. R. ALCOCK read a paper on Ruptured Ovarian Cyst followed ten months later by intra-abdominal sarcoma. The patient, who was 34 years of age, was suffering from abdominal enlargement when she received a blow from the handle of a washing machine in December, 1902; she was seized with pain and the abdomen increased rapidly to its utmost capacity. Laparotomy was performed on Dec. 21st at the Goole Cottage Hospital and the abdomen was found to be distended with thick slimy fluid exactly like the contents of an ovarian cyst. A cystoma of the left ovary was removed; it was an oval multicystic growth about 12 inches long and six or eight inches wide. Recovery from the operation was uneventful. Death took place from cachexia and vomiting on Oct. 3rd, 1903—i.e., little more than nine months after the ovariotomy. A partial post-mortem examination revealed the existence of a round-celled sarcoma of the peritoneum following the folds of the peritoneum and the omentum. There was likewise a sarcoma of the right ovary of about the size of a small orange. The appearances suggested that the peritoneum had become generally infected by the cystic fluid which escaped into the abdominal cavity in December, 1902 —Mr. WARD, Mr. B G. A. MOYNIHAN, and Dr. T. KILNER CLARKE took part in the discussion.

Dr. A. MANTLE read a paper on the Importance of a Thorough Investigation of the Patient's Personal and Family History in Disease. The personal history was important as to the kind of life which was lived, particularly in connexion with the amount of food and alcohol consumed and the occupation followed. A knowledge of previous illnesses was important but care should be taken in accepting the statements made by patients. The influence of season and temperature upon some patients was worthy of attention. Some patients were very subject to constrictive changes in the peripheral circulation through cold and practically felt well only in a warm temperature, whilst others showed symptoms pointing to capillary dilatation, such as exophthalmic goitre, erythromelalgia, and some other disturbances of the sympathetic, and a class including many fat people felt quite warm and comfortable in the colder weather. The family history enhanced the value of the personal history. Some families were short-lived, their tissues degenerating early. Inheritance played a most important rôle in the resisting power and longevity of the cells constituting tissues and nothing showed the law of transmission more than that highly specialised tissue the grey matter of the brain and spinal cord. Neurotics ought to be dissuaded from marrying neurotics and consumptives from marrying at all.

Mr. G. CONSTABLE HAYES showed cases to illustrate the Action of Radium and Radiographs to show the Advantages of the X Rays for the purpose of Diagnosis.

Other cases and specimens were shown by Mr. WARD, Dr. A. G BARRS, Dr. J. B HELLIER, Dr. T. WARDROP GRIFFITH, Mr. HARRY LITTLEWOOD, Mr. WALTER THOMPSON, Dr. E. F. TREVELYAN, and Mr. R. LAWFORD KNAGGS.

HUNTERIAN SOCIETY.—A clinical meeting of this society was held at the London Institution on Oct. 28th, Dr. F. J Smith being in the chair.—Dr. J. H. Sequeira showed four patients suffering from various Syphilides. One of them was a girl, aged 16 years, whose nose, upper lip, and palate had been the seat of gummatous ulceration. Comment was made upon the rarity of tertiary ulceration in congenital syphilis. The patient had been treated at a hospital as a case of lupus and the parts had been scraped with disastrous results. There was distinct evidence of congenital syphilis in one upper incisor tooth. The ulcers had healed in a month with iodide of potassium and mercury taken internally and iodoform applied locally.—Dr. T. Glover Lyon in reference to this case said that he thought that the syphilis was acquired.—Dr. Sequeira, in reply, pointed out that the first manifestations occurred at the age of 13 years and that there was an undoubted Hutchinson tooth —Dr J [illegible] enlargement of the cervical, axillary, and inguinal glands, there were no pain or tenderness and little, if any, pericarditis The spleen could not be felt, the liver was a little enlarged, but the other organs appeared healthy The blood count showed 2 500 000 red corpuscles and 250,000 white cells per cubic millimetre, 97 per cent of the hugely increased white corpuscles were lymphocytes A great improvement was made under treatment with large doses of arsenic —Dr Bertrand Dawson showed a woman suffering from Syphilitic Perihepatitis which had produced a large tongue shaped Riedel's lobe She had had many miscarriages She had greatly improved under potassium iodide At one time there had been definite localised peritonitis around the liver Dr Dawson could not entirely exclude malignant disease of the liver because of the great number and hardness of the nodules on it but the patient's good general health did not support this view —Dr Smith said that the case seemed to him to be one of intermittent hydronephrosis because great variations in the tumour were reported to be associated with variations in the urine —Dr Le Rossignol said, however, that actual measurement of the urine did not confirm the patient's account —Dr Dawson then showed a woman with an undoubted Riedel's Lobe of the Liver probably due to tight corsets —Mr Barnard pointed out that if Riedel's lobe were taken to mean a tongue shaped process projecting downwards from the lower border of the right lobe of the liver then there were three varieties (1) that due to corsets, (2) that due to enlargement of the gall bladder, and (3) that due to syphilitic perihepatitis and scarring of the liver The cases shown by Dr Dawson illustrated two of these varieties —Dr Smith showed a man, aged 51 years who 27 years ago met with an accident to one testicle, after which an abscess formed there, this had healed at last, leaving hard lumps in the testicle and cord There was now a lump in the right side of the abdomen which was undoubtedly the right kidney, probably considerably enlarged and tuberculous —Dr W H Kelson showed a woman, aged 38 years, the posterior pillars of whose fauces were adherent to the pharyngeal wall and to each other in the middle line The condition was believed to be due to a severe attack of scarlet fever when a child The patient suffered very little inconvenience and was unaware of the presence of anything abnormal

THERAPEUTICAL SOCIETY — The first annual meeting of this society was held at the Apothecaries Hall on Oct 27th Sir William Thiselton Dyer being in the chair —The following officers were elected for the ensuing year President Sir William Thiselton Dyer Vice President Dr J Rose Bradford Treasurer Dr S C Griffith Secretary Dr T E B Brown Dr J H Bryant was elected on the council and Mr Peyton Beale Mr E Dennis Vinrace and Mr Chattaway were confirmed on the council, having been elected to fill vacancies —Dr Harrington Sainsbury then read a paper on the Action of Bodies in the Particulate State with special reference to the action of carbon, of which the following is an abstract The importance of the physical state of aggregation as a factor in the action of medicines upon the tissues was shown Given an affinity between the substance and the tissues the dependence of the reaction was upon (1) the vibration rate of the particles, (2) the density or molecular crowding, and (3) the extent of surface presented by the substance The three states of matter—solid, liquid, and gaseous—were contrasted in respect of these qualities, the conclusion being arrived at that the liquid state was the most active and that the solid state (in proportion to the insolubility of the substance) was the least active The action of solid bodies on the tissues was analysed according as the substance was (1) soluble but undecomposable, (2) insoluble but in part decomposable into a soluble substance, and (3) wholly insoluble and wholly unchangeable Carbon was a type of Class (3) Its mode of action by virtue of its mechanical action and by virtue also of its powers as an absorbent was considered, the conclusion being arrived at that neither of these explains the effect produced by carbon Details of experiments in evidence of the small part played by absorption were given and it was concluded that the action of carbon must depend principally upon a peculiar surface action as yet un- [illegible] for his very [illegible] lar action of [illegible] chlorophyll on the gases which form the food of plants —Dr Ince seconded the vote of thanks to Dr Sainsbury and also proposed a vote of thanks to the President. This was unanimously agreed to —After the paper Mr Chattaway showed a splendid specimen of Radium and narrated Some Experiments with X Rays and High Frequency Currents —Mr Bryant Sowerby of the Regent's Park Botanical Gardens exhibited some interesting specimens of Chinese Medicinal Teas as well as of Drugs and Medicinal Plants

MIDLAND MEDICAL SOCIETY —The annual meeting of this society was held at the Medical Institute in Birmingham on Oct 21st, Dr H W. Langley Browne, the President, being in the chair —On the reports of the council and the treasurer being received, the following officers were elected for the ensuing session President, Dr. Robert Saundby, treasurer, Mr John Garner, and honorary secretaries, Dr J Douglas Stanley and Mr Leonard P Gamgee —At the conclusion of the general meeting the first ordinary meeting of the session was held —Dr Stanley showed a specimen of Cardiac Aneurysm The patient was a woman, aged 72 years, who was admitted under his care at Queen's Hospital, Birmingham The cardiac impulse was in the fifth and sixth left intercostal spaces and outside the mid-clavicular line, it was weak and fluttering in character The first sound was muffled and the pulse was irregular and feeble The vessels were degenerated The patient suffered from increasing œdema and ascites appeared The irregularity of the cardiac action became more marked and although a murmur developed in connexion with the first sound there was a want of proportion between this feature and the very serious condition of the heart. There was slight albuminuria, the specific gravity of the urine being low The diagnosis was progressive cardiac dilatation due to chronic myocarditis Death occurred from cardiac failure On post mortem examination the heart showed a well marked bulging to the left with a localised pericardial adhesion Closer examination revealed a well marked aneurysm of the left ventricular wall in which was a large mass of clot The ventricle at this point was much thinned There was marked chronic myocarditis of the whole ventricular structure, the coronary vessels showed slight degeneration The diffuse myocarditis was confirmed microscopically Dr Stanley considered that the cause of the aneurysm was myocarditis, the pericardial adhesion being secondary and mechanical —Mr J F G Pietersen read an interesting and instructive paper on the Medical Certification of the Insane He described cases of difficulty and the best methods of dealing with them from the legal as well as from the medical point of view He strongly emphasised the great importance of asylum treatment for all cases of mental disease —The paper was discussed by several members

BRADFORD MEDICO CHIRURGICAL SOCIETY —The annual dinner of this society was held on Oct 13th, Dr H Angus the President elect being in the chair About 70 members and guests were present Previously to the dinner an address was given by Mr Rickman J Godlee on Some Conditions leading to Chronic Septic Absorption —The first meeting of the present session was held on Oct 20th, Dr Angus, the President, being in the chair —The President delivered his opening address, the subject selected being Types of Dyspepsia. In summarising his conclusions he said that dyspepsia was essentially due to functional derangement of the nervous system In dietetic treatment fats were to be avoided when the gastric secretion was already deficient, but the more digestible forms of fat were indicated in cases where secretion was excessive Animal proteids were more digestible than vegetable proteids but much depended on the stage of gastric digestion which had been reached at the time when different foods were taken —Mr J T Crowe showed a case of Pott's Disease of the Spine with Paraplegia which had been treated by costo transversectomy The case had been operated on by Dr W H Brook of Lincoln. The patient was a lad, aged 19 years, who had a well marked angular curvature in the dorsal region After treatment for a considerable time with plastic jackets he rapidly lost the power of walking and finally of sensation in the lower limbs The sphincters were affected The knee jerks were present. The operation was described in detail. The patient was now able to walk well and had recovered sensation. He was wearing a steel spinal support. —Mr. W. H. Horrocks read notes on a case of Pregnancy complicated by Uterine Fibroids which he had treated by abdominal hysterectomy. In performing the operation Mr. Horrocks had ligatured one uterine artery and had put a ligature around the other before incising the uterus. As soon as the child was delivered the ligature around the second uterine artery was tightened and there was practically no loss of blood. The child was alive and the mother made a good recovery.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Oct. 28th, Dr. J. Nigel Stark, the President, being in the chair.—Dr. Parry demonstrated a Tumour of the Ovary which was composed of myomatous tissue and was exceptionally large. He also showed a Tuberculous Salpingitis the removal of which necessitated the resection of the piece of intestine adherent. Part of the cæcum and a second piece of small intestine had also to be resected. The patient did well. Sections of the diseased tube were exhibited.—Dr. Russell showed, for Dr. Edgar, a Myoma of the Ovary and a Tumour of the upper part of the Rectum and Sigmoid Flexure, also a Fibroid Uterus complicated by Carcinoma of the Cervix —Dr. Teacher showed, for Dr. Christie, a simple Papilloma of the Nipple. The patient was 34 years old. The rarity of such growths was remarked upon.—Dr. Russell showed, for Dr. Kelly, a seven months Fœtus from an Extra-uterine Pregnancy. The history of this case was as follows. There were symptoms of ordinary pregnancy. At the end of the third month the patient had an attack of severe pain, sickness, &c. This attack was repeated in two weeks and again in two months, when fœtal movements ceased. The fœtus was partly macerated and the placenta was degenerated. An Unruptured Tubal Pregnancy of the Fourth Week was next exhibited. A minute embryo was found in the amniotic cavity. Sections of a Primary Carcinoma of the Ovary with secondary involvement of the tube and peritoneum were shown.—Dr. Teacher gave a lantern demonstration of Chorion Epithelioma and Allied Conditions.—A series of Instruments, principally modifications of the Bossi dilator, were exhibited.

EDINBURGH ROYAL MEDICAL SOCIETY.—A meeting of this society was held on Oct. 30th, Dr. P. F. Shaw, the senior President, being in the chair.—Dr. Low read notes on a case of Addison's Disease without Pigmentation. The patient complained of numbness of the feet and swelling of the hands and face. His cerebration was slow, his skin was harsh, coarse, and dry, his temperament was melancholic, and his circulation was extremely feeble. He had also gastro-intestinal trouble. The case was diagnosed as one of myxœdema and thyroid feeding was used. Under this treatment he improved for a few days but symptoms of thyroidism supervened and it had to be stopped. The patient then got gradually weaker and the case terminated fatally by heart failure. The necropsy showed fatty degeneration of the heart and the liver. The right suprarenal capsule was absent and the left one was greatly atrophied. The peculiarity of the case was that there was no pigmentation.—Dr. Dunbar read notes on a case of Spleno-medullary Leucocythæmia. The patient was a middle-aged woman and her chief complaint was weakness. There was very marked leucocytosis, the increase being most marked in the polymorphonuclears and in the myelocytes. She was treated with arsenic and after several months' treatment in hospital was discharged greatly improved —Dr. Campbell read notes on a case of Hysterical Ischuria. The patient was a young woman and her case was very like one of acute Bright's disease. The amount of urine passed by her daily was very small but she had no symptoms of uræmia. The daily excretion of urea was likewise very greatly diminished. She had numerous stigmata of hysteria.

ABERDEEN UNIVERSITY MEDICAL SOCIETY.—A meeting of this society was held on Oct. 28th —Mr. James Clark read a paper entitled "Gynæcological" He discussed at length puberty and the climacteric period. The ovaries were the chief factor in the changes associated with puberty, as was shown by the case of a child, aged 15 months, who had hair on the mons Veneris, menses, and an abdominal swelling; removal of the ovaries led to the patient regaining the normal appearance of a child of that age.—Mr. A. D. Pringle read a paper on Internal Derangements of the Knee-joint. In miners and football and tennis players displacement of the semilunar cartilages (most often the internal) frequently resulted from prolonged flexion and then sudden extension, or from flexion followed by a simultaneous twist and extension in the two latter cases. Pieces of thickened synovial membrane were sometimes snipped off by the membrane getting caught between the bones. Treatment for displacement was manipulative, instrumental, or operative, the last being the best. Strong antiseptics should not be used. Sterile normal salt solution was the safest. The finger should not be introduced into the opened knee-joint if possible. They could not always observe this rule as foreign bodies frequently got stuck about the crucial ligaments.

NEWPORT MEDICAL SOCIETY.—A meeting of this society was held in the board room of the Newport and Monmouthshire Hospital on Oct. 28th. The following clinical cases, specimens, &c, were exhibited and discussed: (1) A case of Lupus under Treatment by Roentgen Rays; (2) Knee-joint with Effusion, the result of gonorrhœa; (3) a Calculus removed by Suprapubic Cystotomy; and (4) Photographs and Roentgen-ray Pictures of a case of Carcinoma of the Clavicle. —Mr. J. Lynn Thomas, C.B, read a paper on Prostatectomy, giving his experience in cases on which he had operated by Freyer's method.

Reviews and Notices of Books

The Alien Immigrant. By Major W. EVANS GORDON, M.P. (late a member of the Royal Commission on Alien Immigration). With map and numerous illustrations from photographs by the Author. London: William Heinemann. New York: Charles Scribner's Sons. 1903. Pp. 323. Price 6s. net.

THIS book, which deals with a matter of great difficulty and complexity, is an honest attempt to bring before the public both aspects of a question which has been the subject of prolonged and bitter controversy. Major Evans-Gordon has made the question of the Hebrew migration to the West peculiarly his own and the book is the outcome of a long continued inspection of the conditions of the aliens in the East-end of London, of painstaking inquiry during a journey in Eastern Europe undertaken when Parliament rose in the summer of 1902, and of the part he took as a member of the Royal Commission on Alien Immigration. The majority of the alien immigrants whom this country receives are the homeless poor of Eastern Europe—Jews who leave their countries in consequence of some form of persecution or from the knowledge of the inferior position they occupy and with the hope that their descendants may be both educated and free Although Major Evans-Gordon states in his preface that his object is to put both aspects of the case before the public as impartially as he can, yet a study of the work shows us that the weight of his experience is altogether thrown into the balance which urges immediate legislation. While he is scrupulously fair in his treatment of the Jewish population, yet, taking into consideration that trades and occupations are overstocked, he thinks it right to press on the attention of the public that these worthy descendants of Jacob are supplanters and that the Christian fares as the Canaanite fared. "He is expropriated." The Jews are, as he says, a race apart and he lays stress on the evil which must result from the rapid inflow of a population accustomed to ignore sanitary requirements and to overcrowd, both of which evils are aggravated by the abiding separatism of the race.

The possibility of legislation becoming necessary was considered by the House of Commons in 1889 but the author points out that the problem both as regards the number of aliens and the area affected is now beyond all comparison graver and more urgent than it was 14 years ago The necessity for action cannot be more forcibly illustrated than by the extract from the report of the Jewish board of guardians for 1901 and by the figures published by the Board of Trade which the author quotes. The figures show that, leaving out the year 1901, the immigration of Russian Poles and Roumanians has increased nearly 400 per cent. and the increase which caused so much anxiety to the Jewish community in 1900 was surpassed in 1902 by 3074, the total amounting to 21,013 The tide of ill-considered immigration therefore continues and is steadily increasing in volume. The author repeats Dr. Herzl's warning to us in London "that we are not at the end but at the beginning of the Jewish immigration" and quotes the authority of the Bishop of Stepney who says that East London is growing more and more poverty-stricken.

The author points out that the immigration now taking place is vitally distinct from the coming of the Huguenots and other Protestants who became merged in the population. The Hebrew people form a colony permanently distinct—"a race apart, as it were, in an enduring island of extraneous thought and custom." Including the children born of foreign parents living in this country he estimates the number of aliens in the East-end to day to be not less than 88,000 East of Aldgate is practically a foreign town where in the streets it is an exception to hear the English language spoken, while in hundreds of houses a single room serves as workshop, kitchen, bedroom, and living-room, and no matter at what hour of day or night the passer-by hears the machines and through the windows, by the light of a dim lamp, sees the victims of the sweaters, imported from Vilna or Lodz, bending over their work. The aliens in the East-end have already taken up the most varied avocations. The author says it is not an exaggerated forecast to say that every considerable commercial centre in England will be confronted with the problem of congestion, sweating, and "the aloofness of Israel" if the present conditions of free and unregulated immigration continue.

During his tour Major Evans-Gordon passed from St. Petersburg to Dvinsk in the Jewish pale, thence to Riga, Libau, Vilna, Pinsk, Warsaw, Lodz, Cracow, Bucharest, Galatz, and, returning *viâ* Lemberg in Galicia to Berlin, ended his journey at Hamburg. At Vilna he saw the Jewish Ghetto in all its original picturesque squalor but he says he observed little in Vilna more horrible than he has seen in Whitechapel. It is not necessary to visit Russia to see the horrors of the Ghetto—they are here in our midst, daily increasing, the just reward of an inert public.

In the main the emigration to England comes from the lowest stratum of the Jewish society in the congested towns. From Poland the emigrants to England are, as a rule, drawn from the most necessitous class and from Roumania from the poor and incapable. The law requires everyone to obtain permission before leaving Russia; the procedure is complicated and expensive but there is the alternative for the outgoing traveller to get himself smuggled across the frontier. By the latter means all persons absconding from justice, deserters from the army, and others escape and it is clear that the undesirables and criminals of whom we have so much complaint in London come chiefly by this route. Of the other aliens who come to our shores from different countries many are merchants and skilled craftsmen whom no sane person proposes to impede but concurrently there proceeds a systematic incursion of criminals and vicious persons for purposes of criminality and vice. The cost of maintaining these alien criminals is a serious burden on the community.

We have quoted enough of Major Evans-Gordon's book to show its worth. The sooner Parliament frames laws to prohibit the landing of these undesirables the better. The recommendations of the Royal Commission of 1902 are before the public and show that every European country exercises the right to expel and to shut out criminal and disorderly persons and paupers. We have, moreover, before us the remarkable fact that where their own colonies are concerned (the Hirsch Jewish settlements in Argentina) the Jewish authorities take the most elaborate precautions to prevent the very evils from which we are suffering in the East end of London.

On his return journey, at Hamburg, Major Evans-Gordon studied the admirable and efficient machinery by which undesirable emigrants are sifted from among those *en route* to the United States of America. He describes the system and points out that if restrictive legislation were placed on our Statute Book all emigrants embarking at that port would immediately come under similar control—a control which would not throw a penny of expense upon this country. The danger of infection induced the American people to regulate immigration by law but more recent legislation has been based on economic and social, not upon directly hygienic, considerations and is firmly supported by the American Jews themselves The question of alien immigration is one which no Government ought longer to neglect for the evils are known to, and are appreciated by, all thinking men. It is to be hoped that this book will have the large circulation which it deserves and will bring home to the masses the absolute necessity of demanding from the candidates who solicit support at the next general election a promise to promote legislation in this direction.

A Pocket Guide to Anæsthetics for the Student and General Practitioner. By THOMAS D. LUKE, M.B. R.U.I., F.R.C.S. Edin. Edinburgh: W. Green and Sons. 1902. Pp 148

THE book before us contains nine chapters and an appendix and gives the usual information required by students concerning the apparatus and methods necessary for the production of anæsthesia. The apparatus, besides being mentioned in the sections dealing with nitrous oxide gas, ether, and chloroform, is also dealt with in a special chapter. For nitrous oxide gas the older methods of giving gas are described but not in detail and the many difficulties besetting the path of the beginner do not find any particular mention in the book. Although the gas-to-ether combination is described it does not appear that Mr. Luke habitually employs it as he treats of ether very fully and leads the reader to assume that the student will confine himself to the plan of commencing the inhalation straightway with ether. While upon the subject of mixtures and successions of anæsthetics we may say that we find occasional mention of the employment of the A.C.E. mixture and mixtures in which the alcohol is omitted but the book gives no very precise directions as to how they should be used and controlled. It is true that the suggestion of Lawson Tait to employ a small Clover's regulator without the reserve bag is mentioned. Ether itself finds favour with Mr. Luke. Ether bronchitis he has never seen, nor, according to him, has Mr. Teale met with more than one case during 20 years of practice. Mr. Luke adds: "The proportion of patients suffering from true ether bronchitis is infinitesimal," and referring to the occurrence of post-ether albuminuria he states: "There is little doubt, however, that there was pre-existing renal disease, and that neither chloroform nor ether have the power of producing the most transient albuminuria." With regard to this last statement we were under the impression that both the evidence of experiment and of clinical observation went to prove that while ether does in a certain number of cases induce transitory albuminuria unimportant in normal subjects, chloroform superinduced albuminuria only when the kidneys were diseased and when it did so often severely taxed the vitality of the nephritic structures. It is certainly not at present clear what is the exact pathological meaning of derangement of the kidney following severe surgical procedure under anæsthesia—how much is owing to the surgical shock and how much to the anæsthetic. With regard to chloroform, quoting Syme's rule to "Watch the breathing," Mr. Luke says: "While I should be sorry if at the present day we had to rely on nothing but this, still too much importance cannot be attached to it." He adds: "One must judge of the condition of the patient from no single sign but from the breathing, condition of pupil, colour of lips, amount of chloroform given, the type of the patient, and nature of operation." Although, speaking generally, the last quotation probably represents the mental condition of the expert we venture to think that the tyro who rivets his attention upon the respiration is less likely to go astray than if he aspires to a wider range of observation. Apparatus for chloroform giving is not insisted upon, although a Schimmelbusch's mask with a drop-bottle finds favour. It might, we think, be emphasised that every administrator of any anæsthetic should be provided with a set of instruments for the performance of laryngotomy or tracheotomy, since emergencies do arise even in the hands of the most skilled anæsthetist which renders this precaution necessary. There is not much said in the book about such emergencies; probably an addition dealing with them would be useful and might replace some redundancies and unnecessary pages, such as Chapters I. and IX., the subject-matter of which could quite well be comprised in a couple of paragraphs. Eucaine-β and some other local anæsthetics are described and the methods of Schleich's and Bier's lumbar puncture are given with a very proper caution about the obvious perils of subarachnoid cocainisation. The chloride of ethyl employed for local and general anæsthesia is mentioned but we should judge fails to gain the favour of the writer of this book.

Chemistry, General, Medical, and Pharmaceutical, including the Chemistry of the British Pharmacopœia By JOHN ATTFIELD, F.R.S, Ph. D. Edited by LEONARD DOBBIN, Ph D., F.I.C., F.C.S. Eighteenth edition. London: Gurney and Jackson. 1903. Pp 856. Price 15*s.*

MANY chemical students, but pharmacists in particular, will welcome this eighteenth edition of the work of Dr. Attfield who was for 34 years teacher of practical chemistry to the Pharmaceutical Society of Great Britain. With pharmacists it is quite a historic manual and there is no need to speak of its great popularity, seeing the number of editions that have been demanded. The success of this book has been due to the fact that its writer was perfectly familiar with the requirements of the class of reader for which it was specially written. Nor was this done at the expense of general principles. The book is at the same time a work of theoretical and practical chemistry, and the latter section includes analytical processes directed more or less to the examination of drugs. A glance at the admirably compiled index gives some idea of the skill which the author has shown in dealing with a very broad subject within the limits of this volume. Thus the elements of organic as well as inorganic chemistry are dealt with, a plan for the systematic examination of metallic salts is given, theory and nomenclature are discussed, alkaloids and their reactions are described, and methods for the analysis of blood, milk, and urine are given, besides a number of methods for the quantitative determination of metals and their acid radicles. Dr. Attfield has been fortunate in obtaining the collaboration of Dr. Leonard Dobbin in the preparation of this edition and we find, as might have been expected, considering Dr. Dobbin's special experience of the general application of chemical science to medicine and pharmacy, hat the manual in its present revised form is in accord with the recent developments of the science. Like Dr. Attfield he is cognisant of the needs of the class of reader for which the book was primarily intended. The plan of the book is admirably conceived, the facts and principles are well arranged, while the extraordinary scope of the work, dealt with as it is in one volume, is a matter upon which both author and editor may be heartily congratulated.

Bacteriology: a Manual for Students and Practitioners. By FRED C. ZAPFFE, M.D., Professor of Pathology and Bacteriology in the Illinois Medical College; Professor of Histology in the Department of Medicine in the School of Dentistry in the University of Illinois, Chicago Kimpton's Series of Modern Text-books edited by BERN. B. GALLAUDET, M.D. Illustrated with 146 Engravings and seven Coloured Plates. London: Henry Kimpton. 1903 Pp. 350. Price 7*s.* 6*d.* net.

THIS work forms one of a series of modern text books issued by Mr. Kimpton. With the present plethora of text-books of bacteriology it is natural to the reviewer to examine whether in any new book the author addresses a special class of readers or claims any originality of treatment. Apparently in this case the book is intended for the student and the general practitioner and the author modestly claims that it enables the beginner to gain a full and comprehensive view not only of the subject itself but also of its practical relation to medicine. The book is divided into four parts, of which the first and the third are the most important. The first part treats of the technique of bacteriology and is based on a series of laboratory directions used by the author in his practical course. The third part, which appears to us to be the best, is a description of the various pathogenic bacteria in which especial stress is laid upon such points as are of clinical importance. Based as the technical part is on a practical course, we are surprised that so much stress is laid on the difficulties of making nutrient agar, as since the introduction of the autoclave they have almost ceased to exist, and astonished to find that articles for sterilisation are to be placed in the hot-air steriliser *after* the temperature has reached 150° C. Nor is there usually any difficulty, with English lenses at any rate, in examining a hanging-drop culture with an oil immersion objective. The terms "superheated steam" and "steam under pressure" are used as synonymous but to the English student at least this is misleading and it is the more important as superheated steam has not the disinfectant value of saturated steam under pressure The student is likely also to be puzzled by the statement that chlorinated lime is used for the preparation of milk of lime and he will find some difficulty in making an intravenous injection in an animal if he acts on the instructions given. The portion of the book dealing with the pathogenic organisms is, on the whole, satisfactory, the needs of the practical physician being kept steadily in view. It seems, however, a grave fault in a text-book to speak of Coley's fluid and the typhoid "vaccine" as sera, since the student is naturally very prone to confuse these fundamentally different bodies. Unfortunately, throughout the book there are other evidences of haste which detract from its value and which should be corrected in another edition. Thus it is said that diabetes and tuberculosis are rarely found associated and we meet with the cryptic utterance that "it is strongly suspected that the lysins are the same as the agglutinins, although by no means identical." The volume contains a large number of illustrations derived from various sources, most of which are well produced, while the paper, printing, and general style of the book are satisfactory.

JOURNALS AND MAGAZINES.

Annals of Ophthalmology. Edited by H. V. WURDEMANN, M.D. July, 1903. Vol. XII., No. 3. Subscription for four quarterly parts, £1 1*s.* St Louis, Missouri, U.S.A.: Jones H. Parker.—The articles contained in this part are: 1. The

Accommodative Asthenopia of Donders, by George J. Bull, M.D. The author considers that the cause of accommodative asthenopia is to be sought for in irregular and disordered tension of the motor muscles of the eye and not in the ciliary muscle, and he considers that rest and treatment of the general health with the temporary use of glasses will generally suffice to relieve the state of hypertension of which the patients complain and that whilst in certain cases glasses must be always used, in others an operation regulating the relation between accommodation and convergence must be relied upon to effect a radical cure. 2. Why not employ Intracapsular Irrigation in Cataract Operations? by H. O. Reik, M.D. The answer given is favourable to irrigation but Dr. Reik considers that the aseptic fluid injected should be abundant, amounting in some cases to as much as 200 cubic centimetres, and that all the residue of the lens after the removal of the cataract should be expelled. 3. A case of Tuberculosis of the Conjunctiva, by F. Q. Henderson, M.D. In this case recovery took place without interference. 4 Papillomata of the Conjunctiva and Cornea, by R H. Johnston, M.D. 5. A Clinical Lecture on the Art of extracting for Cataract, by C. Bell Taylor, M.D. 6. Clinical and Histological Report of a case of Purulent Metastatic Ophthalmia in Meningitis giving rise to Meningitis and Sympathetic Symptoms after 13 Years, by C. Zimmerman, M.D., and Brown Pusey, M.D 7. Abstracts of *Foreign Ophthalmological Literature*, by Charles Oliver, M.D., and Clarence Van Epps, M.D.

Analytical Records

FROM

THE LANCET LABORATORY.

LYSOFORM (A NEW ANTISEPTIC) AND ITS PREPARATIONS.

(The British Lysoform Syndicate, 56, Cannon-street, London, E C)

THOUGH it has been said that the ideal antiseptic has not yet been found it would appear that lysoform is largely in advance of the bulk of antiseptic preparations considering the facts that it is not only a very powerful germicide but is also for all practical purposes non-poisonous. Moreover, as our experiments have shown us, it is an effective deodorant. It is specially adapted for medical purposes because in the first place it is freely soluble in water in all proportions and in the second it possesses decided detergent properties also. Lysoform, in fact, may be regarded as a liquid antiseptic soap. It is non-irritating and presents, in general, properties which are not harmful to the higher animals. Its germicidal efficiency has been established by several well-known bacteriologists. A 5 per cent. solution of lysoform is fatal to such organisms as the typhoid bacillus, the bacillus coli, and the staphylococcus pyogenes aureus, and a 3 per cent. solution will destroy the highly resistant spores of anthrax within 24 hours. These results are scarcely surprising having regard to the fact that the basis of lysoform is the powerful antiseptic formaldehyde. For antiseptic purposes and in medical application there are, however, several well-grounded objections to the employment of formaldehyde in the pure state, the chief of which is that *it is very irritating to the skin and* to the mucous membrane. Lysoform, on the contrary, although containing formaldehyde, has no such irritating action when employed diluted though still at an efficient germicidal strength. The merit, in fact, of lysoform is that whilst presenting all the antiseptic advantages of formaldehyde it is without the drawbacks of that agent in the pure state. According to our analysis lysoform consists of a potash soap containing a definite amount of formaldehyde and a small percentage of alcohol. It is a lemon-coloured solution and is viscid to about the same degree as glycerine. On evaporation we found that lysoform yields 43·04 per cent. of residue which contains the soap and some formaldehyde. Lysoform gives an excellent lather when rubbed on the hands after the manner of soap, so that when employed for antiseptic use two important agents are at work in bacteriologically cleansing the hands and rendering them aseptic. In the same way lysoform solution is admirably adapted for sterilising surgical instruments, having no corrosive effect upon metals. The solution shows an alkaline reaction. Lysoform has a feeble odour of formaldehyde but when diluted this odour is scarcely perceptible. It may be used on account of its non-irritating properties for cleansing the nasal or oral cavities and for the purpose of a vaginal or uterine douche. Internally in small quantities lysoform appears to have no poisonous action, so that relatively speaking it is non-poisonous. It forms the basis of many excellent toilet preparations, as for example lysoform soap, lysoform tooth paste, and lysoform mouth wash. We found the soap to be free from alkaline excess and, in fact, it contains on the contrary an excess of fat. Petroleum ether, according to our experiments, extracted 2·30 per cent. of unsaponified fat. The properties of lysoform are such as to render it a safe, convenient, and effective antiseptic.

"TABLOID" SPARTEINE SULPHATE.

(Burroughs, Wellcome and Co, Snow Hill-buildings, London, E.C)

On account of its diuretic properties and of its value as a cardiac tonic sparteine has been recommended to be tried when digitalin fails. It is said, in fact, to succeed occasionally when that drug does not. The tabloid of sparteine sulphate contains one grain of the salt and is intended for administration by the mouth.

"LASSO" SOAP.

(Edward Cook and Co., Bow, London, E.)

"Lasso" is a soap manufactured especially for the purpose of removing grease and stains from the skin and we find that it fulfils this purpose admirably. According to our analysis it contains a well-known mechanical detergent which materially assists the soap itself. The soap basis is of excellent quality and free from alkaline excess. The soap is very effectual in removing all kinds of tenacious grime.

COCOA AND MILK.

(J. S. Fry and Sons, Union-street, Bristol)

This is a convenient dietetic preparation made with cocoa and milk, consisting of a paste which, when stirred in hot water, gives at once a refreshing cup of cocoa ready for use. According to our analysis the preparation contained 8·96 per cent of moisture, 1·40 per cent. of mineral matter, and 12·08 per cent. of fat. The preparation affords a means of readily obtaining a refreshing and nutritive beverage. It is, however, somewhat sweet.

CARLSBERG BEER.

(Agency, Max Hartvig, 46, Queen Victoria-street, London, E.C)

We have examined both light and dark specimens of Carlsberg beer and it is claimed that they show a relatively low alcoholic strength. The beers are pasteurised. They were found to be in excellent condition, sound, bright, and sparkling. The flavour of each was characteristic of a pure malt and hop infusion. The dark beer gave on analysis the following results: malt extractives, 4·04 per cent.; mineral matter, 0·17 per cent.; maltose, 1·90 per cent.; and alcohol, by weight 1·69 per cent., by volume 2·12 per cent, equal to proof spirit 3·71 per cent. As will be seen, the amount of alcohol is quite small and the beer may be regarded certainly as non-intoxicating. *We could trace no objectionable preservatives.* The light beer, of the type of Pilsener beer, gave the following results: malt extractives, 3·53 per cent.; mineral matter, 0·09 per cent.; maltose, 1·75 per cent.; and alcohol, by weight 2·56 per cent., by volume 3·21 per cent., equal to proof spirit 5·61 per cent. This beer was in excellent condition but its alcoholic strength is decidedly higher than that of the dark specimen. Such excellent light alcoholic beverages are calculated to help the cause of true temperance.

SPECIALLY SELECTED HIGHLAND WHISKY.

(JOHN BISSET AND CO., 37, QUEEN-STREET, ABERDEEN.)

On analysis this whisky gave the following results: alcohol, by weight 42·76 per cent., by volume 50·31 per cent., equal to proof spirit 88·18 per cent.; extractives, 0·14 per cent.; and mineral matter, 0·07 per cent. In regard to secondary products the following were the results given in grammes per hectolitre of absolute alcohol present: acidity reckoned as acetic acid, 24·00; aldehydes, 25·00; furfural, 2·88; ethers reckoned as acetic ether, 42·24; and higher alcohols, 160·00 These results are quite in accordance with the statement that Highland malt spirit is for the most part used in the blending. The figures indicate some addition of grain whisky. There can be no doubt, however, that the whisky is well matured; it is soft to the palate and possesses an acceptable malty flavour. It is quite free from any suggestion of raw products and is therefore dietetically suitable.

"DARTRING" LANOLINE TOILET SOAP.

(BURROUGHS, WELLCOME AND CO., SNOW-HILL BUILDINGS, LONDON, E.C.)

The advantage of lanoline soap for toilet purposes is obvious, since it contains, according to our analysis, an excess of fat amounting to slightly over 5 per cent. and this fat, it is important to add, is chemically identical with the natural fat of the skin. Whilst, therefore, lanoline soap is an efficient detergent it does not render the skin dry and hard but soft and supple.

OLD HIGHLAND MALT WHISKY.

(THE BARLEYCORN CO., LIMITED, 3, RANGOON-STREET, CRUTCHED FRIARS, LONDON, E.C.)

We have carefully examined this whisky and believe from the results of analysis that it is correctly described as a pure malt spirit. The figures were as follows: extractives, 0·09 per cent.; mineral matter, 0·01 per cent.; and alcohol, by weight 41·80 per cent., by volume 49·39 per cent., equal to proof spirit 86·37 per cent. The following figures relate to the secondary products in the whisky recorded in grammes per litre of absolute alcohol: acidity reckoned as acetic acid, 12·0; aldehydes, 20·0; furfural, 3·08; ethers reckoned as ethyl acetate, 72·16; and higher alcohols, 240·0. The results are typical of the genuine all-malt pot still spirit. The whisky is well matured and of good but somewhat "full" flavour.

SERILA BOUILLON EXTRACT.

(AGENTS: E. S. SHULTES AND CO., 158, PALMERSTON HOUSE, OLD BROAD STREET, LONDON, E.C.)

This preparation may be correctly described as a bouillon extract but the proportion of beef nutritives in it is quite insignificant. To start with it contains, according to our analysis, 41·10 grammes per cent. of solid matters, of which no less than 37·48 grammes consist of mineral matter, containing 26·03 grammes of common salt. According to these figures there remain but 3·62 grammes of total organic matter. It is true that this contains proteids but we cannot endorse the claims made in regard to this preparation that it possesses any special or high nutrient value.

TROMMER'S EXTRACT OF MALT PREPARATIONS.

(THE TROMMER EXTRACT CO., 44, CHARTERHOUSE-STREET, LONDON, E.C.)

The basis of the preparations about to be described is an extract of malt of a very satisfactory character. We have proved *in vitro* its digestive action upon starch. The extract is of good flavour and contains a commendable proportion of the nitrogenous principles of malt. Amongst the compounds made with this active malt preparation is the Trommer extract of malt with 33 per cent. of petroleum. It is stated that the Trommer extract of malt emulsifies oils by virtue of a ferment closely allied to emulsin or lipase. Whether or not that be so there is some difference of opinion as to the value of petroleum oil at all within the human economy. It is stated by some authorities that the whole of the petroleum administered may be recovered from the fæces unchanged. Considering the chemical stability of petroleum such a result might be anticipated. The Trommer extract of malt is also combined with cod liver oil and the hypophosphites—an excellent emulsion,—with cascara sagrada, with pepsin, and with yerba santa.

MEDICINE AND THE LAW.

Suicide by Prisoners.

IN consequence of the suicide which recently took place in a cell at the Old Bailey, when a prisoner named Barmash shot himself, the attention of the Home Office has been directed to the possibility that persons upon bail may come to trial provided with means of committing suicide should the verdict prove adverse or that these means may be conveyed to condemned prisoners during the farewell interview with relatives which is usually permitted. A circular letter in which the Home Secretary conveys his views to local benches of magistrates upon this subject uses the expression "dangerous weapon" in this connexion, but no doubt the employment of poison would have to be guarded against even more carefully than that of firearms should any considerable tendency to suicide in such circumstances be observable. The Home Secretary does not, however, think the danger sufficiently serious to necessitate the searching of all bailed persons, although he recommends it as necessary in some cases. With regard to the interviews with relatives he advises that these should not take place in the court cells except where there is proper accommodation. Presumably the law relating to the sale of poisons is efficacious enough with regard to the classes from which criminals are chiefly drawn to prevent them from obtaining the means of death from the druggist without some little difficulty. It is, however, to be observed that the villain who contrives at the last moment hastily to swallow something from a phial and so to "cheat the gallows" exists principally in the works of the sensational novelist. Many cases of murder and suicide occur in which the two acts follow closely upon one another and are the result of a common impulse and there are also instances from time to time of self-destruction following the detection of crimes which in themselves suggest conditions of mental unsoundness. The majority, however, of those who deliberately violate the law either in order to enrich themselves or for some other purpose are not driven to take their own lives by the mere fear of imprisonment or even of death at the hands of the executioner.

Carbolic Acid as a Poison.

IN THE LANCET of Oct. 17th, p. 1113, attention was called to the frequent occurrence of carbolic acid as a means of suicide or as a cause of accidental death. A very similar case to the one then commented upon was inquired into at the coroner's court at Battersea on Oct. 31st. The evidence showed that the deceased, the wife of a clerk, had two bottles in her bedroom, one containing whisky and the other carbolic acid, and that in the dark she poured carbolic acid into a cup and swallowed it believing it to be whisky. There was no evidence pointing to suicide and when first found she said that she thought she had "taken something in mistake." The woman's husband stated that she was sober at the time but "had been rather a heavy drinker and had lost her sense of taste somewhat." It is easy to understand that many consumers of whisky are indifferent as to the nature of the grain from which their beverage is distilled and as to questions of maturity when one who is only "rather" a heavy drinker cannot either by taste or smell distinguish carbolic acid from it in the dark. To devise precautions that will protect such persons seems to be almost impossible. A stopper of peculiar construction rendering it more difficult to remove than the ordinary cork or stopper might be devised and insisted upon at the sale of poisonous drugs. Such a contrivance would enforce the attention of the person opening the bottle more effectually than the fact of its differing from other bottles to the touch. The use of a particular bottle or stopper, however, cannot be enforced after the completion of the purchase.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 7, 1903

The Presidential Address at the Ophthalmological Society of the United Kingdom.

THE Ophthalmological Society is to be congratulated on having for its President during the ensuing year the distinguished surgeon who holds the still more prominent office of President of the Royal College of Surgeons of England. It must be acknowledged that the combined duties of the two positions will weigh heavily even upon the energies and the ability of so accomplished and strenuous a man as Mr. TWEEDY, but if we are compelled to regret that his Presidential Address to the society upon the Relations of Ophthalmology to General Medicine and Surgery and to Public Health (which will be found at p. 1280 of our present issue) has been confined within somewhat narrow limits, touching but slightly upon certain topics of great importance alike to ophthalmologists and to the public, we do so with the full knowledge that with Mr. TWEEDY actions come before words. Time may fail him to prepare addresses but we feel certain that he will always find leisure to discharge with zeal and exactitude his official duties. Mr. TWEEDY was at first inclined, he told his audience, to regard the delivery of an address as a matter of form from compliance with which he might seek to be excused, and when this suggestion was repudiated by a flinty-hearted surgical secretary he next thought of "saying ditto to Mr. BURKE" by giving utterance to a series of passages compiled from the addresses of his predecessors in the chair. Kinder counsel, however, prevailed, with the result that the President of the day made a personal addition to the edifice of thought and knowledge which has been prepared by those who had previously occupied his seat. The members of the society, while fully prepared to endorse their President's praise of the addresses given by the long list of brilliant men whose names he enumerated, would not on that account have been less anxious to receive guidance from Mr. TWEEDY himself; they were gratified to listen to his matured opinions upon the questions of the hour and only regretted the brevity of his address.

It was manifestly almost a necessity on such an occasion to say something not only on the general relations which should exist between special branches of practice and medical science as a whole but also on the particular position of ophthalmology in this respect. The new President struck a true note by reminding his hearers that the society had been formed by men who were interested in the study and investigation of diseases of the eye, not merely as local affections but also in their relations to general disease and more particularly to disease of the cerebro spinal system, and he urged upon the younger members the importance of withstanding any temptations to narrow the scope of their corporate endeavours. While admitting the necessity of specialism he pointed out that all specialists should keep in intellectual touch with the developments of modern medicine and with the general progress of pathological knowledge, or, as the idea might perhaps be expressed in other words, that they should think of their art as a department of general medicine and surgery, and of the organs with which it deals as integral portions of a living mechanism in the derangements of which they are liable to share. He regretted an apparent tendency even within the profession, and still more outside its ranks, to split up practical ophthalmology into two parts, the optical and the medico-surgical, and declared that this tendency ought to be jealously resisted not only in the interests of our art but in those of public health. The eye is not, he urged, only an optical instrument but is a living mechanism made up of the most elaborate and most highly differentiated structures in intimate and constant relation with the cerebro-spinal system, the blood-vessels, the lymphatics, and the other organic systems of the body, living the life of the whole body, observing its modes of nutrition, participating in its diseases, and responding to its various pathological manifestations. No one, then, can safely deal with the optical defects of the eye unless he has an adequate knowledge not merely of its structural diseases but also of their relations to the whole of the organism.

The passages of the address which we have thus quoted or abbreviated will commend themselves to our readers as being demonstrably true and are in complete accord with much which we have previously written on the same subject. They *leave nothing to be desired in respect* either of accuracy of statement or of comprehensiveness of view, and they amount to an absolute condemnation of the "ophthalmic optician," or "optologist," or whatever he may please to call himself, and of all his ways and works. They contain an explicit repudiation of the belief that what are called the optical defects of the eye can ever be safely or satisfactorily treated apart from a knowledge of the diseases to which that organ is liable or of the manner in which it may participate in the diseases of the body as a whole. Such a declaration as this, proceeding from one who is not only the president of a special society but also the President of the Royal College of Surgeons of England, could hardly have been made in too emphatic terms. We doubt if Mr. TWEEDY'S words would have gained in force by amplification, while their direction is so clear that although uttered to a scientific audience their message could not have been better calculated to convey instruction to the public. Members of the medical profession, whether specialists or not, do not need to be told that the proceedings of a spectacle quack are fraught with danger to his misguided customers, or that the various forms of apparatus, more or less complicated, which are displayed at places of public resort may prove traps for the unwary. But a warning is needed to reach the public ear and to make an impression on what is called the public mind. The fact is that the advances of ophthalmology and the knowledge recently gained concerning conditions which spectacles may relieve have brought about the development of a new and dangerous form of charlatanism which is seeking, by all the usual means of impudent advertisement and unblushing false pretence, to bring grist to the mills of its professors at no matter what danger to the sight of the credulous or the ignorant. In the presence of such conditions it is hardly possible for the medical profession to speak too plainly, and we hope that Mr. TWEEDY'S words may filter through that profession and the press to the public so that the obvious lessons may be learned from them. The strong position occupied by the speaker as head and official mouthpiece alike of a powerful medical corporation and a famous scientific society should secure fruitful consideration for his words. They cannot be brushed aside as expressing any narrow or specialistic view.

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The Personal Paragraph.

SEVERAL references have recently been made in the columns of a contemporary journal to the ethics of what may be conveniently termed the personal paragraph, so far as it relates to medical men and their patients. The correspondence commenced with the communication of a resolution, emanating from the ethical committee of the British Medical Association, which runs as follows: "That a circular letter be sent to the principal London newspapers deprecating the mention in paragraphs relating to the illnesses of persons, other than members of the Royal Family, of the names of medical men in attendance." The letter sent with this resolution states that it is believed that in general the information is supplied by the patient or his friends and that the medical man is not consulted as to the insertion of his name and if consulted would object. Other letters have since appeared protesting strongly against any organised interference with the liberty of the press and urging that a man of talent is entitled to have his meed of praise in the lay press when it is deserved and clearly claiming that there is financial advantage in such paragraphs and that many are debarred from sharing in this legitimate gain by the influence of a clique. "Sweet are the uses of" advertisement and the writers of these letters object "to let concealment, like a worm i' the bud," injure their prospects in life. They argue so strongly that they cast doubt upon the original charitable suggestion that the personal paragraph is "supplied by the patient or his friends."

Assuming the absence of connivance and unworthy prompting there may be reasons for these paragraphs being sent by the patient or his friends in all good faith. They might be suggested by the desire to claim sympathy in a time of sickness and to reassure friends, not only by stating the nature of the complaint, but also by indicating the name of the medical man in attendance or that of the physician or surgeon in consultation. It is conceivable that such a paragraph might be sent to the papers to avoid the trouble and annoyance of unnecessary suggestions from relatives and acquaintances. There is a strange tendency amongst the public to offer advice upon all matters, most of all, perhaps, upon questions of health; it is doubtless well-intentioned though often ignorant and disquieting. It is the tendency which leads to random recommendations of quack remedies, of fashionable health-resorts, and even of the names of members of the medical profession. At its best the personal paragraph may serve to check all sympathetic but ignorant suggestions, since by plainly stating the nature of the illness and the name of the practitioner it indicates, or may be intended to indicate, that though there may be cause for anxiety the patient and his relatives are aware of the risks and are doing their best to avert danger. In this sense, and perhaps in this only, is the personal paragraph legitimate and defensible. There is, however, another argument which might be urged on behalf of publication by the patient and his friends. Having presumably paid a high price for an operation by a distinguished surgeon, are they not at liberty to proclaim the fact and to derive some supposed social advantage from the association of their name with that of one known to have attended exalted personages? In other words, may not the advertisement occasionally be intended for the benefit of the patient rather than of the medical practitioner whose name has been introduced without his permission and regardless of his feelings?

To judge from some of the letters which have appeared upon this subject there is a strong feeling that the personal paragraph does not originate in either of these ways, that it may be sent by the medical man, and that it is not more frequently seen because of "an imposed incubus of chaste restraint" which "will not allow a man of talent to have his meed of praise in the lay press when it is deserved." "Chaste restraint" should hinder publication of the names of patients and the nature of their maladies, since there can be no public advantage in supplying material for unprofessional inquiries into the etiology of disease, whether it is to be attributed to personal habits or to inherited weakness. Guided by the dictates of good taste the consensus of professional opinion is against the disclosures of the lay press, since they tend to undermine confidence in the reticence of the medical attendant and when this is lost surely practice goes with it. Those who have written in defence of the personal paragraph appear to regard it as a royal road to fortune and think its suppression an act of injustice, but in its ordinary form it affords no measure of "praise when it is deserved," since it merely announces the name of one who has been consulted or who has been called upon to operate, and it does not record whether the advice has been acted upon or whether the operation was one involving greater difficulties or more deserving of praise than thousands of minor operations daily performed by juniors in ordinary hospital routine While all sympathy must be extended to those—and they are numerous—who feel they have not yet reached the professional position to which they consider that they are entitled by their abilities, by their long period of preparatory study, and by their conscientious discharge of all professional duties, we would still in their own interests deprecate any endeavours by personal paragraphs to take a short cut towards success, since we believe that this frequently entails loss of confidence by patients who do not desire publicity and loss of respect amongst professional brethren who scorn those who do.

Physical Disability of Recruits for the Army.

ON the physical well-being of a people their national existence itself may depend. The mental activity of the inhabitants of a country is obviously of the utmost importance if they are to maintain an intellectual, scientific, or manufacturing supremacy over their rivals and nowadays the claims of higher education, especially in technical subjects, have been very extensively advanced, and though we do not wish for one moment to belittle their importance we consider that at present there is small chance of the needs of mental education being disregarded. There is, however, a risk that the physical education of certain sections of the community may not have due recognition. It was only natural that the long-continued neglect of technical education in this country should be followed by a reaction and the reaction has led to a certain amount of disregard of the importance of physical health and thus physical education is at the present time distinctly under-valued. The hackneyed phrase "*mens sana in corpore sano*" exactly expresses the desired consummation. "These ought ye to have done and not to leave the other undone." To neglect either the mental or the physical training of the child or of the nation is a serious error; the two should proceed *pari passu.* Especially in the *personnel* of the army and navy is physical strength of importance, for vain indeed would be an appeal to physical force if the physical force itself should prove wanting.

A doubt has arisen, and to this subject we have frequently referred, as to the quality of the raw material which offers itself to the recruiting sergeant, for it has been suggested that there is an obvious falling off in this respect and it has been thought that the deterioration has been proved by statistics. It is, at all events, certain that during recent years a large number of recruits for the army have been rejected on the ground of physical disability and it was proposed that the Government should institute an inquiry as to the causes which have led to this apparent falling off in the national health. To this end, as we mentioned in THE LANCET of July 25th, p. 246, the Director-General of the Army Medical Service prepared a circular containing statistics bearing on the subject and this circular was sent by the Secretary of State for Home Affairs a short time ago to the Council of the Royal College of Surgeons of England with a request for any observations on it which the Council might feel disposed to make. The Council has now made public its reply, which was hitherto confidential, and it deals with the question of the necessity for an inquiry into the causes of physical deterioration and into the means available for improving the national health. The Council bears testimony to the skill and clearness with which the Director-General has drawn up his report on a very difficult and intricate subject. The circular states *in limine* that there is reason to believe that the physique of the well-to-do classes of the country is improving and we do not think that there will be any difference of opinion on this point for it is a matter of common knowledge. The increased attention devoted to the physical exercise of girls also cannot but have its effect on the next generation. The circular goes on to say that "a very large proportion of the men who offer themselves for enlistment in the army are found to be physically unfit for military service," and it appears to be suggested that the proportion of those who are unfit is increasing. The Council does not consider that the statistics which are contained in the circular really bear out these views. It is necessary in the first place to be sure that there has been no change in the requirements as to the physical fitness of recruits for the army during the few years to which the statistics refer, for any such change would obviously deprive the statistics of their value, but no alteration appears to have been made, nor has there been any increased stringency in the application of the tests imposed. The men who now wish to enter the ranks of the army are drawn from a class physically inferior to that from which they came in former years and it is to this cause that the Council mainly ascribes any deterioration that there may be in the quality of the recruit Putting aside the comparatively few who take up soldiering from a real liking for a military life, most of the recruits are men who have been unable to obtain other work. The Council points out that during recent years many influences have combined to affect the status of the working classes. Increased competition in trade, the "labour movement," trade unions, and many other social and economic factors have modified the conditions of labour and have raised the standard of efficiency of the workman, the standard of living, and the rate of wages. This competition leads to the better educated and the more physically fit obtaining higher wages now than formerly; hence it follows that there is a greater difference now between the pay offered to the private soldier and the wages which can be earned by the working man. It is only from the residue, who from some mental or physical unfitness fail to obtain regular employment, that the men who offer themselves for enlistment are drawn

In spite of the probability of there being some falling off in the quality of the recruit the Council was unable to find that the physical disabilities have increased. One table in the circular gives the proportion of rejections of boys under 17 years of age; only 11·2 per cent. were rejected and it cannot be said that this is a large proportion when we bear in mind the numerous possible physical disqualifications. Rejections are distinguished as primary and secondary. Primary rejections are those which occur at the first examination for enlistment and secondary rejections are those occurring within three months of enlistment or after two years' service. There has been a steady fall in the rate of primary rejections from 40·6 per cent. in 1893 and 41·6 per cent. in 1896 to 27·4, 28 0, and 30·7 per cent. respectively in the three years 1900 to 1902, but in 1901 and 1902 there was a sharp rise in the percentage of secondary rejections, though it is difficult to say what is the explanation of this rise. The table giving the causes to which the rejections are assigned shows a diminishing proportion for every cause except "loss or decay of teeth." The numbers rejected for "chest measurement" and for "imperfect constitution and debility" have greatly diminished, while the rejections due to the teeth have increased nearly five-fold in the 12 years 1891 to 1902. Assuming that no change has been made in the requirements the Council believes that many of the causes of disability will grow less and that "the spreading influence of the various social, municipal, and philanthropic agencies for the promotion of the public health and the strengthening of the character of the individual cannot fail to affect beneficially the health and wellbeing of all classes of the people," and with this hope we concur. It must not be forgotten that many of the disqualifications which exclude a would-be recruit from the British army are considered of much less importance in countries where conscription obtains. In conclusion, the Council states that it does not consider that there is any need for a large inquiry into the national health but it is of opinion that "much might be done by emphasising the necessity of still stricter attention to the health, feeding, and training of school children, and more especially the care of the teeth and the arrest of threatened or early decay." The Council also considers that "as much as possible should be done to promote the health, growth, and general physical development of the young soldier by improving his environment and by the exercise of special care in the selection of the kind and quality of his food and in its preparation and preservation."

As we have already announced, the Government has appointed a very satisfactory committee to investigate the whole subject. We shall probably have to wait several months for its report, as such investigations are carried on somewhat slowly, but when it is issued it should prove of the greatest interest to the whole nation.

Annotations.

"Ne quid nimis."

KING EDWARD VII. SANATORIUM.

ON Nov. 3rd the foundation-stone of this sanatorium was laid by His Majesty the King at Lord's Common, Midhurst, before a large gathering of visitors, the majority of whom consisted of members of the medical profession and their wives or daughters. The King in his speech referred to the benefits likely to be conferred on the community by a sanatorium of the character which it was proposed to build. It is intended not for the accommodation of the very poor—they are already provided for—but for the relief of those of slender means who are unable to meet the expenses of prolonged residence in private sanatoriums. The original plan of reserving a certain number of beds for more wealthy patients will also be persisted in. His Majesty also laid stress on the fact that while no necessary comforts which will add to the well-being of the patients will be omitted there will be a total absence of all luxury and of expenditure of money in superfluous appointments. This arrangement is entirely what might be expected, emanating as it does from a committee formed of gentlemen who have had both large and special experience in the management of hospitals and kindred institutions. Sir William Broadbent, as chairman of the advisory committee, in a brief address referred to the care which had been taken in selecting a suitable site and the difficulties which had been met with in obtaining a good water-supply. Both these essentials are now all that can be desired. The general arrangements for the day were most efficiently carried out. The invited guests were conveyed to Midhurst and Haslemere stations respectively by special trains and vehicles were in readiness to take them to the site of the sanatorium. After the brief ceremony of laying the foundation-stone the King at once returned to London, whilst luncheon was served to the large party that had been invited, and subsequently ample time was allowed to view the preparations which have already been made for the construction of the building. The architect's plans were also on view. In addition to the interest of the occasion a most enjoyable day was spent by those who had the privilege of being present, the drive to Lord's Common giving an opportunity of viewing the beautiful scenery, rendered even more lovely than usual by the glorious autumnal tints.

THE ST. BARTHOLOMEW'S HOSPITAL APPEAL.

IN THE LANCET of Oct. 31st, p. 1247, we alluded shortly to Sir Henry Burdett's paper in the *Hospital* of the same date concerning the future of St. Bartholomew's Hospital and in one place we unwittingly committed a slight inaccuracy. We stated that Sir Henry Burdett did not say whither he would propose to remove the nursing home, but we see on closer inspection of his article that he mentions that the existing wards, when the patients would be removed into the new wards which he proposes to construct, would suffice for the nurses. The question of the future of St. Bartholomew's Hospital is so important that we think it is as well to state succinctly how matters exactly stand. For some years past it has been obvious to the authorities of the hospital that more land must be acquired for the purpose of reconstruction and augmentation of the existing buildings and on Feb. 25th, 1902, Lord Balfour of Burleigh, who was the appointed arbitrator in the dispute between the authorities of St. Bartholomew's Hospital and Christ's Hospital, gave it as his decision that St. Bartholomew's Hospital should be given an area of a little more than one and one-third of an acre at a cost of £238,781.[1] The area thus granted is very nearly the same as that marked in a map which we published in our issue of August 11th, 1900, p. 408. What is now required is, as we said last week, some two more acres of land. This would cost about another £250,000. To erect the necessary buildings upon this area and the area at present in the possession of the hospital, including the removal of some of the existing buildings, would cost, in all probability, another £500 000. The Mansion House Committee has already decided to appeal for £350,000, but it seems to us that in view of the great importance of the matter it would be as well for the governors of the hospital to take a bold step forward and to appeal to the public not merely for £600,000, as suggested by Sir Henry Burdett, but for £800 000 This it may be calculated would cover with a certain margin to spare the cost of the additional two acres which we suggest are necessary for the due extension of the hospital and the erection of new buildings together with the renovation of the old. We think that, if the public were certain that the authorities of St Bartholomew's Hospital were willing to undertake a great scheme which would be practically final, the £800,000 might not be long in forthcoming. It is an enormous sum, and when the wants of other hospitals and the urgency of other appeals are remembered we may seem over sanguine as to the result of a public appeal for such a mass of money. But St. Bartholomew's Hospital has behind it a history of upwards of eight centuries. It is the only hospital within the boundaries of the City of London. It has stood where it now stands since the day when the first stone of it was laid. Medical men and others who have been connected with it are scattered throughout the empire and we believe that an appeal to the generosity of the citizens of London, to the subjects of the King whose son is now, like his father before him, the President of the hospital, would meet with a response worthy of the name and fame of that great institution founded so many years ago by Rahere.

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[1] THE LANCET, March 1st, 1902, p. 611.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual meeting of Fellows and Members will be held at the College on Thursday, Nov. 19th, at 3 P.M. Any motion to be brought forward at the meeting must be signed by the mover or by the mover and other Fellows and Members, and must be received by the secretary at the College not later than Nov. 9th. At this meeting the annual report of the work of the Council will be presented. A copy of this report will be sent to any Fellow or Member on application, and on request the name of the Fellow or Member can be registered, so that the report can be sent to him annually without further application. It is important that as many Fellows and Members as possible should attend this meeting, so that any motions which may be carried may really represent the opinions of the body corporate.

THE "RED LIGHT" TREATMENT OF SMALL-POX.

DR. J. F. SCHAMBERG, professor of diseases of the skin in the Philadelphia Polyclinic and College for Graduates in Medicine, has submitted to us a criticism of Professor Finsen's views on the red light treatment of small-pox which are well known to the readers of THE LANCET. Dr. Schamberg's remarks refer perhaps more particularly to an article which appeared in the *British Medical Journal* of June 6th, 1903, by Professor Finsen but they are of considerable interest as showing the very varied opinions which have been expressed on this method of treatment. The failure to take into consideration the type of cases in any particular epidemic of infectious disease has frequently led to misconception in regard to the value of a new remedy. Doubtless the fact that epidemics of small-pox vary greatly in the case mortality may account in some measure for the different results obtained by the Scandinavian physicians on the one hand and the American physicians on the other, and Dr. Schamberg refers to this point in his remarks. Professor Finsen was enthusiastic with regard to his results and remarked that "the effect of the red light treatment is one of the most striking results known in medicine" and that "we cannot help comparing the red light treatment with vaccination." Dr. Schamberg attempts to refute these statements both on theoretical and practical grounds. Professor Finsen maintains that the chemical rays of sunlight exert an injurious influence on a diseased skin and that the use of red panes of glass or red curtains in a room excludes the chemical rays and he adduces this theory as an explanation of the alleged benefit of red light in cases of small-pox. Dr Schamberg contests this view and his arguments seem to be well founded. He points out that while prolonged exposure to the direct solar rays, particularly in the hot months of the year, commonly induces inflammatory reaction, yet there is no evidence of such noxious influence from ordinary exposure to diffuse daylight. Further, small-pox being more prevalent in the winter months, it seems difficult to believe that ordinary exposure in the sick room to diffuse daylight at that time of the year would result in any irritative action of the skin. Dr. Schamberg also is of opinion that the predilection of the small pox eruption for the face and the extremities is not because these parts are exposed to light but that it is due to their greater vascularity. Dr. Schamberg refers to the favourable opinion of the treatment expressed by physicians chiefly in Denmark, Sweden, and Norway. His own experience is limited to two cases of the disease, both of which ran an unfavourable course. He refers, however, to an article by Dr. N. D. Brayton of Indianapolis. This physician treated 300 cases in "red light wards" and was entirely unable to corroborate the good results claimed by the Scandinavian medical men. As partially explanatory of this discrepancy Dr. Schamberg points out that Denmark, Sweden, and Norway are among the best vaccinated countries of Europe. It is obviously illogical and misleading to attribute definitely favourable results to certain measures employed in the treatment of small-pox in persons once vaccinated. It is evident, therefore, that no absolute conclusions can yet be drawn with regard to the red light treatment. Further evidence is necessary. He insists that the general severity of the particular epidemic must be noted and also whether the patients so treated had ever been vaccinated, or whether revaccination had been performed at a comparatively recent period.

STREET NOISES.

WE have upon several occasions drawn attention to the very great and absolutely unnecessary nuisance caused by newsvendors shouting their wares in the streets. We have also pointed out that the view which some magistrates take that a complainant must appear in person renders the existing law on the subject absolutely useless. We are glad to see, however, that one magistrate at least has apparently considered that the recently passed by-law of the London County Council is enough for him and the police to act upon without the attendance of an annoyed ratepayer. On Oct. 28th seven newspaper boys appeared before him for shouting in the streets. Six of them were fined 2*s.* 6*d.* and 2*s.* costs each, and one, who was very small, had to pay 1*s.* and 2*s.* costs. The nuisance in a street such as the Strand which is full of workers is absolutely unbearable and, as we have pointed out again and again, there are lots of newspaper sellers who do not shout and who do not rush through the streets like lunatics. The police are exceedingly loth to act upon their own initiative but it is perfectly foolish for legal authorities to expect anybody who is at work to leave his occupation, to run downstairs, to find a policeman, to follow up the newspaper seller, to take his name and address, and to promise to appear at some future date at a police-court. What is wanted is that any newspaper seller who persistently shouts should be then and there taken to a police-station.

WORKHOUSE NURSING.

THE matter of nursing in workhouses has already been dealt with at some length in these columns but its importance justifies some allusion to the proceedings at a meeting held on Oct. 29th in connexion with the Hospitals Association. This meeting, which took place at St. Thomas's Hospital, Mr. Thomas Bryant being in the chair, was held for the purpose of considering the Report on Nursing of the Departmental Committee which was appointed by the President of the Local Government Board. In opening the discussion Dr. T. D. Savill found fault with the constitution of the committee in that while the Local Government Board was fully represented no outside expert on nursing was invited to assist. He opposed the arrangement by which it is proposed to grant certificates to nurses after 12 months' training on the grounds (1) that the material afforded by cases in workhouses is not sufficient for adequate training, especially as the medical and surgical methods pursued there are not always up to date; and (2) that the time is too short both for gaining experience and for the formation of that character of broad-minded intelligent sympathy which constitutes so important a part of a nurse's qualification. It was pointed out that the object of the Local Government Board was to manufacture cheap nurses for employment in workhouses, and stress was laid on the injustice which would be done to nurses of the better class by giving credentials of apparently equal value to imperfectly trained women. Miss Gibson, matron of the Birmingham Infirmary, regarded the suggestion that a new grade of nurses, to be called "qualified nurses" and with only one year's experience, should be instituted as dangerous and retrograde in the extreme. She agreed with Dr. Savill as to the impossibility of any woman obtaining in a year at a small workhouse such knowledge as would render her a safe person to be left in charge of patients without supervision. Skilled nursing, she remarked, is a necessity for all who are sick and she expressed the opinion that it was a gross injustice to the sick poor that so low a standard of knowledge as the report sanctions should be accepted. Dealing with the question of the position of superintendent nurses she supported the proposal of the committee to make those officers independent of the matrons and pointed out that any course which tended to reduce the responsibility and the enthusiasm of the Poor-law nurse tended to lessen the supply and to lower the quality of such nurses. Reform, in Miss Gibson's view, should take the direction of (1) the formation of a special nursing department of the Local Government Board; and (2) the appointment of women inspectors who were nursing experts to visit, to inspect, and to report on the nursing of the small unions. In this way she thought that the debt of gratitude which she described the sick poor as willing to pay would be largely added to. Several other speakers, including Mr. J. T. Macnamara, Mrs. Despard, and Mrs. Bedford Fenwick, followed in the same sense and a motion proposed by Dr. Savill was passed unanimously condemning the proposals of the Local Government Board and urging that their adoption would have a detrimental effect upon nursing generally. It was also decided to ask the Local Government Board to receive a deputation in connexion with the subject. With the aims of the promoters of the meeting, in so far as these are directed towards maintaining the efficiency of nursing in all its branches, we are quite in sympathy. It is eminently desirable that there should be no ambiguity about the qualifications of nurses and this will certainly arise if the Local Government Board persists in applying the epithet "qualified" to a nurse as an indication of her having received a minimum of training.

SECOND ANNUAL REPORT OF THE WORK OF THE BACTERIOLOGICAL LABORATORY OF THE WEST RIDING OF YORKSHIRE COUNTY COUNCIL.

THE number of county medical officers and of county public health laboratories will no doubt steadily increase as the public realise the value of the services which are rendered by them in the preservation of the country from the spread of epidemic disease. Such annual reports as the one under notice will greatly assist this realisation. The West Riding County Council having established a laboratory offered to undertake free of charge such bacteriological investigations as would be of assistance in the diagnosis of certain infectious diseases and of importance to public health. The need of a county laboratory has in other cases been met by the utilisation of the fully equipped establishments which were attached either to the provincial universities or other educational bodies and thus the services of skilled investigators have been secured at a comparatively small expense. There can be no two opinions as to the legitimacy of the expenditure of public money for the public health but care should be taken that the resources of the public laboratory are not employed for purposes which are but remotely connected with the public service. The West Riding Laboratory commenced work in April, 1901, and a steadily increasing number of cases has been dealt with. In the last nine months of 1901 some 863 specimens were reported upon as contrasted with 1700 during an equal period in 1902. The principal work has consisted in the examination of specimens for the bacillus tuberculosis and the bacillus diphtheriæ and for the agglutination reaction in enteric fever. In the case of diphtheria the use of Neisser's stain and the direct examination of the swab have been so successful that in 50 per cent. of the positive cases it has been possible to send a report within a few hours of the receipt of the specimen. Early diagnosis in diphtheria is of the greatest importance to both patient and practitioner and the laboratory is to be congratulated on this unusually high ratio of successful and rapid diagnosis. One of the most important and striking features of the report is the very complete clinical information of the cases submitted for examination which the director, Dr. P. J. Cammidge, has been able to obtain. This bears witness to the good feeling which exists between the central laboratory and the local medical officers of health and the general practitioners, without which it is impossible to carry on any successful work. It is of vital importance that the results of the laboratory should be correlated with the clinical details if these institutions are to produce really scientific work and to further the progress of preventive medicine.

TABES DORSALIS IN THE NEGRO.

TWO grave and incurable diseases of modern life are believed by some neurologists to have been acquired by the negro with civilisation—viz., general paralysis of the insane and tabes dorsalis. Of tabes in the negro, writes Dr. d'Orsay Hecht, instructor in neurology in the University Medical School, Chicago, in an article published in the *American Journal of the Medical Sciences* for October, it has been possible to obtain very few references in medical literature. Von Leyden quotes an apparently well established belief among medical men to the effect that "tabes occurs very rarely in the large number of syphilitic negroes" in the United States and in Africa, while the disease is also stated by local physicians to be rare in Cuba. Dr. Potts, physician to the Dispensary for Nervous Disease in the University of Pennsylvania, had not seen a single case of tabes dorsalis in the negro in eight years, and Dr. Burr had not seen a single case at the Philadelphia Infirmary for Nervous Diseases during 14 years. Dr. Hecht, having had the opportunity of seeing and studying "four undoubted cases of tabes dorsalis in coloured individuals," three of whom were females and one was a male, states that the clinical picture of the disease as exhibited in these cases in no way differed from the symptom-complex accustomed to be seen among the whites except, perhaps, in the fact that they were all of the "amaurotic type" of the disease. Dr. A. Plehn, who had studied the diseases of the negro in Western Africa and who had drawn up an official report on the subject to the German Government in 1895, states that of nervous disease he had only seen four cases of epilepsy and an occasional case of hysteria, which exhausts the list of neuroses to which the natives are liable. Dr. Hecht thinks that emancipation from slavery has brought to the negro all the vices and excesses of western civilisation, that tuberculosis, syphilis, and cancer are now deeply rooted affections among them, and that a slight admixture with the blood of white people has weakened the race. The inter-crossing with new blood has brought with it a tendency to acquire new diseases. "By an illegitimate and universal miscegenation with the whites the typical American negro of to-day has incorporated in his frame the deteriorating phenomena of his hybridity." The following is one of the four cases recorded by Dr. Hecht. The patient was a negro woman, aged 39 years, of healthy parentage, in whom there was a slight trace of "white" blood. As a child she suffered at the age of 12 years from rheumatism which became chronic owing to hard work and exposure At the age of 16 years she gave birth to an illegitimate child Prior to the birth of her second child at the age of 18 years she contracted syphilis from the man who was her husband Her present illness began at the age of 34 years with severe recurrent protracted headaches of an agonising character and progressive dimness of vision in the left eye which glasses did not seem to relieve Eventually she became quite blind in the left eye and dim of vision in the right eye Severe gastric "crises," "girdle sensations" about the waist paræsthesiæ about the feet and ankles, "lightning" pains in the legs, and a commencing ataxia of gait manifested themselves The sexual desire rapidly disappeared and some defect of control of the bladder and rectum developed Physical examination showed absence of knee jerks, optic atrophy with iridoplegia, and exaggeration of the plantar reflexes The slight ataxia soon disappeared The interval between syphilitic infection and the first manifestation of tabes was in this case, and in three other cases, in harmony with what has been observed in white races Optic atrophy was present in every one of the four cases and it was singular to note, states Dr Hecht, that as the optic atrophy became distinct the further advance of the ataxia was checked—a condition to which Benedikt of Vienna called attention 16 years ago Subsequent observations by Bonar of New York and Pierre Marie have emphasised the fact that almost invariably the onset of optic atrophy marks the arrest of the ataxic symptoms, a fact for which an explanation is now found, says Dr Hecht, in an ingenious theory of "compensation of nerve centres and tracts" recently propounded by Edinger The question as to why the negroes, amongst whom syphilis is a very common disease, should suffer very rarely from tabes is hard to answer as yet "As well might we seek to explain the absence of tabes in Bosnia and Herzegovina where, as we know, the most intense constitutional syphilis is rampant among the natives" Dr Hecht concludes that a constitutional variation has been wrought in the American negro by acclimatisation, by social environment, and more than all else by miscegenation, and from a critical and exhaustive study of the facts of his own and other cases he concludes that the last factor is, above all, essential to the production of tabes in a syphilised negro

RAILWAY TRANSPORT FOR SICK AND WOUNDED MEN IN TIME OF WAR

In the June issue of *Le Caducée* Surgeon-Major Duval of the French army discusses the question of railway transport for the sick and wounded in war time While on a tour through British India in 1897–98 he was greatly impressed by the completeness of the arrangements to that end which he found established throughout the entire railway system of the North Western Provinces Forming part of every train there were several third class carriages which answered admirably for ordinary traffic and could also be easily rearranged for the reception of sick or wounded soldiers in the recumbent position The seats and backs being moveable could be compactly stored in an adjoining van, leaving a framework suitably fitted with hooks and other appliances for the suspension of stretchers in two tiers The operation of converting one of these carriages into an ambulance took a few minutes only In the sides of each carriage there were folding doors wide enough to admit laden stretchers with ease and safety In ordinary circumstances a portion only of each door would remain available for the ingress and egress of passengers, the remainder being kept securely fastened in order to prevent accidents On his return to France Surgeon Major Duval instituted inquiries and found that with the exception of one or two specially equipped "sanitary trains" capable of accommodating a comparatively insignificant number of patients the army medical authorities would in the event of war be compelled to depend for the transport by rail of sick and wounded soldiers upon the ordinary baggage wagon, a species of vehicle which is rendered absolutely unfit for the purpose by its lack of suitable springs So long ago as 1882 Dr. Redard, principal medical officer of the State railways in France, drew attention to this subject in a report which he addressed to the head of the administration but apparently no action was taken in the matter Last year he again returned to the charge According to an annotation in the *Archives de Medecine et de Pharmacie Militaires* for August one of the French railway companies has already constructed 56 third class carriages with removeable fittings and containing wide doorways for the admission of litters and we are also told that Dr Redard has been authorised to inspect the existing rolling stock throughout France with a view to the conversion of suitable carriages for ambulance purposes

"ANTI-VIVISECTIONIST" METHODS IN THE TEMPLE

Now that the Bar has resumed its labours after the long vacation the attention of the benchers of the Temple may be called to a large placard which decorates a ground floor window looking into Elm court, Temple It is apparently placed there by someone interested in what is popularly called "anti vivisection" and consists of a picture of a gentleman in his shirt sleeves contemplating a small dog which sits "begging" before him upon a table Beside the dog stands a microscope and a box with articles intended to suggest surgical instruments, and under the whole is inscribed "The Last Appeal," with a reference to the "anti-vivisection" source from which this entirely absurd advertisement is taken The suggestion of the picture, of course, is that the gentleman in his shirt sleeves is being appealed to for mercy by the small dog which he is about to sacrifice with ruthless cruelty in the supposed interests of science The display is in very bad taste and if the windows of chambers in the Inns of Court are to be used for purposes of this kind it would be better that the posters exhibited should deal with matters more within the scope of the lawyer's calling and not be of a nature offensive to members of another learned profession

TUBERCULOSIS OF THE URETHRA

Tuberculosis of the urethra is very rare The following case which is recorded by Dr A L Chute in the *Boston Medical and Surgical Journal* of Oct 1st, is of great interest A married man, aged 35 years, who had never suffered from venereal disease was seen in March, 1902. Two years previously he began to suffer from painful and frequent micturition and the left inguinal glands rapidly enlarged Hæmaturia and slight urethral discharge occurred at times For a period there were painful erections and coitus was impossible The stream of urine gradually became smaller and micturition became more frequent When he came under observation he was micturating four times at night and frequently in the day His general condition was good and there was no urethral discharge With difficulty he passed a few ounces of urine in a very small stream which was followed by dripping The urine was pale, of specific gravity 1009 and contained a trace of albumin and a few shreds which on staining showed urethral and pus cells, cocci and bacilli, but no gonococci. The urethra felt like a stiff tube At a distance of one and a half inches from the meatus was a hard bulbous enlargement and there was another at the peno-scrotal angle. On moving the urethra laterally at this point distinct crepitus was obtained. A probe was passed as far as the bulb and gave a grating sensation as it passed the enlargements. In the left groin was a mass of hard glands three or four inches long and about an inch wide. In the right groin the glands were only slightly enlarged. The prostate was enlarged and on the right side a small hard mass was felt. The diagnosis was not clear. Gradual dilatation of the urethra relieved the frequency and difficulty of micturition. At first bleeding was produced but it gradually diminished. With an alligator forceps bits of calcified material were removed. They were composed of carbonate and phosphate of lime, with traces of magnesium compounds and triple phosphate. A search for tubercle bacilli proved negative. In July, 1902, the left inguinal glands were removed. They showed amyloid infiltration, a condition which, apart from general amyloid disease, is very rare and usually is due to tuberculosis in some part of the lymphatic area. In April, 1903, a No. 25 (French measurement) sound could be passed. Grating could be felt at a point one and a half inches from the meatus and in the membranous urethra. On several occasions small pieces of calcified material were passed. Endoscopy showed a pale, fibrous-looking canal with an occasional eroded spot and whitish points here and there. Though the bacillus was not found the diagnosis of tuberculosis seemed justified by the non-venereal origin of the disease, its course, and the condition of the inguinal glands. Dr. Chute has been unable to find recorded any case in which similar calcareous deposits were produced. The nearest approach is the case of a child, reported by Berard and Trillat, in which there was urethral tuberculosis and several points were felt which seemed to be due to calcification. Urethral tuberculosis occurs in early childhood and in old age but like all forms of genito-urinary tuberculosis it is most common during the period of sexual activity. Men are affected more frequently than women. Gonorrhœa seems to be a predisposing cause. Several cases of tuberculosis of the glans penis with extension to the urethra have been reported. In cases in which a necropsy has been performed there have been almost without exception other lesions of the genital or urinary tract which appeared to have preceded the urethral lesion. Thus urethral tuberculosis may be secondary to genital or to urinary tuberculosis; usually both tracts are affected. Lesions of the prostate, epididymis, and vesiculæ seminales are nearly always associated. In urethral tuberculosis there are generally two forms of lesion—granulations and ulcers. The former may be grey or yellow. Dr. Chute's case appears to be unique in the fact that the acute stage of the disease ran a favourable course with calcification.

HETEROGENESIS.

THE problem of the origin of life must ever exercise its fascination on the human mind. Since Virgil described the growth of bees from the carcass of a beaten ox to the time when the development of the experimental method led to the researches of Needham and Spallanzani the heterogenetic origin of life has been at intervals the subject of more or less heated controversy. To many the problem would seem to have been solved and most will have forgotten the war which in "the sixties" raged round this and the kindred problem of biogenesis when such champions as Pasteur and Tyndall were ranged against Pouchet and Bastian. Death has removed most of those who then fought but one remains and still upholds the heterogenetic theory. In the *Annals and Magazine of Natural History* Dr. H. Charlton Bastian writes of the origin of bacteria and their allies by heterogenesis and in THE LANCET of Oct. 31st, p. 1220, there is a paper by him on the importance which the proof of this *de novo* origin of micro-organisms has in widening the views on contagion which are current in medical science. In the first mentioned paper, as he says, he has shown that the segments of a rotifer's egg may "presently become alive as amœbæ, monads, peranemata, or even as ciliated infusoria," it would seem comparatively easy to grant that bacteria should have a heterogenetic origin, though owing to their small size the proof may be more difficult. The methods Dr. Bastian employs are reasonings by analogy and experimental investigations on animal and vegetable tissues treated with formalin and kept in vessels washed out with that fluid. Reproductions of photographs of the results of his microscopical examinations are given but though the original sections may carry conviction this is hardly the case with the reproductions. It is, however, well to remember that discussions of this subject have been far from sterile, as in the course of the investigations science and especially bacteriology have been enriched by a large number of practical methods. The second paper deals with the very interesting subject of the origin *de novo* of disease and cites the cases of enteric fever, tubercle, and leprosy as affording evidence of such origin, while the experimental septicæmias produced by the injection of putrid blood or some sterile chemical irritant in the rabbit are held to afford absolute proof that they may originate in this way. When we consider that a pathogenic germ may be so modified that it loses its pathogenicity and becomes indistinguishable from a saprophyte and yet that this same organism may under certain experimental conditions resume its virulence, especially when it is passed through the bodies of extremely susceptible or artificially weakened animals, it is a very tempting hypothesis to suppose that such a disease as typhus fever, which practically never appears except under conditions of starvation or extremely bad sanitation, may be produced by some organism which we usually regard as a saprophyte. In many branches of science, notably in chemistry, it has been by the study of outlying phenomena which did not fall easily within the scope of the current theory that the science has made its next step in advance, and a thoughtful review of some of the outlying phenomena of medicine such as are dealt with by Dr. Bastian cannot fail to be of value. It is of interest, too, to be reminded that the problems of heterogenesis do not in all minds find the same solution and also of the great difficulty, if not impossibility, of finding an absolutely final proof of the biogenetic origin of life.

FISTULA BETWEEN THE PORTAL VEIN AND THE HEPATIC DUCT.

IN the *Australasian Medical Gazette* for September Mr. E. W. Moncrieff, pathologist of Prince Alfred Hospital, Sydney, has reported a remarkable case under the care of Mr. H. V. C. Hinder of fistula between the portal vein and the hepatic duct. An operation for gall-stones was performed on a man and a large calculus was found in the common bile duct. The latter was incised longitudinally. As soon as the calculus was removed there was a gush of blood as if a large vein had been opened. The hæmorrhage was controlled by four forceps which grasped the edges of the incision and finally by means of a large tube stuffed with gauze. A few hours later the movements of the patient displaced the plug and death occurred from hæmorrhage into the peritoneal cavity. At the necropsy the common duct was found to be greatly dilated. It was of about the size of a thumb, its mucous membrane was roughened, and its walls were thickened. The portal vein was quite normal. The gall-bladder was small, shrunken, and thickened, and contained a little mucoid blood-stained fluid. The hepatic ducts were full of dark, clotted blood. At the transverse fissure of the liver the portal vein showed a discoloured patch under the intima about a centimetre in diameter. In this was a small opening with clean cut edges like the mouth of a vein. On introducing a probe the intima was found to be dissected up and the discolouration to be due to effused blood. The probe could be passed on into one of the large hepatic ducts just at its origin from the common duct. Evidently blood had passed directly from the vein into the ducts and escaped when the stone which acted as a plug was removed. On section of the liver all the small bile ducts were found to be full of clots. Microscropic examination of the liver showed an increase of small round cells in the ramification of Glisson's capsule. The cause of the communication between the portal vein and hepatic duct was not obvious. Perhaps the calculus at one time lay over the opening in the hepatic duct and by pressure gave rise to necrosis. The appearance of the blood contained in the ducts was compatible only with recent hæmorrhage, for the clots were soft and dark.

EXPERIMENTAL PSYCHOLOGY AT KING'S COLLEGE, LONDON

THE council of King's College, London, has just elected Dr. C. S. Myers to the lectureship on experimental psychology at the College which was rendered vacant by the resignation of Dr. W. G. Smith who has obtained a similar post at the University of Liverpool. The recently established laboratory devoted to this important branch of science is now in full working order and those who desire to take advantage of it can obtain full particulars by writing to Dr. Myers or to Dr. W. D. Halliburton at King's College.

RECENT ADVANCES IN THE KNOWLEDGE OF GENERAL PARALYSIS.

IN the *Archives de Neurologie* for September a number of communications are published which contain accounts of recent researches made in the pathological histology of general paralysis of the insane by various observers. In the first of these articles Dr. Klippel of Paris gives a lengthy account of his investigations. As the result of his studies he considers that three types of general paralysis, regarded from the pathological standpoint, may be said to exist. The first type is characterised by inflammatory lesions (which may proceed to actual suppuration) of the cerebral meninges and cortex (inflammatory general paralysis). In the second type a lesser degree of meningo-encephalitis is seen, but this is a secondary condition superimposed on a pre existing cerebral degeneration which might have been brought about by other causes to which reference will be made below (associated general paralysis). The third type comprises purely degenerative lesions arising from various causes but unaccompanied by any traces of inflammatory action (degenerative general paralysis). In spite of the attempts of various investigators, says Dr. Klippel, no distinctive histological feature has been found in inflammatory general paralysis which enables us to differentiate it from other inflammations of the brain due to micro-organisms or their toxins, and even the presence of "mast cells" is not pathognomonic of general paralysis. On the other hand, such morbid conditions as cortical hyperæmia with diapedesis of leucocytes, hyaline degeneration of the fine cortical blood-vessels, invasion of the pericellular spaces by leucocytes, and miliary hæmorrhages into the substance of the brain have been described by many observers (Manasse, Klebs, Pierret, and Bischoff) as occurring in the brain as the result of such diseases as chorea, influenza of the "nervous" form, and acute delirium In inflammatory general paralysis there are present such indications of bacterial infection as cystitis and marked leucocytosis. The second type of general paralysis is marked by slight or moderate meningo-encephalitis, due probably to bacterial infection, but supervening on a basis of pre-existing cerebral organic degeneration. Such degeneration has usually been found to be caused by alcoholic indulgence over long periods of time. Patients of this class present signs of fatty and fibroid degeneration in the liver, myocardium, and kidneys. Tuberculosis of chronic and long-standing character produces in some cases a form of special cerebral degeneration on which, as on a basis, the acute infection of general paralysis may develop with facility Similarly brains weakened and altered by the presence and growth of tuberculous tumours or cerebral gummata are prone to suffer from, and succumb readily to, the agencies which produce general paralysis. The third group comprises cases of general paralysis of purely degenerative character, in which the basis is a cerebral debility of congenital origin or one due to tuberculosis or alcoholism of a mild degree of intensity. These cases lapse steadily and uneventfully into dementia with the onset of general paralysis without exhibiting signs of inflammatory or other acute brain mischief. They include the group of cases of the so-called "primarily demented type." Between these three types of cases a few intermediate forms are occasionally met with, so that it is impossible to draw strict lines of demarcation between them. At the acute and rapidly progressive stages of general paralysis, adds Dr. Klippel, acute leucocytosis is observed, the number of polynuclear leucocytes in the blood being high, but during remissions these leucocytes diminish to a normal proportion. Dr. Anglade of Toulouse, in a contribution following the above, stated that lesions of the neuroglia elements in the brain and of the capillaries occurred in the earliest stages of general paralysis. He regarded these changes in the neuroglia and capillaries as primary, and the degeneration of the nerve cell as secondary, phenomena. Lymphocytosis occurred early in the cerebro-spinal fluid—a fact indicating morbid changes in the meninges and blood-vessels. Dr. Laignet Levastine of Paris in another article stated that from a study of 42 brains he had come to the conclusion that the lesions of general paralysis could be classed under the three groups mentioned by Dr. Klippel.

THE ENNO SANDER PRIZE.

THE Association of Military Surgeons of the United States has announced the conditions to be observed by the authors of essays competing for the Enno Sander Prize and it directs special attention to the fact that military and naval medical officers of the British services are eligible. The subject of the competition for 1904 is "The Relation of the Medical Department to the Health of Armies." The conditions of the competition are as *follows* :—

1. Competition is open to all persons eligible to active or associate membership in the Association of Military Surgeons of the United States.

[illegible]

3. In fixing the precedence of the essays submitted the board will take into consideration, primarily, originality, comprehensiveness, [illegible]

[illegible] author. Each one, however, will be authenticated by a *nom de plume*, a copy of which shall, at the same time as the essay, be transmitted to the secretary in a sealed envelope, together with the author's name, rank and address.

[illegible] the successful competitor [illegible] ng annual meeting of the [illegible] erty of the Association of [illegible] and will appear in its publications."

The board of award consists of Lieutenant-Colonel John Shaw Billings, U.S. Army, Brevet-Brigadier-General

George Ryerson Fowler, New York, and Surgeon Henry Gustav Beyer, U.S. Navy. The secretary of the association is Major James Evelyn Pilcher, Carlisle, Pennsylvania, U.S.A. The essayist securing first place will receive a gold medal of the value of $100. The essayist securing second place will receive a life membership in the association of the value of $50.

THE annual general meeting of the Society of the Members of the Royal College of Surgeons of England will be held at the Frascati Restaurant, Oxford-street, on Tuesday, Nov. 10th, at 7 P.M. The meeting will be followed by a dinner at 7.30. Any member wishing to dine will oblige by communicating with the honorary secretary, Society of Members of the Royal College of Surgeons of England, Elmbank, West Hill, Putney, S.W.

THE annual dinner of the staff and past and present students and friends of the Royal Dental Hospital of London will take place on Saturday, Nov. 21st, in the Whitehall Rooms of the Hôtel Métropole under the presidency of Mr. F. J. Bennett, M.R.C.S., L.D.S. Eng. All communications on the subject should be addressed to the Dean at the Royal Dental Hospital, 32, Leicester-square, London.

THE November dinner of the Aberdeen University Club in London will be held at the Trocadéro Restaurant, Shaftesbury-avenue, W., on Wednesday, Nov. 18th, at 7 P.M., Professor George Pirie being in the chair. Members desiring to be present should communicate with the honorary secretaries, Mr. J. Malcolm Bulloch and Dr. Robert J. Collie, 25, Porchester-terrace, W.

THE authorities of Yale University, U.S.A., have invited Dr. C. S. Sherrington, F.R.S., Holt professor of physiology in the University of Liverpool, to succeed Dr. J. J. Thomson, F.R.S., professor of physics in the University of Cambridge, as lecturer under the Silliman Memorial Endowment. The lectures will be delivered at Yale University in the spring of next year.

A GENERAL monthly meeting of the members of the Royal Institution was held on Nov. 2nd, Sir James Crichton-Browne, treasurer and vice-president, being in the chair. Mr. A. K. Huntingdon, Sir Oliver Lodge, Mr. J. Francis Mason, and Mr. Edward H. Woods were elected members.

KING EDWARD VII. SANATORIUM.

HIS MAJESTY THE KING went on Nov. 3rd to Lord's Common, Midhurst, and laid the foundation-stone of King Edward VII. Sanatorium. Special trains from London took down many medical men interested in the open-air treatment of tuberculosis and they were taken to the site from Midhurst and Haslemere stations in brakes, but the steepness of the ascent to Lord's Common rendered the progress of the party very slow, inducing many to proceed to their destination on foot. The sanatorium is placed in park-like grounds at an altitude of about 500 feet. The spot where the buildings will be erected is sheltered by pine trees on rising ground, while the southern aspect is open and affords a charming view over the South Downs towards Chanctonbury Ring. The sanatorium will be built in two portions—an administrative building and a building for the patients. As far as could be made out in the present unfinished state the institution promises to be the most perfect of its kind.

The King arrived at the sanatorium shortly before one o'clock and was immediately conducted by Lord Abergavenny to the pavilion where the foundation-stone was suspended in readiness for the ceremony.

An address was then read by Sir WILLIAM H. BROADBENT, Bart., K.C.V.O., the chairman of the advisory committee. The committee consisted of the following: Sir William Broadbent (chairman), Sir Richard Douglas Powell, Bart., K.C.V.O., Sir Francis Laking, Bart., G.C.V.O., Sir Felix Semon, C.V.O., Sir Hermann Weber, Dr. C. Theodore Williams, Lord Sandhurst, Lieutenant-Colonel Lascelles, Sir Frederick Treves, Bart., K.C.V.O., C.B., and Dr. P. Horton-Smith and Dr. John F. H. Broadbent, secretaries.

THE ADDRESS.

The advisory committee appointed by your Majesty to carry out your Majesty's gracious intention of providing for the open-air and sanatorium treatment of consumption occurring in the classes above the very poor but unable to meet the expense of prolonged residence in private sanatoria, desire humbly to express their satisfaction that the project has reached the stage which offers the occasion for your Majesty's presence here to-day. The site, which after examination of many parts of the country they were able to secure, fulfils in their judgment every requirement for such an institution and they trust that its advantages will be apparent to your Majesty even at this period of the year. The extent of land acquired is 151 acres and was purchased from Lord Egmont. To the south it is open and covered by heather and bracken, while the northern and higher part is well timbered by fine fir-trees. The ground slopes gently to the south, affording a maximum of exposure to the sun; the soil is the lower greensand and the climate particularly suitable. The building will stand at the elevation of nearly 500 feet and will command a view over the valley of the Rother to the South Downs. It will be sheltered from the north and east by a gradual rise of the ground to a height of 630 feet and by beautiful pine woods which will be laid out in walks suitable for the graduated exercise which forms part of the treatment. To the west is an open common with fine views which will be accessible to patients who are convalescent and capable of vigorous exercise. The plans and elevations of the sanatorium as designed by Mr. Percy Adams, the architect, have been submitted to your Majesty. In order that the best principles of construction and management, as approved by the experience of existing sanatoria, and new suggestions in advance of these might be brought to bear upon the institution, your Majesty offered prizes of the value of £500, £200, and £100 respectively for the best essays and plans and with the same object members of the committee and the architect visited sanatoria on the continent and in this country. The part of the building to be occupied by the patients will be a long two-storey building. Each patient will have a separate room and there will be a balcony upon which the patients can sit out or upon which the bed in case of need can be wheeled. For the further enjoyment of open air there will be *Liegehallen* and shelters in the [illegible] ...ds will be 100 and at your Majesty's [illegible] ...een provided for 12 well-to-do patients [illegible] more wealthy classes from the special [illegible] be afforded by the institution. Some delay has been occasioned by difficulties with regard to the water-supply. According [illegible] water of excellent quality was to be found in [illegible] This proved to be the case on bor[illegible] h extremely fine sand which would have interfered with pumping and rendered the supply uncertain. It was therefore necessary to go elsewhere and springs issuing from the same stratum of greensand to the north and capable of supplying 60,000 gallons a day have been secured by purchase from Lord Egmont. The water collected as it emerges from the ground is conveyed to a collecting reservoir near Henley Common and pumped up to a cistern holding 160,000 gallons at the highest point of the site, about 100 feet [illegible] It will thus be available in case of fire as [illegible] of the sanatorium which is estimated at [illegible] The committee desire to tender their humble thanks to [illegible] for the encouragement afforded them in their task and for the interest manifested in the beneficent work placed under their supervision, a striking instance of which is given in your Majesty's presence here to-day. It is their earnest hope that the erection of which your Majesty now lays the foundation-stone may be worthy of the name it will, by your gracious permission, be honoured in bearing—the King Edward VII. Sanatorium.

The KING, in reply, said: My Lords and Gentlemen,—It gives me great pleasure to come here to-day to lay the foundation-stone of my sanatorium for tuberculosis. When a generous donor, whom I regret I am not allowed publicly to thank, placed at my disposal a large sum of money for any philanthropic object which I might have in view I at once decided to devote it to the erection of an open-air sanatorium, having been so greatly impressed with the immense benefit which institutions of this nature conferred on those suffering from pulmonary diseases. It is my hope that by these means the malady may be arrested in the case of not a few of those who would be treated in the institution, while I further trust that on their return home, by diffusing among their relatives and friends a knowledge of the infinite importance of fresh air and sunshine in maintaining health, the conditions under which in so many homes tuberculosis flourished will be sensibly diminished. I note with satisfaction that the site which my committee have secured fulfils all the essential requirements of a sanatorium, and I trust that the sandy soil, the southern aspect, and the pine trees which give protection from the north and the east will assist in restoring health to the inmates of the institution. I am aware that this site has not been chosen without investigating many others, and I thank my committee, and especially among them Dr. Theodore Williams, for the many visits which they have paid to other possible sites in various parts of England You, Sir William Broadbent, have alluded to the difficulty experienced in obtaining a satisfactory supply of water and to the delay which has in consequence been caused in commencing the building of the institution This was unavoidable, for without a proper supply of water an otherwise excellent site becomes valueless I am glad now to know that through the ingenuity and skill of Mr Brough Taylor all difficulties have been overcome and that an ample supply of absolutely pure water has been obtained. I observed with satisfaction in driving here the condition of the road leading to the institution, which has recently been constructed The great rapidity with which this has been completed, under the supervision of Messrs John Aird and Sons, is, I hope, an earnest of the way in which the building of the sanatorium itself will be pushed forward now that all preliminary difficulties have been overcome You have alluded in general terms to the character of the building which will be erected As you have rightly stated it will be for the accommodation not of the very poor—they are already being provided for—but of those of slender means who are unable to meet the expenses of prolonged residence in private sanatoria A certain number of beds will also be reserved for more wealthy patients I am glad to know that while no necessary comforts which will aid to the well being of the patients will be omitted there will be a total absence of all luxury and of expenditure of money on superfluous appointments I regret that it was not possible for the Queen to accompany me here to day Like myself, she is deeply interested in the fight against tuberculosis and has proved it by permitting the Queen Alexandra Sanatorium at Davos to be called by her name We both of us pray that the institution of which I am about to lay the foundation stone may receive the blessing of God and that those who come to reside here may find renewed health and strength to enable them to carry out their duties in the world

The Bishop of CHICHESTER then conducted the religious service and the stone was declared to be well and truly laid by the King

His Majesty before leaving spent some time conversing with the members of the advisory committee and recognised one or two of the general company present

TRANSVAAL ADMINISTRATION REPORTS FOR 1902

PUBLIC HEALTH DEPARTMENT

OUT of a volume consisting of 264 pages of Blue book dimensions 28 are devoted to the report of the health of the Transvaal during 1902 Dr George Turner, medical officer of health of the Transvaal, laments the impossibility of getting a trustworthy report owing to insufficiency of returns, statistics, &c This can be readily understood when it is remembered that up to June 1st, 1902 warlike operations were still in progress The group of diseases classed together as "typhus typhoid enteric gastric, or typho malarial fever" accounted for 194 deaths out of a total of 2906 patients under observation Of the 194 deaths 78 were of white people and 116 were of coloured Dysentery claimed the largest number of victims, however, amounting to 228 out of the total of 2906 Malaria accounted for only 17 deaths One death only from scarlet fever is recorded and six from measles Classified with small pox and chicken pox we find the unfamiliar term of "amaas" a term which no doubt has a local meaning but is not included amongst the official nomenclature of diseases and therefore requires explanation In the leper asylum at Pretoria there were 230 leper patients on Dec 31st, 1902, being an increase of 14 upon the number resident in the asylum on Jan 1st, 1902. Dr Turner states that it is very doubtful if heredity plays any part in causing leprosy, that leprosy is conveyed in some way by contagion is incontestable, and that in the Transvaal there is not a particle of evidence that fish in any way influences the spread of the disease As regards vaccination the result of experience in the Transvaal is summed up thus "I am by no means impressed with the desirability of using calf lymph. I am of opinion that arm to-arm vaccination is more efficient and when properly carried out is perfectly safe"

An excellent report by Mr R Fox Symons, medical officer of health of Pretoria and district, specifies the causes of deaths registered in his district during the year 1902, and shows that of 486 deaths 51 persons died from dysentery and 29 from enteric fever Pneumonia caused 57 deaths and enteritis 61 The high percentage of deaths due to intestinal ailments, enteric fever, enteritis, and dysentery, was the most striking feature of the report

Mr C L Sansom medical officer of health of the Witwatersrand district, divides his report for the year into two, the first part ending June 30th, 1902 In almost all districts he comments on the unsatisfactory condition of the water supply

At the bacteriological laboratory at Daspoort, under the direction of Dr Theiler, valuable work was done in prosecuting the study of horse sickness, the so called Rhodesian red water disease amongst cattle, rinderpest and biliary fever in horses Trypanosomiasis was also studied and Dr Theiler states that a fly belonging to the genus hippobosca was responsible for the spread of the disease

Mr W C C Pakes during the year 1902 examined 860 specimens sent to him at the Government laboratories for analysis Of these 805 required chemical investigation, 16 toxicological examination, and 39 bacteriological examination

The Transvaal medical department, although not by any means completed seems to be rapidly becoming organised, and on the basis of the work indicated in this report we look forward to many valuable additions to our knowledge in the near future

ROYAL COLLEGE OF PHYSICIANS OF LONDON

AN ordinary Comitia was held on Oct. 29th, Sir WILLIAM S CHURCH, Bart, K C B, the President, being in the chair

The following gentlemen having passed the required examination were admitted as Members Dr Sydney Walter Carl, Dr Charles Edwin Percy Forsyth, Dr James Edward Hill Sawyer, Dr Jacob Snowman, and Dr James George Taylor

Licences to practise were granted to 102 gentlemen who had passed the required examinations

The PRESIDENT announced that Mr Arthur Richardson, late of Epsom College, had been appointed Jenks scholar for the ensuing year He also announced that he had nominated Dr T H Green, Dr E C Seaton, and Dr F J Wethered to be adjudicators of the Weber Parkes prize and medals at the next award in 1906

The PRESIDENT also asked the permission of the College to permit Sir Hermann Weber to deliver a lecture at the College on a date to be announced on Measures for prolonging Life The request was granted

The following communications were received 1 From the Board of Trade, forwarding a translation into English of a report by a Norwegian committee respecting beri beri occurring on European sailing ships A committee was appointed to consider the report consisting of the President, Sir Patrick Manson, and Dr J F Payne 2 From the secretary of the Royal College of Surgeons of England reporting certain proceedings of its Council on August 4th and Oct 15th 3. From the Society of Arts inviting the College to form with it a joint committee for advising on the award of the Swiney Prize in January next The officers of the College were appointed to serve on the committee 4 From Professor Silvanus Thompson on the approaching tercentenary of the death of Sir William Gilbert, President of the College in 1600 The treasurer and senior censor (Sir Dyce Duckworth) Dr W H Allchin, and Dr J Abercrombie were appointed to act on any committee which might be formed to carry out suitable arrangements to mark the occasion

The audited accounts for the year ending Sept 29th last were received and adopted.

The quarterly report of the Finance Committee was received and adopted

A report from the Committee of Management dated Oct 5th was received and adopted. The committee recommended that Cranbrook School should be added to the list of institutions recognised by the Examining Board in England for instruction in chemistry, physics, and practical chemistry

Dr. Norman Moore was re-elected a member of the Committee of Management. A report from the Laboratories' Committee dated Oct. 9th was received and adopted and Dr. Sidney Martin was re-elected a member of that committee.

A list of books and other publications presented to the library during the past quarter was received and the thanks of the College were returned to the donors. After some formal business the President dissolved the Comitia.

UNIVERSITY OF LONDON.

A MEETING of the Faculty of Medicine was held at the University, South Kensington, on Oct. 30th. Mr. H. T. BUTLIN, the Dean of the Faculty, presided and there were 41 members present.

Sir Isambard Owen was re-appointed Vice-Dean, and Dr. Lauriston Shaw honorary secretary, for the ensuing year.

Certain communications from the Royal Veterinary College, from the Board of Agriculture, and from the Royal Agricultural Society with regard to the institution by the University of a degree in veterinary science were considered by the faculty. It was resolved:—

> That in the opinion of the Faculty of Medicine it is desirable to encourage the teaching and study of veterinary science within the University.

The reports of the several boards of studies comprised within the faculty as to their composition for the ensuing year were considered and with slight modifications were approved.

A report from the board of intermediate medical studies upon the arrangements for the special examinations in organic chemistry in 1904 which had been rendered necessary by the recent modifications in the curriculum was considered and approved.

A report was received from the board of intermediate medical studies defending the recent alterations in the curriculum so far as they concerned the teaching and examination in chemistry. The faculty resolved to refer this matter to a special committee for consideration and report. The committee was constituted as follows:—Dr. J. R. Bradford, Mr. H. T. Butlin, Dr. F. D. Chattaway, Mr. A Pearce Gould, Dr. W. D. Halliburton, Dr. H. W. G. Mackenzie, Dr. Norman Moore, Sir W. Ramsay, Professor A. W. Reinold, Dr. W. G. Ridewood, Mrs. M A. D. Scharlieb, Mr. S. G. Shattock, Dr. Lauriston E. Shaw, and Professor G. D. Thane.

ASYLUM REPORTS.

Dorset County Asylum (Annual Report for 1902).—The average number of patients resident during the year was 737—viz, 355 males and 382 females. The admissions during the year amounted to 156, comprising 77 males and 79 females. Of these 130 were first admissions. Dr. P. W. Macdonald, the medical superintendent, states in his report that the unfavourable nature of a number of the admissions was shown by the fact that many of the patients were aged and feeble and others greatly reduced in physical strength. Referring to an undesirable class of patient among the admissions Dr. Macdonald writes: "Another class of patient ...... was in strong evidence among the admissions in 1902, I mean the 'jail bird.' These men are often the lowest of the low and neither attention nor persuasion has the least influence in improving or altering their ways. When, as generally happens, they are evilly disposed and maliciously inclined, then their care and treatment become indeed trying and difficult When this class of patient is a fairly educated being ...... his method of influencing others, his persistent, unfounded complaints and studied abuse are a source of trouble and worry far beyond the ordinary class of patient." Two causes, heredity and worry, apparently overshadow all other causes and remain closely linked together in the production of insanity. The number of patients discharged as recovered during the year amounted to 38—viz, 17 males and 21 females, or 5·1 per cent. of the average number resident. The deaths during the year amounted to 60—viz, 35 males and 25 females, or 8·1 per cent. as calculated on the same basis. Of the deaths two were due to renal disease, three to cerebral degeneration, four to pulmonary tuberculosis, eight to cardiac disease, nine to general paralysis of the insane, 10 to senile decay, 12 to pneumonia and broncho-pneumonia, and the rest to other causes. Table 22 of the last census returns for the county of Dorset states that the county has sustained a net loss by migration of 10,171. "This excessive drain on the population has an important bearing on the high rate of lunacy in the county." The Commissioners in Lunacy state in their report that all parts of the asylum continued to be maintained in excellent order, that the wards were bright, cheerful, and plentifully supplied with objects calculated to interest the patients, that the dormitories without exception were sweet and clean, that the bedding was in a very satisfactory condition, that the private patients were very comfortably lodged in special wards, that the personal condition and dress of the patients were satisfactory, and that the medical case books and records were very well kept. The committee of management states in its report that a new building, at an estimated cost of £39,500, is in course of erection for the admission of private patients. The weekly rate of maintenance per patient has remained at 9*s.* 4*d.* throughout the year. The committee reports very favourably upon the general efficiency of the officers and staff of the asylum.

Nottingham City Asylum (Annual Report for 1902).—The average number of patients resident during the year was 750, comprising 374 males and 376 females. The admissions during the year amounted to 184—viz., 89 males and 95 females. Of these 169 were first admissions. Mr. Evan Powell, the medical superintendent, states in his report that with regard to the causes of insanity in the cases admitted intemperance in drink heads the list, and it is noted "that the cases from this cause are practically in equal proportions of the sexes, which is quite unusual in the general statistics of the country. Side by side with this fact it is of interest to find that a much larger proportion of females to males are found to be suffering from general paralysis [of the insane] here than in other places which leads to the belief that there is a closer connexion between drink and this disease, as cause and effect, than is now admitted." Hereditary predisposition to insanity was found to be present in a large proportion of cases and influenza has been the cause of insanity in a few. The number of patients discharged as recovered during the year amounted to 60—viz., 33 males and 27 females, or 8·0 per cent. of the average number resident. The deaths during the year amounted to 72, or 9 6 per cent as calculated on the same basis. The recovery-rate, adds Mr. Powell, may be considered satisfactory "considering the very large proportion of hopeless cases admitted." The death-rate was rather below the average of previous years. All the deaths were from natural causes and there was no occasion for holding an inquest. There was only one serious accident during the year—in the case of a male patient who accidentally fell and received a fracture and dislocation of the ankle. There were only three cases of infectious fever during the year—viz., one of scarlet fever and two of typhoid fever. All made good recoveries and there was no spread of the disease from any of the cases. The Commissioners in Lunacy state in their report that both divisions of the asylum were in excellent order, that the patients of both sexes were neatly dressed and well behaved, that the sleeping rooms and bedding were thoroughly clean and sweet, and that the medical records and case-books were carefully and intelligently kept. They point out that post-mortem examinations were made in the very creditable proportion of 97 per cent of cases of death. The committee of management states in its report that the weekly charge of maintenance per patient has remained at 10*s*, that the accommodation within the asylum is now sufficient for the requirements of the city, that the profit derived from the maintenance of out-county patients has enabled the whole of the cost of repairs and upkeep of the building to be met, and that it has not been found necessary to go to the finance committee for the sum estimated, and provided, for that purpose at the beginning of the year. The committee has visited the asylum every fortnight and when practicable has visited the wards and seen the patients and has been quite satisfied with the condition of the wards and the care and comfort of the patients.

Belfast District Asylum (Annual Report for 1902).—The average number of patients resident during the year was 956, comprising 458 males and 498 females. The admissions during the year amounted to 267—viz., 116 males and 151 females; of these, 231 were first admissions. Dr. William Graham, the medical superintendent, states in his report that although the usual categories under which the causation of insanity is divided are heredity, drink, business anxieties, unhygienic conditions, and intermarriage, it ought to be known that modern science penetrates behind these specific causes to a theory of causation in general. "Briefly put, that theory is that certain forms of *insanity are largely the result of various toxins or poisons* acting on the nerve cells of the brain and nervous system which are associated with intellectual functions. These poisons may come from without, such as alcohol or morphine, or they may be generated from within through defective nutrition and other causes. When we speak of insanity being hereditary ...... what we mean is that certain nerve cells in certain persons have a special susceptibility to these poisonous influences." But we are as yet, continues Dr. Graham, too ignorant of the conditions under which the laws of predisposition operate to know whether one day we may not be able to control the hereditary transmission of the insanities. However, there are causes palpably at work which are absolutely under our control. "It is not too much to assert that half the existing insanity could be banished or contracted to inconsiderable limits were the hygienic conditions in the home, the school, and the factory what they ought to be." The number of patients discharged as recovered during the year amounted to 74—viz., 29 males and 45 females, or 7·8 per cent. of the *average number resident. The deaths during the year* amounted to 79, or 8 25 per cent. as calculated on the same basis. Of the deaths three were due to cardiac disease, five to renal disease, six to pulmonary and other forms of tuberculosis, seven to epilepsy, ten to senile decay, 15 to general paralysis of the insane, and the rest to other causes. "General paralysis of the insane claimed more victims this year than last. This unhappy state of affairs is, however, universal and is largely due to the greater stress and excesses of modern life." The general *health of the inmates has been good throughout the year* though the asylum has been overcrowded. The Inspector of Lunatics states in his report that the wards were bright and well ventilated, that the dietary of the patients was satisfactory, that all parts of the asylum were in good order, and that the medical case-books and records were well and carefully kept. A slightly increased cost of maintenance prevailed during the year, being due to exceptional expenses in connexion with the repair of the asylum.

Looking Back.

FROM

THE LANCET, *SATURDAY*, NOV. 5, 1825.

FOREIGN DEPARTMENT.

Rheumatic Gout cured by Acupuncturation.

M. Andrieux, in the *Bulletin de l'Athenée*, gives the case of a man, aged 49 years, who, during the last 10 years, had suffered from attacks of gout in the knees, elbows, wrists, and the articulations of the fingers, which were permanently deformed. In December last the right foot became red, swelled, and extremely painful; a needle was inserted at the origin of the little toe, and brought out under the malleolus externus. The needle was no *sooner inserted than the patient felt himself relieved; he* could move his foot and suffer it to be touched, whereas before the slightest motion was insupportable. Fearing a return of the pain, M. Andrieux introduced a second needle below the malleolus internus; at the end of ten minutes the needles were taken out; they were considerably oxydized. The patient could rest his foot upon the ground and walk with ease, whereas a quarter of an hour before he could not bear the mere contact of the blankets. M. Andrieux thinks that the electrical equilibrium which the needles establish between all the parts, is the cause of the success which attends acupuncturation. The opinion of M. Andrieux, on this point, is entitled to the more attention as he has devoted much of his attention to the influence of galvanism on the animal economy, and has, in many instances, applied this agent to therapeutics with the most successful results.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8812 births and 4718 deaths were registered during the week ending Oct. 31st. The annual rate of mortality in these towns, which had been 15·8, 15·8, and 15·9 per 1000 in the three preceding weeks, further rose last week to 16 3 per 1000. In London the death-rate was 15·8 per 1000, while it averaged 16·5 in the 75 other large towns. The lowest death-rates in these towns were 4 7 in Hornsey, 6 9 in Reading, 8·3 in Leyton, 9·9 in Southampton, 10·0 in Croydon, 10 2 in Hastings, and 10 4 in East Ham and in Newport (Mon.); the highest rates were 21·0 in Wigan and in Oldham, 21 8 in South Shields, 22 0 in Walsall, 22 1 in Rochdale, 23·3 in St. Helens, 24 6 in Rotherham, and 29·9 in Warrington. The 4718 deaths in these towns last week included 523 which were referred to the principal infectious diseases, against 704, 635, and 532 in the three preceding weeks; of these 523 deaths, 250 resulted from diarrhœa, 74 from measles, 61 from diphtheria, 53 from "fever" (principally enteric), 41 from whooping-cough, 40 from scarlet fever, and four from small-pox. No death from any of these diseases was registered last week in Hornsey, Bournemouth, Reading, Northampton, Smethwick, or Coventry, while they caused the highest death-rates in Great Yarmouth, Hanley, Wigan, Warrington, Preston, Rotherham, Sunderland, Gateshead, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Warrington, Bury, Preston, Rotherham, and Sunderland; from scarlet fever in Devonport and Walsall; from diphtheria in Portsmouth, Walsall, and York; from whooping-cough in Wigan, Rochdale, and Merthyr Tydfil; from "fever" in Walsall and Merthyr Tydfil; and from diarrhœa i[illegible] ham, and [illegible] registered [illegible] one in St[illegible] towns. The number of small pox cases under treatment in the Metropolitan Asylums hospitals, which had been 17, 11, and 34 on the three preceding Saturdays, had further risen to 42 on Saturday last, Oct. 31st; 12 new cases were admitted last week, against two, one, and 26 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 1828, against 1881, 1861, and 1858 at the end of the three preceding weeks; 199 new cases were admitted during the week, against 240, 208, and 209 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 146, 175, and 194 in the three preceding weeks, further rose to 260 last week, but were 32 below the number in the corresponding period of last year. The causes of 57, or 1·2 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Bradford, Leeds, Newcastle-on-Tyne, and in 46 other smaller towns; *the largest proportions of uncertified* deaths were registered in Hanley, Smethwick, Liverpool, Bootle, St. Helen's, Manchester, Salford, Barrow-in-Furness, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 16·0, 16·1, and 16·7 per 1000 in the three preceding weeks, further rose to 17·0 *per 1000* during the week ending Oct. 31st, and was 0·7 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 14·4 in Leith and 14·9 in Edinburgh to 20 1 in Perth and 22 0 in Paisley. The 557 deaths in these towns included 33 which were referred to diarrhœa, 11 to measles, seven to whooping-cough, five to diphtheria, four to scarlet fever, and two to "fever," but not one to small-pox. In all, 62 deaths resulted from these principal infectious diseases last week, against 71, 72, and 77 in the three preceding weeks. These 62 deaths were equal to an annual rate *of 1 9 per 1000*, which was slightly above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of diarrhœa, which had been 41, 35, and 39 in the three preceding weeks, further declined last week to 33, of which

17 were recorded in Glasgow, six in Dundee, three in Edinburgh, two in Aberdeen, two in Paisley, and two in Greenock. The deaths from measles, which had been eight, 14, and 16 in the three preceding weeks, declined again to 11 last week, and included nine in Glasgow. The fatal cases of whooping-cough, which had been six, seven, and eight in the three preceding weeks, decreased again last week to seven, of which three occurred in Glasgow. The deaths from diphtheria which had been four in each of the two preceding weeks, rose to five last week, and included two in Glasgow. The four fatal cases of scarlet fever corresponded with the number in the preceding week and included two in Paisley. The deaths referred to diseases of the respiratory organs in these towns, which had been 62, 82, and 92 in the three preceding weeks, further rose last week to 108, but were 38 below the number in the corresponding period of last year. The causes of 18, or more than 3 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 19·7, 18·6, and 21·5 per 1000 in the three preceding weeks, declined again to 21·2 per 1000 during the week ending Oct 31st. During the past four weeks the death-rate has averaged 21·2 per 1000, the rates during the same period being 15·2 both in London and in Edinburgh. The 154 deaths of persons belonging to Dublin registered during the week under notice showed a slight decline from the number in the preceding week and included seven which were referred to the principal infectious diseases, against nine nine, and 13 in the three preceding weeks; of these, four resulted from diarrhœa, two from whooping-cough, and one from scarlet fever, but not any from small-pox, measles, diphtheria, or "fever." These 7 deaths were equal to an annual rate of 1·0 per 1000, the death-rates last week from the principal infectious diseases being 1·6 in London and 1·1 in Edinburgh. The fatal cases of diarrhœa, which had been four, five, and eight in the three preceding weeks, declined again last week to four. The 154 deaths in Dublin last week included 34 of children under one year of age and 36 of persons aged 60 years and upwards; the deaths of both infants and elderly persons showed a slight decline from the respective numbers in the preceding week Eight inquest cases and six deaths from violence were registered, and 67, or nearly 44 per cent., of the deaths occurred in public institutions. The causes of 11, or more than 7 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following civil practitioners have been appointed Surgeons and Agents:—G. Myles, at Limerick; J. E. Hibbert, at Penarth; S. E. Martin, at Newry; P. L. Watkin Williams, at Bridgwater; H. M. Hughes, at Stockton; and P. Aitken, at Bo'ness (dated Oct. 27th, 1903).

ROYAL ARMY MEDICAL CORPS.

Captain H. V Prynne is appointed specialist in ophthalmology in the Thames and Woolwich Districts.

Lieutenant Colonel W. O. Wolseley to be Colonel, vice W. L. Gubbins, promoted (dated August 27th, 1903). Lieutenant-Colonel A. T. Sloggett, C.M.G., to be Colonel, vice W. B. Allin, deceased (dated Sept. 9th, 1903).

INDIAN MEDICAL SERVICE.

The King has approved of the following promotions among officers of the Indian Medical Service made by the Government of India:—To be Colonel: Lieutenant-Colonel (temporary Colonel) Thomas James Hackett Wilkins (dated June 30th, 1903). Captains to be Majors (dated July 28th, 1903): *Bengal Establishment:* Benjamin Hobbs Deare, Benjamin Curwen Oldham, Robert Bird, Sidney Browning Smith, John Stuart Shepherd Lumsden, George Hewitt Frost, Edmund Wilkinson, George Francis William Ewens, Charles Duer, and Henry Stotesbury Wood. *Madras Establishment:* James Entrican, Walter George Pridmore, Charles Donovan, Jeremiah Penny, Douglas Henry McDonell Graves, and Charles Henry Leet Palk. *Bombay Establishment:* Thomas Walter Irvine.

The King has also approved of the retirement from the service of the undermentioned officers:—*Bengal Establishment:* Lieutenant-Colonel Samuel Ferguson Bigger (dated Sept. 1st, 1903); Major Basanta Kumar Basu (dated August 21st, 1903).

The following appointment has been made to the Staff in India:—Major W. H. W. Elliott, D.S.O., to be secretary to the Principal Medical Officer, His Majesty's Forces in India, vice Lieutenant-Colonel J. Shearer, D.S.O., vacated (dated August 13th, 1903).

IMPERIAL YEOMANRY.

Royal 1st Devon: Francis Ernest Little to be Surgeon-Lieutenant (dated Oct. 31st, 1903). Duke of Lancaster's Own: Surgeon-Lieutenant-Colonel W. W. Wingate Saul retires under the provisions of paragraph 54 Yeomanry Regulations, and is granted the honorary rank of Surgeon-Colonel, with permission to wear the prescribed uniform on retirement (dated Oct. 31st, 1903). 3rd County of London (Sharpshooters): Surgeon-Lieutenant E. M. Rooke resigns his commission (dated Oct. 31st, 1903).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Aberdeenshire: Surgeon-Lieutenant H. McI. W. Gray to be Surgeon-Captain (dated Oct. 31st, 1903). The Highland: Charles Gordon Mackay, late Lieutenant, to be Surgeon-Lieutenant (dated Oct. 31st, 1903).

Rifle: 1st Surrey (South London): Daniel Oliver Kerr to be Surgeon-Lieutenant (dated Oct. 31st, 1903).

Correspondence.

"Audi alteram partem."

THE BRITISH MEDICAL BENEVOLENT FUND.

To the Editors of THE LANCET.

SIRS,—Will you allow me to supplement Sir William Broadbent's appeal for the British Medical Benevolent Fund (to which I am a subscriber) by pointing out that no practitioner residing within 20 miles of London ought to, or need, leave his widow and orphans unprovided for if he will but join the Society for the Relief of Widows and Orphans of Medical Men, and pay one guinea subscription half-yearly up to the time of his decease. The office of the society is at 11, Chandos-street, Cavendish-square, W.

I am, Sirs, yours faithfully,
CHRISTOPHER HEATH, F.R.C.S. Eng.,
President of the Society.

Cavendish-square, W., Oct. 31st, 1903.

THE LUNG REFLEX OF ABRAMS.

To the Editors of THE LANCET.

SIRS,—I am obliged to Dr. A. G. Auld for his courteous and interesting reply to my criticisms on his letter to THE LANCET of Oct. 17th, p. 1118. May I say that I have an entirely open mind as to the existence of a pulmonary reflex and that I was prompted to write simply because the evidence adduced by Dr. Auld in favour of such a reflex did not appear to me to be conclusive; nor do I find the fresh evidence he advances in his second letter wholly convincing. Dr. Auld points out that the thoracic expansion which results from protracted rubbing of the chest or vigorous percussion of the epigastrium persists longer than that which follows upon the voluntary taking in of deep breaths, from which he argues that the expansion in the former case is not due to the deep breaths which he admits are induced by the stimuli referred to and must therefore result from a reflex bronchial dilatation. May we not, however, explain the longer duration of the expansion in that case on the assumption that in it some degree of dyspnœa is induced, while in the latter case the very opposite condition of apnœa is brought about?

The other evidence advanced by Dr. Auld, though of a more convincing kind, is yet open to criticism. He points to the facts that the spraying with ether or the long-continued percussion of the chest over a collapsed pulmonary base causes a local (as against a general) expansion of the lung; but is it not possible that these stimuli thus locally applied may excite the local inspiratory muscles more than the others? The sudden application of cold to the chest, for example, is known to excite inspiration and tends, I suggest, when applied to one side to cause it to *expand more than the other.* In regard to the thoracic expansion said to follow upon the absorption into the blood of such drugs as atropine and hyoscine I would ask whether, even granting its origin in bronchial dilatation, we can justly refer to it as an example of genuine reflex action?

The remaining portion of Dr. Auld's second letter touches a side issue raised by myself. Assuming the existence of a reflex bronchial dilatation, how is the thoracic expansion resulting from it effected? In criticising my explanation of this expansion Dr. Auld unwittingly fails to do me justice. He says that in making "the general assertion" that whatever thoracic enlargement results from reflex bronchial dilatation is *chiefly* effected by the inspiratory muscles I "fail to appreciate" the fact that the chest tends to recoil outwards when pulmonary suction is diminished; it is, however, clear from the employment of the italicised word that I admitted the operation of some other factor, and in point of fact the other factor I had in mind is the very one for which Dr. Auld calls me to task for neglecting; for in an earlier part of my letter I say "the primary effect of bronchial dilatation must be to cause a relaxation of pulmonary tissue and thus, by diminishing the suction action of the lungs on the thoracic walls and diaphragm, somewhat to increase the size of the chest cavity"—i e., by passive outward recoil. I then go on to observe that the thoracic expansion would not end here but that the inspiratory muscles would come into augmented action so as to tone up the relaxed pulmonary tissue to the norm, and that throughout life "the inspiratory muscles are ever busy keeping the lungs at the requisite degree of stretch." Dr. Auld does not accept this proposition. As I believe it to express an important principle in thoracic physics I shall be grateful to you, Sirs, if you will afford me this opportunity of vindicating it.

All will agree that pulmonary suction is not a merely accidental phenomenon but that, on the contrary, it serves some useful purpose or purposes, and such being the case we may be sure that the organism will strive to maintain it at the requisite level. I contend that this end is achieved by the inspiratory muscles. We shall, I think, be helped to an understanding of this position by inquiring into the origin— [illegible] ulmonary suction. Before birth [illegible] upon their solid and liquid contents; at birth the thorax is expanded by the inspiratory muscles and air thus sucked into the lungs. Now it might conceivably happen that just sufficient thoracic expansion is effected at birth to open all the tubes and vesicles of the lung *without putting the pulmonary tissue on the stretch*—without, that is, inducing pulmonary suction—and such is possibly the case for a short time after birth. Very soon, however, the chest is expanded beyond this point, the pulmonary fibres being actually stretched, and in this way pulmonary suction is gradually established. Now I can conceive of no other means by which this stretching can be effected than by the action of the inspiratory muscles, and my contention is that these muscles are throughout life ever on the watch to maintain pulmonary suction at its proper level. It is true that after the first months—perhaps I should say years—of post partum life pulmonary suction operates even at the end of an ordinary expiration, when, i.e, there *is little or no active contraction* of the inspiratory muscles, a fact which is shown by the thoracic expansion which takes place in the cadaver after puncturing the pleuræ and thus allowing the lungs to collapse; but this, I would observe, is because the inspiratory muscles having through a long period kept the chest expanded beyond the point at which suction first appears the chest has become "set" in this position—to wit, in the neutral position referred to—one, namely, corresponding (about) to the position of the chest at the end of an ordinary inspiration. This "setting" of the chest in the "neutral" position undoubtedly helps to relieve the inspiratory muscles in their function of maintaining pulmonary suction at the norm; nevertheless we shall find if we look at the matter more closely that this function belongs essentially to the inspiratory muscles.

In the first place, the ne[illegible] by the shortening of the [illegible] action preponderating ove[illegible] Then there is the fact that in widespread paralysis of the inspiratory muscles, such as may, for example, occur in idiopathic muscular palsy, the chest tends to collapse and in some cases (especially in young subjects) this happens to such an extent as to lead, I can have no doubt, to the entire disappearance of pulmonary suction. What could better show the ultimate dependence of this latter upon the inspiratory muscles? Finally, I would in this connexion draw attention to the fact that the neutral position of the chest is liable to great modification through the forcible action of the inspiratory muscles. Consider, for example, what great permanent expansion can be effected in the contracted chests of sedentary youths by suitable exercises and the steady augmentation in the size of the thorax which takes place in hypertrophous emphysema. In both cases a shifting of the neutral point occurs and there can be no doubt that this is effected by an augmented action of the inspiratory muscles.

I conclude, therefore, that pulmonary suction is essentially dependent upon the action of these muscles and if I have satisfactorily established this conclusion I have proved the thesis "the inspiratory muscles are ever busy keeping the lungs at the requisite degree of stretch"; for if it is of great moment (and who can doubt it is?) that the organism shall maintain pulmonary suction at the norm we may be quite sure that it will avail itself of the only means at its disposal for achieving this end—i.e., the action of the inspiratory muscles. Many instances can be cited of the inspiratory muscles coming into extra action for the purpose of raising pulmonary suction to the normal level. Perhaps the most interesting is the case of hypertrophous emphysema already referred to. I am pleased to find Dr. Auld accepting my view that one of the reasons why the chest enlarges in this affection is in order to tone up the relaxed pulmonary fibres. Another instance is afforded by the case of a large pleural effusion under negative pressure; in this case we may find considerable expansion of the thorax; such expansion is manifestly brought about by the inspiratory muscles and has for one of its objects the maintenance of the normal pulmonary suction which otherwise would stand in danger of disappearing altogether. It is now, I trust, clear why in my former letter I concluded that, given considerable relaxation of the bronchial muscles, the inspiratory muscles will come into extra action in order to tighten up the relaxed pulmonary tissue, for otherwise pulmonary suction must necessarily fall below the norm.

What purpose or purposes, I am tempted to ask in conclusion, are served by pulmonary suction? Though doubtless it helps breathing by promoting the upward movement of the diaphragm I can have little doubt that its essential function is to facilitate cardiac diastole, notably the diastole of the auricles and of the right auricle in particular. Nature has, in fact, cunningly placed the heart in a partial vacuum, from which I conclude that the inspiratory muscles take no small share in aiding cardiac diastole and in this way favouring the return of blood to the heart. Apologising for the length of this letter,

I am, Sirs, yours faithfully,
Wimpole street, W., Nov. 1st, 1903. HARRY CAMPBELL.

KING'S COLLEGE HOSPITAL REMOVAL FUND.

To the Editors of THE LANCET.

SIRS,—As already reported in THE LANCET,[1] at a meeting of the governors held on Oct. 12th, 1903, it was finally decided to remove King's College Hospital from its present position to a site in South London. The main object of the removal is more fully to carry out the idea of the charity by transferring it from a district largely denuded of its poor inhabitants to one in which there is a dense population urgently in need of hospital accommodation. By the removal this urgent need which has long existed in South London will be met without the addition of another large general hospital to those at present existing, most of which already have a constant struggle in meeting their necessary expenditure.

The governors when sanctioning the present course authorised the joint committee appointed by the council of King's College and the committee of management of the hospital to act for them in all matters appertaining to the removal. In accepting this authority the committee are fully conscious of the great responsibility they have taken upon themselves and they are determined jealously to guard the traditions of the charity and the many benefactions made to it. A sum of not less than £300,000 will be required to build and to equip the hospital, so as to enable it to meet the needs of the three-quarters of a million of population who will be benefited by the removal.

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[1] THE LANCET, Oct. 17th, 1903, p. 1110.

The committee now appeals to the public for help towards raising this required sum and it feels confident that it will not appeal in vain. The committee is allowed to add that this appeal is issued with the approval of His Royal Highness the Duke of Cambridge, President of the hospital. It also has the cordial support and hearty approval of His Grace the Archbishop of Canterbury, one of the Vice-Presidents of the hospital and visitor of the College. A suitable site of 12 acres in South London has been presented to the hospital by the munificence of a single donor.

It remains but to say that donations to the Removal Fund will be thankfully received by the treasurer, Mr. Charles Awdry, 2, Hyde Park-street, W.; by Lloyd's Bank, Limited, Law Courts Branch, 222, Strand, bankers to the hospital; and at King's College, Strand, by Mr. A. MacLeod Forest, the secretary King's College Hospital Removal Fund.

We are, Sirs, yours faithfully,
W. F. D. SMITH,
Chairman of the Joint Committee Removal of King's College Hospital.
METHUEN, Lieutenant General,
Chairman of the Hospital Committee.
E. S. ROFFEN.
LISTER,
Vice-President and Consulting Surgeon of the Hospital.
CHARLES AWDRY,
Treasurer.
ARTHUR C. HEADLAM,
Principal of King's College.
DAVID FERRIER,
Senior Physician of the Hospital.
W. WATSON CHEYNE,
Senior Surgeon of the Hospital.

PHIMOSIS AND CANCER OF THE PENIS.

To the Editors of THE LANCET.

SIRS,—In a letter in THE LANCET of August 8th, p. 423, it is contended that phimosis is not a potent cause of cancer of the penis. This perhaps may be the case in simple phimosis but it is surely not so (at any rate in this country) if the phimosis becomes complicated with venereal disease. During the last five years 25 cases of cancer of the penis have come under my observation—18 were submitted to operation, while seven were inoperable owing to too advanced growth. At least 15 of these cases gave a similar history: an original phimosis, some venereal trouble, chronic discharge from the preputial orifice, increasing pain and swelling, and finally perforation of the prepuce and protrusion of the growth. It must, of course, be taken into consideration that these cases were absolutely untreated from the beginning and the disease was allowed to take its course unchecked. It may be noted that phimosis is rare, while cancer of all kinds is uncommon. Sections of the 18 cases operated upon were examined, the growth in all cases being a squamous epithelioma.

I am, Sirs, yours faithfully,
Seoul, Corea, Sept. 20th, 1903. EDWARD H. BALDOCK.

THE TREATMENT OF GOITRE BY THE USE OF DISTILLED OR RAIN WATER.

To the Editors of THE LANCET.

SIRS,—In reference to the above I should like to put on record four cases under my care in this district. Although this communication tells against the usefulness of the method and must necessarily reach you very long after the already published facts, yet it is so extremely important for all aspects of a treatment to be impartially set forth that I venture to send you the following notes.

Outtrim is a colliery district in South Gippsland, Victoria, quite close to the extreme south-east corner of the continent. It supports about 2600 inhabitants and is very hilly. The whole water-supply consists of rain water collected on galvanised-iron roofs and stored in galvanised-iron tanks and is from my own analysis of excellent quality. It is true that some underground tanks exist in which rain water is stored, but these are not accessible to the patients cited. During the 12 months I have been in practice in the locality four patients suffering from goitre have come under my care with the following histories, symptoms, &c.

CASE 1.—The patient was a woman, aged 35 years, born in Melbourne but resident in Outtrim for the past seven years. Five years ago she first noticed the swelling in the neck which has got progressively larger ever since. She suffers from attacks of a sense of suffocation and also from occasional attacks of dyspnœa. She exhibits slight exophthalmos and throbbing of the carotid arteries and a uniform enlargement of the thyroid gland which is of about the size of a large hen's egg. She is morose, suspicious, and melancholy in disposition and complains of nervousness.

CASE 2.—The patient was a woman, aged 35 years, who was born and spent the early part of her life in Cumberland but came out to Australia in early adult life and has been resident in this district for the past five years. She had a slight goitre in England but it caused her no trouble until about 12 months ago when it began to enlarge rapidly. The enlargement of the gland has been accompanied by paroxysms of dyspnœa and hot flushes. The swelling, which is about as big as a small orange, involves the whole thyroid unequally, the right lateral lobe is by far the larger mass and pushes the trachea wall over to the left. It undergoes remarkable changes in size in the course of a few days. The patient is very nervous and emotional and readily weeps on being questioned.

CASE 3.—The patient was a girl, aged two and a half years, who was born and brought up in the district. The parents state that the child was born with a goitre and their then medical attendant stated the same to them. The thyroid is of about the size of a walnut and uniformly enlarged (the thymus also can just be felt behind the sternum); it is not tender and has only enlarged proportionately to the growth of the child. The child suffers from *petit mal* and sometimes from bronchitis. The parents state "she occasionally complains of feeling choked."

CASE 4.—The patient was a woman, aged 32 years, who was born and spent the early part of her life in Cumberland; she came out to Australia at about 20 years of age and has been resident in the district for the past seven years. She has had a goitre ever since she can remember; it is stationary and gives rise to no symptoms (she consulted me for other troubles) and has got neither larger nor smaller since her stay in the district. The thyroid is uniformly enlarged to the size of a hen's egg.

It will be seen from the above that not only will rain water sometimes fail to benefit cases of existing goitre but two of the above-mentioned cases must have actually developed under the *régime*.

I am, Sirs, yours faithfully,
A. E. TAYLOR, M.B., B.C. Cantab.
Outtrim, South Gippsland, Australia.

CORDITE-EATING.

To the Editors of THE LANCET.

SIRS,—With reference to your note on Cordite-Eating in THE LANCET of Oct. 17th, p. 1137, it would seem that the first reference to cordite-eating by soldiers appeared in the *New Zealand Medical Journal* for March, 1902. In that number it is suggested by Surgeon-Captain Purdy, 6th N.Z M.R., that cordite was eaten by men for the purpose of malingering and that the effect produced was a temporary pyrexia resulting in the individual affected being sent off duty. I should think it probable that many cases of ill-defined and continuous fevers for which no obvious cause could be discovered—cases in which the temperature would rise to over 102° F. at night and drop to normal in the morning—were cases of cordite eating. It is obvious that a man with a "temperature" would be sent off duty and if it continued he would be sent to hospital and kept there till his "fever" left him. The same thing doubtless applies to cases of "disordered action of the heart" and other anomalous ailments prevalent in military practice. When one considers the facility with which, even in the general hospitals, cordite could be obtained and what the soldiers on active service had to put up with, one considers why such a convenient form of malingering by those addicted to such practices was not resorted to more.

I am, Sirs, yours faithfully,
J. S. WARRACK, M.D. Aberd., D.P.H. Cantab.
Gravesend, Oct. 27th, 1903.

A SIMPLE METHOD OF PERFORMING INTESTINAL UNION

To the Editors of THE LANCET

SIRS,—As I have received numerous inquiries regarding the intestinal bobbins described in THE LANCET of Oct 24th, p 1156 may I say that these are to be procured from the Medical Supply Association 56 Sauchiehall street, Glasgow I shall esteem it a favour if you can give this publicity

I am, Sirs, yours faithfully,

Glasgow Oct 31st 1903 ALEX MACLENNAN

THE USE OF GLYCERINE INSIDE THE UTERUS

To the Editors of THE LANCET.

SIRS —I thank you for your criticism of my paper on the intra uterine use of glycerine and formalin for drying the uterus after irrigation I quite acknowledge the danger of injecting glycerine into the pregnant uterus to induce labour, but in that case the glycerine is injected between the membranes and the uterine wall and there is the danger of it separating the placenta and being forced directly into the maternal blood stream This I believe, is what actually happened in those cases in which untoward symptoms followed its use When, however, the uterine sinuses are closed by contraction of the uterus after delivery and the formation of blood clot this risk is not present Again, the glycerine in my method is injected through a catheter with a return flow and any remaining is expressed

Into the merits of the question of uterine irrigation I will not ask you to let me enter, though personally I am now impressed with its usefulness The point to which I wished to draw attention was the harmful effect of the water left in the uterus—a condition which is obviated by the passage of glycerine through its cavity after completion of the irrigation Further experience of this method since writing the paper has confirmed my belief in its efficacy

I am, Sirs, yours faithfully,

Glasgow Nov 2nd 1903 DAVID WATSON

RELAPSES IN SCARLET FEVER

To the Editors of THE LANCET

SIRS —Dr C DIXSON, in THE LANCET of Oct 24th p 1193 mentions his experience of relapses in scarlet fever and asks if others have had similar experiences

In the year 1892, when I was medical officer to the Nottingham Borough Isolation Hospital, I collected notes of 600 consecutive cases of scarlet fever attended by myself on the basis of which I wrote a paper on the complications of scarlet fever, from which I take the following extract "Second attacks or relapses should, perhaps, hardly come under the head of complications, but as they are hardly mentioned in the ordinary text books, or passed over as being very rare, I may state that there were 10 cases on my list (1 6 per cent of the total number) in which a fresh rash with rise of temperature and the development of other typical symptoms occurred when there was no doubt that the patient had originally had scarlet fever This occurred in the second week in two cases, in the third week in four, in the fourth week in two once in the sixth, and once in the seventh week of the original attack ' With regard to the explanation of such cases I do not see any difficulty in accepting the theory that in a minority of individuals the acquired immunity conferred by an attack of scarlet fever is of a more or less evanescent character and that when such persons are brought into or kept in, an atmosphere highly charged with the micro organisms of the disease they will catch the infection more than once, a relapse only differing from a second attack at a later period by the shortness of interval between its occurrence and that of the original disease

I leave it to others to dogmatise as to the exact nature of the antitoxins or other ferments which are concerned in the process and will only, in conclusion, mention my own case as an instance of what I mean As a child of 13 years I contracted scarlet fever and distinctly remember the annoyance of having to go back to bed again with a fresh rash and rise of temperature which came on during my convalescence As others of my family had the disease at the same time there was plenty of opportunity for re infection Many years later, during my term of office at the Nottingham Isolation Hospital, at a time when I had to deal with a considerable number of severe cases of scarlet fever and was frequently occupied in brushing ulcerated throats with antiseptic solutions, I exposed myself to an atmosphere highly charged with the poison and was in consequence again attacked by the disease, attended by very severe throat symptoms Trusting you will excuse the length and the personal nature of this communication,

I am, Sirs, yours faithfully,

Nov 4th 1903 *J DARLEY WYNNE M B Dub , D P H , &c*

THE CENTRAL BRITISH RED CROSS COMMITTEE

To the Editors of THE LANCET

SIRS,—Permit me to draw the attention of your readers to the following

The Central British Red Cross Committee has been charged with the duty of making known to the British public the existence of a fund instituted by H I M the Dowager Empress Marie Féodorovna of Russia for encouraging inventors and others to devise improvements in the means of dealing with wounded and sick in the field The announcement of the foundation of this fund was made at the Seventh International Conference of Red Cross Societies held at St Petersburg in May, 1902 The money set apart for the above object, and which is called the Empress Marie Féodorovna International Red Cross Fund, consists of a sum of 100 000 roubles (about £11 000) graciously presented by Her Majesty, the interest of which is to be expended every fifth year in prizes to be awarded at each successive International Red Cross Conference The prizes at the first competition, which will take place in 1907 (country to be hereafter named), will be three in number They will be awarded to competitors who submit, in whole or in part, the best solution of problems connected with rendering aid to the wounded, whether on land or sea, and in the following directions the surest and quickest means of searching for and removing the wounded from the field of battle, the best type stretchers or vehicles for moving the wounded to the dressing stations with the greatest rapidity and with the least degree of suffering , the means of saving lives at sea , the best installations in moveable hospitals, wagons, ships, &c , for the final evacuation of wounded and sick The competition is an open one and intending competitors are informed that they will have to send their inventions to the exhibition of ambulance material which it is proposed shall be held quinquennially in connexion with the International Conference of Red Cross Societies Further details can be obtained on application to the honorary secretary Central British Red Cross Committee, 68, Victoria street, London S W

I am, Sirs, your obedient servant,

KNUTSFORD,
Chairman

October, 1903

ERRATUM —In the letter published in THE LANCET of Oct 31st, p 1257 headed "The Universities' Mission to Central Africa and signed Oswald A Browne M D Lond ," Dr Browne s degree should have been given as *M D Cantab*

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT)

The Plague Epidemic Inoculation for the Punjab – The Decimation of Mhow —The Plague Mortality

AN attempt is to be made to revive the practice of inoculation in the Punjab which was so grievously upset by the unfortunate accident at Mulkowal about this time last year "Government has done all in its power to bring the advantages of inoculation prominently to the notice of the people ' and "all that can be done now is to afford the greatest possible facilities for the inoculation of such persons as may desire of themselves to be inoculated.' These are the latest announcements but no information is given of the confidential report of the "accident committee." Perhaps we shall never know how the misfortune arose which broke down the Punjab Government's grand scheme of universal inoculation. The inference from the silence is that the finding must be an unpleasant one. There are three possible explanations—viz., that it was an accident in manufacture or an accidental contamination subsequently, or that it was an intentional crime and that the committee has not been able to discover the cause.

To revive inoculation all officers of the medical department with qualifications of a licentiate upwards will be allowed to perform it and will be furnished with the appliances, but the inoculators will be stationary not itinerant. Effort is also to be made to induce the people to evacuate infected places, especially in the early stages of an outbreak.

Later news from Mhow reveals the terribly virulent form of plague which has during the monsoon months attacked this city. Half of the population are reported to have left the city which according to the census contained about 35,000 people. On Sept. 4th the death-roll was 140 and for the week ending Sept. 12th 669 deaths were recorded. Up to Sept. 26th there had been 4313 deaths, practically in three months This is probably the worst outbreak that has been experienced, as an eighth part of the population have succumbed and the rate of mortality of the worst week would, if it had continued, have wiped out the whole population in less than a twelvemonth.

The plague mortality throughout India last week was as follows: Bombay Presidency, 9163 deaths; Bombay city, 91; Bengal, 46; Calcutta, 27; Madras Presidency, 127; Punjab, 211; Berar, 794; Central India, 1899; Central Provinces, 404; United Provinces, 80; Hyderabad State, 940; Mysore State, 673; and Kashmir, 7. The disease is increasing in Bombay city but slumbers in Calcutta. A recrudescence is evident in Mysore city and the Government has decided to spend about £20,000 in sweeping away some of the congested slums and in creating open spaces.

Oct. 9th.

LONDON TEMPERANCE HOSPITAL.—A large company assembled at the London Temperance Hospital, Hampstead-road, N.W., on Oct. 28th, when the Right Hon. the Lord Mayor and the Sheriffs of the City of London attended to inaugurate the scheme for rebuilding the out-patients' department. Alderman Sir T. Vezey Strong, in presenting an address of welcome to the Lord Mayor, said that the hospital had been in existence over 30 years and had so grown that it had become absolutely essential that the present building should be enlarged. While the distinctive principle of the institution was the treatment of disease without the use of alcohol, the medical officers had full liberty of action, the only stipulation being that when alcohol was prescribed the fact should be notified in a book kept for the purpose and its effect upon the patient set forth. During the existence of the hospital something like 300,000 in-patients suffering from every conceivable malady had passed through the wards and had been successfully treated, the rate of mortality comparing favourably with that of any of the general hospitals, and yet it had only been found necessary to prescribe alcohol in something less than 2 per 1000 of the cases treated. The new building scheme would entail an expenditure of about £10,000 and they appealed to the public to help them to carry on this beneficent work. The Lord Mayor, in replying, said that the London Temperance Hospital had amply justified its existence. The statistics which the chairman had given showed conclusively that alcohol was by no means a necessity in medical treatment and if they could treat disease without that fell enemy of the human race, which they as magistrates knew only too well was the cause of a great deal of the crime which prevailed in this nation, then they were doing indeed a most excellent and noble work. He was surprised that they confined themselves to a paltry £10,000 and certainly that sum should be readily forthcoming. He congratulated them on having secured the approval of King Edward's Hospital Fund which meant that the managers of that fund, after having gone carefully into the matter, were satisfied that the hospital was worthy of support. Dr. Dawson Burns, Sir W. J. Collins, and the Archdeacon of Westminster also spoke and the proceedings then terminated.

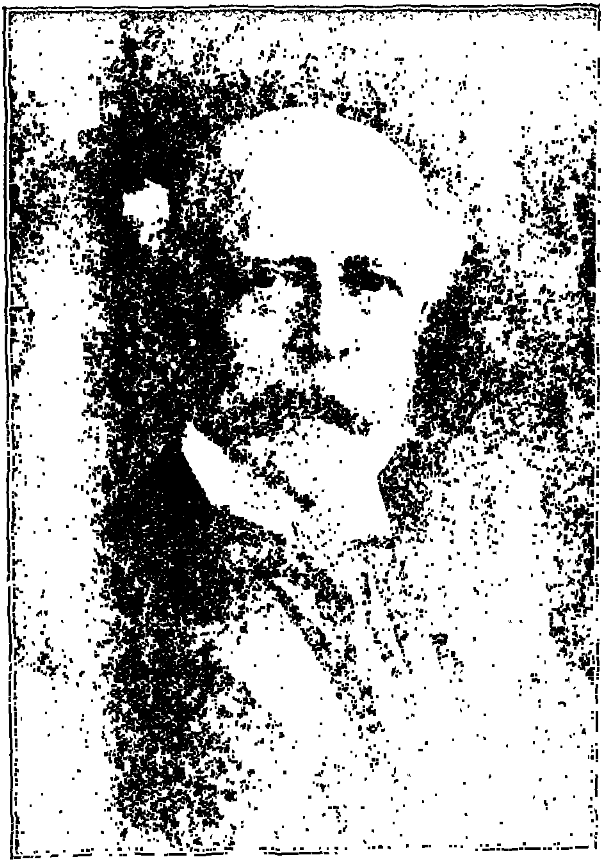
Obituary.

SIR GEORGE FREDERICK DUFFEY, M.D. DUB., F.R.C.P. IREL.

SIR GEORGE FREDERICK DUFFEY, ex-President of the Royal College of Physicians of Ireland, died after a long illness at his residence in Fitzwilliam-place, Dublin, on Oct. 13th. He was a graduate in Arts and in Medicine of the University of Dublin, in the medical school of which he had as an undergraduate obtained the medical scholarship of his year. Taking the degree of M.B. in 1864, he entered the Army Medical Service in 1867 as assistant-surgeon in the 24th Regiment and after nine years' service resigned his commission to settle in Dublin. In 1871 he proceeded to the degree of M.D. In 1876 he was appointed physician to Mercer's Hospital, which position he filled until 1882, when he was elected physician to the Royal City of Dublin Hospital and lecturer on materia medica to the Carmichael College of Medicine and Surgery. After the amalgamation of that College with the Ledwich School of Medicine and the School of Surgery of the Royal College of Surgeons in Ireland he was appointed professor of materia medica and pharmacy to the combined schools. In 1873 he became Fellow of the Royal College of Physicians and in 1896 was appointed its President. In the summer of 1897 he was still occupying the presidential chair and when in this year various honours were bestowed in connexion with the celebration of the diamond jubilee of Her late Majesty Queen Victoria Dr. Duffey received the honour of knighthood. During his brilliant and industrious career he filled many offices and appointments. He was examiner in materia medica in the Queen's University before its dissolution, extern examiner in the Institute of Medicine in the University of Dublin, inspector of examinations for the General Medical Council, and visitor for His Majesty's Privy Council in Ireland. Sir George Duffey had literary tastes and contributed many papers to the medical journals, the first being a valuable account of Mediterranean fever as observed by himself during his residence at Malta. He founded and managed the *Irish Hospitals Gazette*, a small journal which ultimately became merged in the *Dublin Journal of Medical Science*. He was also editor and part author of "Griffith's Materia Medica and Pharmacy" and author of "Suggestions for a Plan of Taking Notes of Medical Cases," a work which reached a second edition in 1890. In 1871 he married Agnes, daughter of the late John Cameron of Dublin and sister of Sir Charles Cameron, Bart., who represented Glasgow in Parliament for many years. His family consisted of two sons and three daughters. Some years ago his elder son, Lieutenant George Duffey, died from yellow fever while serving with his regiment in the West Indies. His younger son, Dr. Arthur Cameron Duffey, is a lieutenant in the Royal Army Medical Corps and in 1899 acted as special commissioner to the United States on behalf of the Cancer Research Society. Sir George Duffey was an exceedingly popular and useful member of the medical profession in Dublin and a most regular and diligent supporter of many scientific societies. At the last meeting of the governors of the Royal City of Dublin Hospital he was appointed consulting physician to that institution, while a motion was passed expressing the regret of the governors and members of the staff on account of his enforced retirement from the duties of visiting physician. His death at the comparatively early age of 60 years has left a gap in the ranks of his profession which will not soon be filled. The attendance at the funeral, which took place on Oct. 16th, was, as might have been expected, very large and representative.

At the annual general meeting of the Royal Academy of Medicine in Ireland the following motion was passed:—

> That the Fellows of the Royal Academy of Medicine in Ireland assembled at this annual general meeting wish to record their regret and sorrow at the death of Sir [illegible] original Fellow of the Academy and one of the trus[illegible] was one of the most steadfast and faithfu[illegible] Year after year he submitted to one or [illegible]ications of great scientific, clinical, or pathological interest and value and on all occasions he shed lustre upon the Fellowship of the Academy by the high standard of professional honour which he set before him and up to which he consistently lived. The Fellows of the Academy also desire to convey to Lady Duffey, Dr. Arthur Cameron Duffey, and the other members of the family of their friend and colleague an expression of sympathy with them in their bereavement and sorrow.



SIR GEORGE FREDERICK DUFFEY, M.D., DUBLIN.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The University and Vivisection.

MASON COLLEGE never possessed a licence for purposes of vivisection. The late Mr. Lawson Tait, who though himself a vivisector in his earlier days, as the recently published letters of Charles Darwin have shown, afterwards postured as one of its opponents and was for a number of years one of the trustees of the College and there were in the city other active opponents of scientific research of sufficient influence to make it inadvisable for the College in its youthful days to court the agitation which it was thought would have been directed against it had any steps in the direction indicated been taken. There has, however, for long been a feeling on the part of all connected with the institution that the time had come when the reproach should be taken away from the College and when it became a university it was obvious that no long postponement of this event could take place. As a matter of fact, the University applied for, and obtained, a licence during this summer, a fact which it would seem has only just come, and incorrectly come, to the ears of the anti-vivisectionists, since they have commenced an agitation the object of which is to "protest against a licence being granted to the authorities of the Birmingham University of a laboratory for vivisectional purposes." The papers have been flooded with the usual style of letters in which abusiveness and ignorance are equally noticeable. A striking contrast to most of these effusions has been a letter from a local practitioner, *Dr. F. J. V. Hall*, who says that when himself a student he witnessed vivisections but never anything which could be described as cruelty and adds in reply to a letter from the chairman of the National Canine Defence League, "If any one of the statements he has made—and professedly from knowledge—were true, I would back the students to lynch the operator before he had time to torture the animal." Needless to say, this direct testimony has made no impression on the anti-vivisectionists but the most encouraging sign of the times in connexion with the present agitation is the fact that it has not succeeded in securing the support of a single person of any local importance. At the meeting held on Oct. 27th to protest against the giving of the licence there was not one person on the platform of any influence in the city and the principal speakers were the well-known Mr. Somerville Wood and Dr. George H. Brand, a practitioner in Northampton. The meeting was the most eloquent testimony to the fact that the common sense of Birmingham is ranged on the side of the University. Beyond this fact the most interesting point in connexion with the meeting was the reading of a letter from the Right Hon. Joseph Chamberlain, Chancellor of the University, addressed to the secretary of the Anti-vivisection Society in Birmingham:—

> MADAM,—I beg to acknowledge the receipt of your letter of the 19th inst. and to say that I am most certainly opposed to the torture of animals, but that I entirely approve of the application of the [illegible] to promote [illegible] Sir Oliver [illegible] ssibility of [illegible] tter to the [illegible]
>
> I am, Madam, yours obediently,
> J. CHAMBERLAIN.

On Oct. 31st an account was published in one of the papers of an interview which the reporter had had with the Dean of the Medical Faculty of the University in which the reasons for obtaining a licence and the limitations placed thereon were set forth. It is to be hoped that this will settle any doubts which may have arisen in the minds of any well-meaning though ill-informed persons, though it is too much to expect that any effect will be produced by it on the anti-vivisectionist party.

The Medical Mission.

The annual meeting of this society has recently been held in the new mission hall in Floodgate-street, the Lord Mayor being in the chair. His lordship after expressing the interest which he had taken in the society since he settled in Birmingham said that the record of 120,473 cases dealt with, involving over half a million of attendances, was one of which any mission might well be proud. He drew attention to the fact that the annual subscription list was only £500 and that there was a deficiency amounting to £271 which he hoped would soon be wiped off and its recurrence rendered impossible by larger assistance being forthcoming. Mr. H. Bagster Wilson, the medical superintendent, reported on the work accomplished by the mission not only on the medical but also on the religious and social side. The religious services were appreciated and much success attended the mothers' meetings, the sewing class, the Saturday afternoon and evening socials, the youths' meetings, and the various Sunday gatherings.

Orthopædic and Spinal Hospital.

The eighty-sixth annual meeting of this charity has recently been held, also under the presidency of the Lord Mayor. During the past year there was a diminution in the number of in-patients owing to the fact that the wards had to be closed for some time on account of an outbreak of scarlet fever. After thorough disinfection under the supervision of the health committee these have again been opened and are in full work. A deficiency of nearly £700 on the year's working was reported. The Lord Mayor suggested that as the instrument account amounted to something over £700 this particular part of the work should be made a separate fund, as he was sure that a number of their subscribers would gladly contribute additional sums for that special object.

Staffordshire Police and Attempted Suicides.

A singular order recently issued by the chief constable of Staffordshire to the police under his control seems likely to cause considerable difficulty in connexion with cases of attempted suicide brought under the notice of the police in Handsworth, a suburb of the city, with which it is absolutely continuous, though technically outside its boundary and actually in Staffordshire. This circular is as follows: "Any person attempting to commit suicide must not be taken to the General Hospital by the police, as the hospital authorities decline to receive cases brought by the police unless arrangements are made for watching them. If the relatives or friends are prepared to pay the hospital authorities for watching the patient there need be no difficulty, but friends who undertake to pay must accompany the patient to the hospital to make the necessary arrangements, as the police cannot undertake any responsibility in the matter, the patient not being a prisoner. In other cases where no one is prepared to pay for watching the relieving officer must be communicated with, and the patient must be taken to the workhouse unless arrangements can be made for medical attendance and watching in the patient's own house." The Birmingham police have an invariable practice and that is that the officer who takes a would-be suicide to the hospital remains with him until he is relieved by another constable. As the Staffordshire police have refused to conform to this custom, the authorities of the hospital have been involved in considerable expense in connexion with this class of case, since they have been obliged to engage two attendants for each patient, one for the day and one for the night. They do not think, in justice to their subscribers and to the public, that they ought to be called upon to defray these charges and, as Mr. Howard Collins, the house governor, points out, the hospital authorities are not prepared to make arrangements with the friends or relatives of such patients for the payment of watchers, since, being a charity, the hospital never accepts any payment either from a patient or from his friends. The hospital committee has therefore had no alternative but to refuse such cases when brought by members of the Staffordshire police unless and until they agree to conform to the practice of the Birmingham police. In any case, it seems as if this order would be likely to lead to a very serious loss of time in connexion with the treatment of such cases, for if the patient has to be removed to the workhouse it must be remembered that the relieving officer has a very large district and it might well happen that a considerable time would elapse before he could be found and the necessary order for removal obtained.

Hospital Saturday Fund.

Those responsible for the collection of this fund have not had the satisfaction of congratulating themselves upon raising the £20,000 which has long been the goal of their ambition, though they have made considerable strides in that direction; but in spite of this fact they have handed over their usual contribution of £10,000 to the medical charities of the city, the sum being divided in precisely the same manner as last year.

Guild of St. Luke.

A branch of this guild has recently been formed for the city and district and Dr. Milner M. Moore of Coventry has been appointed Master. It is intended apparently to include dentists amongst its membership, since the first honorary secretary belongs to that profession. The first annual meeting has recently been held at Queen's College but so far as the newspaper reports show does not appear to have been attended by many members of the medical profession.

Nov. 3rd.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Salicylic Acid in Jam.

AN interesting case was heard on Oct. 19th at the Knutsford quarter sessions when a Stockport grocer appealed against a conviction for selling a pound pot of jam which was not of the nature, substance, and quality demanded. It was shown by Mr. William Thompson, public analyst of the borough of Stockport, that the pot of gooseberry and raspberry jam contained 2·6 grains of salicylic acid to the pound. It contained 7·7 per cent. of cane sugar, 52·4 per cent. of invert sugar, 3·6 per cent. of other sugars, 32·9 per cent. of water, and 3·4 per cent. of insoluble matter from fruit. He analysed another sample of jam which contained no salicylic acid and it showed 73·1 grains of sugar against 23·3 grains of water, while the sample with salicylic acid contained 63·7 grains of sugar and 32·9 grains of water. The addition of the acid therefore enabled the jam to take up about 9 per cent. additional water. Mr. Thompson said that salicylic acid was not necessary for the making or preservation of jam. Professor S. Delépine agreed with this statement and said that if there were too much water in jam something else than sugar was required to counteract it. "Salicylic acid was a powerful poison and the continuous taking of minute doses would be injurious to children and weak persons." Several representatives of jam-making firms gave evidence that they had used salicylic acid for various periods up to 25 years. Other makers gave similar evidence but admitted that since the Parliamentary inquiry they had reduced the quantity of the acid to two grains, or 0·16 grain per pound. Mr. Herbert Davies, analytical chemist, Liverpool, Dr. Thomas R. Bradshaw, and Dr. E. Rayner of Stockport considered that such a small quantity as that mentioned would not be deleterious but rather an advantage. Sir Horatio Lloyd, in giving judgment, said that the article supplied did not comply with the terms of the statute. And as to its being to the prejudice of the purchaser, they were more or less influenced by the fact that in working-class districts it was the staple food of the children and even in small doses frequently repeated they could not but feel that this would be injurious to them. The decision of the magistrates was confirmed with costs. The defendant's counsel applied for a case to be stated.

Life-Saving at Manchester Baths.

Manchester is not the place where one would expect much interest to be taken in swimming but a good deal is done to encourage the art at the public baths. On Oct. 27th an interesting series of examinations by the Life-Saving Society took place at the Cheetham baths. There was a medical examination in the theory of circulation, respiration, and resuscitation taken charge of by Dr. Ashworth. The land drills in rescue and release included the Silvester, Howard, and Marshall Hall methods of resuscitation. "The water drills were release and rescue four methods, the drowning subject to be carried 20 yards by each method, 100 yards breast stroke, 50 yards back stroke, and object diving." Out of 33 candidates 32 were successful. The classes for instruction are free to all citizens over 16 years of age. This is a municipal enterprise highly to be commended. How far it is taken up elsewhere I do not know, but as it is said that the deaths from drowning round our coasts and in the fresh waters of the United Kingdom alone every year are between 6000 and 7000 it is very desirable that the art of swimming and the technique of life-saving should be more widely known and practised. The difficulty and danger involved in the attempt of a mere swimmer to save the life of a drowning person are well known and if, as it is stated, a swimmer can in the course of ten or 12 lessons become so proficient as to give valuable aid in saving life without risk or danger to himself this part of the work of the baths committee may be cordially approved.

St. Mary's Hospital.

The building of the new hospital for women in Oxford-street is practically complete and it is expected to be ready for patients about the end of the year. £25,000, however, are required to defray the cost and one of the last acts of Bishop Moorhouse while he was still Bishop of Manchester was to preside at the annual meeting on Oct. 28th and to make an eloquent appeal for increased support. The medical charities of Manchester are largely made use of by those living in a wide area from which few subscriptions are received and the severe words of the bishop are quite justifiable. "It seems to me, I must confess," he said, "an anomalous, and I will even say a scandalous, state of things that no fewer than 100 great towns in the vicinity of Manchester are receiving valuable assistance from this institution and return no annual subscriptions." The burning words with which his appeal was enforced ought surely to rouse the slumbering philanthropy of "the 100 great towns in the vicinity of Manchester."

The Salford Royal Hospital.

The annual meeting of the friends of the Salford Hospital was held on Oct. 29th, under the presidency of the Mayor, Alderman Stephens. As is so often the case, the report told of increased work, greater calls on the institution, and a deficiency for the year of nearly £2000. The annual subscriptions only amount to £1000 which the chairman of the board considered was not creditable for a population of from 220,000 to 230,000. Dr. J. Dixon Mann read the medical report which stated that "the record number of patients treated during the past year afforded additional evidence of the need for enlarging the hospital." This seems the universal cry—more calls on the charity, absolute need for extension, insufficient subscriptions, in debt, but must enlarge, and so on. How long can it go on? Is it absolutely necessary? There is a large section of the population of our towns obtaining the help of hospitals and looking to it as a right, who might, and ought to, pay something for the treatment and care they obtain but for whom "self-help" has no charms. The whole question of hospital management and the equitable treatment of the private practitioner requires consideration.

Victoria University and the General Medical Council.

The annual meeting of convocation of the Victoria University of Manchester was held on Oct. 28th at the Owens College. Dr. P. McDougall proposed a motion in favour of the election of the representative of the University on the General Medical Council by the medical graduates who are also members of convocation. This was seconded by Dr. John Brown, and supported by Dr. Sinclair who made, as reported, a characteristic speech. He is stated to have said that the General Medical Council was unfit for the duties which it had to perform; that the Direct Representatives on the Council were like Labour Members in Parliament, they represented the lowest interests from the narrowest point of view; and that the medical practitioners throughout the country had no common interests except their own. "The ordinary medical practitioner was not an educated man and liked to talk about the learned professions, whilst as a rule he could not spell. Graduates of a university would have some common object." One could almost imagine that Dr. Sinclair may have been unfortunate as to his associates. After some further discussion an amended motion was passed:—

> That in the opinion of convocation it is desirable that the representative of the Victoria University of Manchester upon the General Medical Council should be nominated for election by convocation by the medical graduates who are also members of convocation.

Poor-Law Cottage Homes.

The cottages homes at Styal were built by the Chorlton board of guardians about five years ago at a cost of £60,000 and with a receiving home provided accommodation for 308 children. On Oct. 28th the Bishop of Chester opened an important extension. There are four blocks of buildings and eight semi-detached homes to accommodate 15 children each, a total of 120. The cost of the new portion, including furnishing &c., is £15,332. In the course of an interesting address the bishop spoke in commendation of the course adopted in bringing the children out into the country districts.

Cheshire Farmers and Anthrax.

Two farmers were summoned at the Eddisbury petty sessions on Oct. 26th for the non-notification of anthrax. A bull belonging to one of them was taken ill and a veterinary surgeon said that the animal was suffering from acute pneumonia. The defendant, instead of sending for medicine, "stuck the bull and an assistant was afterwards found to be suffering from anthrax" He was taken to the Chester Infirmary and recovered The carcass was sold and eight days after it was found that some of the purchasers' pigs were suffering from anthrax, whereupon the veterinary surgeon gave a certificate that the bull had suffered from the same disease The magistrates decided not to convict but the chairman said that although the defendant might have been ignorant of the existence of anthrax he should l the animal to remain under the care of the rgeon until its real condition was discovered inst the other defendant was withdrawn The serious that it may be thought the defendants asily However, the magistrates requested that d do their utmost in helping the authorities to spread of the disease, a result which does not ble

How Small pox is Spread

been about 30 cases of small pox at Glossop ceable to one house A young man who worked ridge went home to Glossop ill with small pox nitary inspector made inquiries at the house the at his wife and daughter had gone to Sheffield, y were ill upstairs with the disease, evidently the son The magistrates pointed out that the l cost the corporation £300 and caused two defendant was fined £4 14s

ND WESTERN COUNTIES NOTES

ROM OUR OWN CORRESPONDENTS)

Herefordshire Medical Association

THE annual meeting of the Herefordshire Medical Association was held at Hereford on Oct 28th under the presidency of Dr J B Fitzsimons Dr H B Pope of Kington was elected President for the ensuing year An interesting account was given by Dr Paul M Chapman of an outbreak of cerebro spinal meningitis among the occupants of a large school The history of the association since its establishment in 1858 was narrated by the honorary secretary, Mr Edgar F Morris, who brought into prominence the activity displayed by the original members in the suppression of unqualified practice in the county

University College of North Wales

The half yearly meeting of the governors of the University College of North Wales was held on Oct 28th under the presidency of Lord Kenyon It was reported that there was an increase in the number of students as compared with last year The chairman stated that in all probability £5000 would be received from the trustees of the late Dr Evan Thomas and the council had decided to allot that sum to the new building fund and to name the portion of the college which was thus built after the benefactor

University College of South Wales

The Cardiff town council has accepted the invitation of the University of Wales to attend in state the annual congregation on Nov 14th and the laying of the foundation stone of the new buildings in Cathays park

University College, Bristol

The annual distribution of prizes in connexion with the faculty of medicine of University College, Bristol, took place on Oct. 30th, when Sir William Ramsay made the presentations to the successful students Mr P J Worsley, who presided, in welcoming Sir William Ramsay said that they knew him better as Principal Ramsay who had come to University College Bristol *22 years ago and had helped to* establish for it the high position which the college had taken in scientific teaching After the distribution Sir William Ramsay delivered an interesting address on the professional training of a medical student and in the evening he was the principal guest at the annual dinner of the Bristol Medical School

Nov 3rd

SCOTLAND

(FROM OUR OWN CORRESPONDENT.)

General Council of the University of Edinburgh

THE statutory half yearly meeting of this body was held in Edinburgh on Oct 30th The chair was occupied for the greater part of the meeting by Principal Sir William Turner. The matter of greatest interest which came before the council was the report of the business committee of the council on the draft ordinance dealing with the institution of degrees in veterinary medicine and surgery and regulations relative thereto The ordinance says that "it is expedient that the University of Edinburgh in order to improve and encourage higher veterinary education, should institute degrees in veterinary medicine and surgery and frame regulations for the same" In accordance with this view the University Court proceeds to institute the two degrees of Bachelor and of Doctor of veterinary medicine and surgery The regulations for the examinations for these degrees are to be prescribed by the Senatus with the approval of the University Court and are to be *administered* by a committee which is to be composed of professors or lecturers in the University and of others conversant with the subjects of veterinary education The ordinance then deals with the examinations, and first, as regards the preliminary examination, the subjects are English, Latin, elementary mathematics, and Greek, or French or German, and the extent of this examination is to be determined by the Senatus Passing to professional education it is enacted that the course shall consist of not less than four academic years and the classes which must be taken are enumerated and these classes, as to range duration, and number of meetings, are also determined by the Senatus with the approval of the University Court It is then enacted that attendance at the Royal Dick Veterinary College, Edinburgh, shall qualify *pro tanto*, for admission to the University *examinations for degrees*, but the University Court shall, after consultation with the Senatus, have power to determine if attendance at other veterinary colleges shall be recognised The University Court shall have power to determine the courses of instruction to be taken in the University and in the Royal Dick Veterinary College respectively, or in any other veterinary college The matter of fees is then regulated and students who are studying with a view to graduation must enrol themselves at the University and pay the ordinary matriculation fee Passing then to the professional examinations for the Bachelor's degree, it is to consist of four divisions The first embraces chemistry, elementary physics elementary botany, elementary zoology, and the anatomy of the bones and joints of domesticated animals, the second division embraces advanced anatomy, histology, physiology, stable management, shoeing, and manipulation of domesticated animals, the third division includes morbid anatomy, pathology, bacteriology, materia medica pharmacy, pharmacology, the [illegible] ary hygiene, and dietetics, anc [illegible] the principles and practice of [illegible] and obstetrics, heredity and general principles *of breeding, and meat inspection* Having passed these in the order specified by the ordinance the candidate before going on to graduation has to show that he has obtaine [illegible] Register of V [illegible] is five guine [illegible] be 25 years of age or upwards and have been engaged for at least three years in the further study or exercise of his profession, he must present a thesis or a published memoir or work, he shall also be examined practically in veterinary medicine and surgery and, in addition, in veterinary hygiene or pathology, or bacteriology, the fee is 15 guineas This ordinance did not meet with the approval of the business committee of the General Council and in its name it was proposed to send back the ordinance to the University Court The proposal was, *however, defeated by a considerable* majority at the meeting held on the above date The business committee has thus been left in a somewhat awkward position

Nov 2nd

IRELAND.

(From our own Correspondents.)

University of Dublin.

THE chair of chemistry recently vacant by the retirement of Dr. J. Emerson Reynolds has just been filled by the appointment of Mr. George Young of Bristol. Dr. E. Percival Wright, who has filled the chair of botany for a long period, is about to retire and there are many candidates for his position. In the School of Physic many important changes in the professorial staff have taken place within a comparatively short period. A note of these may interest readers of THE LANCET who are graduates in medicine of the University of Dublin and such are to be found all over the world. Professor D. J. Cunningham, the distinguished anatomist, has returned to the University of Edinburgh, his *alma mater*, and has been succeeded in Dublin as University professor of anatomy and chirurgery by Dr. Andrew Francis Dixon. Dr. J. M. Purser, for many years King's professor of institutes of medicine, was succeeded after his retirement by Dr. William H. Thompson, formerly professor of physiology in the Queen's College, Belfast. Professor George Fitzgerald, whose lamented death took place last year, although he did not lecture in the School of Physic was nevertheless well known to all medical graduates. He has been succeeded as Erasmus Smith professor of natural philosophy by Professor William E. Thrift, M.A., F.T.C.D.

The Irish University Question.

The principal question at present being discussed in Ireland is the suggested settlement of the difficult problem of Irish university education—a question which many years ago shipwrecked Mr. Gladstone and which the witty Lord Morris advised Mr. A Balfour, when he came to Ireland as Chief Secretary, to leave alone. Rumour says that Mr. Wyndham is most anxious to try his hand at devising a scheme, and there is no doubt that he and Sir A. MacDonnell, his under secretary, are at present making overtures to the various bodies affected and are hearing their opinions on the matter. The scheme adumbrated by the Dublin Castle authorities is to create a great national university for Ireland which will include Trinity College, Dublin, Queen's College, Belfast, and a new fully endowed and equipped Roman Catholic College in Dublin. It is said in the public press that Trinity College was offered a grant of £10 000 a year if it would consent to the plan, the share for Belfast being an additional yearly grant of £15,000, while a sum of £45,000, it is reported, is to be given to the new Roman Catholic College. Each college is to be autonomous and is to have the power of conducting all the examinations for the degrees in the various faculties. The Provost and senior Fellows of Trinity College are opposed to the scheme on the ground that it would be injurious to the interests of higher education in Ireland and to those of Trinity College that there should be incorporated in the University of Dublin a Roman Catholic or other denominational college in which access to the teaching staff and governing body would depend, either in theory or in practice, not merely on literary and scientific attainments, but also on religious denomination. It is said that Trinity College would be most anxious to join with Belfast but not with a college of Roman Catholics ruled by Roman Catholics for Roman Catholics. Then in this scheme what is to become of Cork and Galway and of non-resident students who wish to obtain a degree and who, owing to the Royal University, have vested interests, and what is to be done with female students? There are many people who would gladly see some new scheme, either a modification of the Royal University or even a new plan altogether, if it could be worked out on purely academic lines with the power of conferring degrees on academic grounds alone and with none of the colleges associated in the University either directly or indirectly under ecclesiastical control. The question is a confessedly difficult one and I fear that Mr. Wyndham will no more be able to settle it than was Mr. Gladstone. The whole trend of public opinion is against sectarianism in university life except in Ireland and if Mr. Wyndham attempts a settlement on any basis except academic lines he will probably be defeated. At the meeting of the Senate of the Royal University on Oct. 29th the following motion was passed:—

> That while we are satisfied that the Royal University of Ireland under its present constitution has done good work within the limits of the powers committed to it we are of opinion that the findings of the Royal Commission on University Education in Ireland must, unless followed by some measure of reform giving promise of permanency, react injuriously upon the University and through it upon the most vital educational interests of the country; and therefore we beg most earnestly to represent to the Government the urgent need of taking this question into their immediate consideration.

Poor-law Reform in Ireland.

At a sitting of the Poor-law Commission in Omagh on Oct. 29th Dr. E. C. Thompson, M.P., in giving evidence, said that there were too many workhouses in Ireland; for instance, in county Tyrone, instead of six, as at present, he thought three would do, those of Omagh, Strabane, and Dungannon. He thought the district hospitals should be made really efficient and they, with one efficient surgical hospital manned by a capable surgeon, would form a desirable system. Workhouse hospitals should be taken out of the workhouses altogether and the fever hospitals should be utilised. The hospitals should be removed from the care of guardians who, with the best intention, did not understand what a hospital really should be. There were, in his opinion, no proper nursing and no proper sanitary arrangements in Irish workhouses. They were houses for the poor, where they lingered until they died.

The Ulster Branch of the British Medical Association.

The autumn meeting of the Ulster Branch of the British Medical Association was held in the Guildhall, Londonderry, on Oct. 28th, when the retiring president, Professor T. Sinclair, was in the chair and introduced his successor, Mr. Thomas MacLaughlin, who delivered an interesting inaugural address dealing with the medical history of Londonderry. After the meeting those present—to the number of 70—were entertained by the Derry members of the branch to an excellent luncheon, at which the new president occupied the chair.

Irish Medical Association.

The council of the Irish Medical Association has just issued a circular to the senates and councils of the universities, medical colleges, and schools bringing under their notice the present deplorable condition of the Irish Poor-law medical service with the hope that those entrusted with the provision of medical education may be induced to exert their influence to improve and to reform the service in the interest of many of their present and future graduates and diplomates of medicine and surgery.

Will of the late Mr. Forster Green.

The will of the late Mr. Forster Green, one of the most philanthropic Ulstermen who ever lived, has just been made public. Among many other legacies he leaves £500 to the Samaritan Hospital, Belfast. During his widow's life he directs the surplus income of each year (if any) to be applied in assisting the Forster Green Hospital for Consumption and Chest Diseases and the Epileptic Hospital, Belfast. After her death the trustees are empowered to pay £10,000 to the Forster Green Hospital for Consumption and Chest Diseases for an endowment fund to extend the benefits of its treatment to those unable to contribute in full to their support while under treatment and £10,000 for building and endowing almshouses in Belfast or its vicinity for the respectable poor of Belfast or counties of Antrim and Down, under instructions fully set out in the codicil. Mr. Green died on Oct. 21st.

Nov. 3rd.

PARIS.

(From our own Correspondent.)

French Surgical Congress.

THE annual French Congress of Surgery has just risen and, as usual, it has provided a considerable number of memoirs which can be read hereafter in the "Transactions" and of which abstracts are given in all the journals. The work of the Congress, however, has not, on the whole, been favourably received and there is no occasion to disguise the fact that these annual congresses are gradually declining. As evidence of this, it is sufficient, to remark that there was always abundance of vacant space in the room where the meetings were held, its only occupants being provincial surgeons and some foreign surgeons, whilst the Paris surgeons for the most part were satisfied with entering their names as members and did not absent themselves from their usual occupations for the purpose of taking part in the proceedings. Some animated personal discussions took place

at the general meeting, M Pozzi pressing so vigorously for the alteration of a by law relative to the general secretary that the latter hande
the president of the
active contest from
emerged victorious
year there are to be
two as heretofore It can hardly be expected that this slight modification will be sufficient to restore vitality to a moribund institution

External Perforating Disease of the Stomach

M Hayem has communicated to the Academy of Medicine an account of a lesion of the wall of the stomach which escaped observation until it was recently discovered by him It consists in a loss of substance which occurs not on the internal surface but on the subperitoneal aspect of the stomach and it proceeds from without inwards The lesion passes through three successive phases In the first of these one or more circular depressions are to be seen made as if stamped with a seal their margins being more or less elevated and the bottom more or less irregular or sometimes puckered In the second stage the gastric wall becomes translucent at the place of the lesion, the mucous membrane forms a smooth bridge, and the cellular and muscular layers are greatly reduced in substance In the third stage the lesion forms an ochre coloured hollow on the internal surface, while on the peritoneal aspect it is convex, projecting like a hernia and covered with a perigastric thickening When the ulcer is fully developed there remains only a thin epidermoid layer of the mucous membrane In its first stage the lesion is common enough but it has hitherto escaped description probably because it does not give rise to any symptoms M Hayem's discovery overthrows one of the theories admitted for the explanation of the classic form of ulcer—namely, that it depends on an excess of acidity in the gastric juice tending in some degree to erode the mucous membrane of the viscus Ulcer of the stomach is, in fact met with principally in patients who are the subjects of hyperchlorhydria This explanation however, is inapplicable for an ulcer commencing externally on the peritoneal surface, a phenomenon which can only be accounted for by disorder of tissue nutrition referable to the nervous system just as in the case of perforating ulcer of the sole of the foot which is a result of disease of a branch of the sciatic nerve The external ulcer is in every respect similar to the classic ulcer of the internal coat of the stomach, a feature which supports the opinion of those who see in the latter only the effect of nervous lesions accompanied by malnutrition of certain regions corresponding to the nerve branches in question According to this view hyperacidity of the gastric juice would only act by promoting erosion of the imperfectly nourished tissues

Extraction of a Bullet in Contact with the Left Auricle of the Heart

At the meeting of the Society of Surgery held on Oct 28th M Tuffier showed a non commissioned officer of Spahis aged 24 years who had received a pistol shot in the front of the chest at the attack on Figuig in March 1903 He had been lying almost flat on his horse so that the direction of the bullet was from above downwards Notwithstanding this wound he was able to remain on horseback for half an hour when he was overcome by extreme difficulty of breathing After he was taken to the ambulance station a small wound was found on the left side of the sternum and on the same day he had slight hæmoptysis and fits of dyspnœa. In the course of some days all this passed off and the patient returned to duty Two months later he began to suffer from difficulty of breathing and attacks of dyspnœa, for which he was admitted into the hospital at Mustapha and was then sent to Paris Here he came under the care of M Tuffier who decided on operating after he had for a long time observed the inutility of various kinds of medical treatment for cardiac trouble Radioscopy on several occasions showed the presence of the bullet and its intimate relation to the left auricle, all the movements of which it followed After incision of the integuments and the intercostal space M. Tuffier found, by means of Contremoulin's needle that the bullet was at a depth of five centimetres (two inches) He then resected the second costal cartilage, and the pleural sac being pushed inwards he could with his finger feel the bullet evidently attached to the auricle It was on the surface of the auricle without being encapsuled and nothing further was required to be done in order to extract it, after which the symptoms disappeared

Dwarfs

At the meeting of the Academy of Medicine held on Oct 20th M Poncet presented an interesting memoir on the subject of dwarfs together with a minute description of two examples—a brother and a sister whom he had observed on the banks of the river Ain With respect to the relative proportion of parts their bodily conformation was perfect, unlike that of the individuals who appear in public exhibitions and are in reality the subjects of disease, they may, for instance, be achondroplasiacs—namely, children in whom the development of the bony cartilages has become arrested, frequently in consequence of hereditary syphilis The dwarfs described by M Poncet had however, an irreproachable osseous development, they were small, but the proportions of all the parts were normal M Poncet considered them to be representatives of the pygmies, dwarf races which formerly lived in Europe and
ancients but have long
These pygmies had
followed in history as
late as the tenth century The stature of primitive man was probably small in comparison with the standards of to-day and this condition of dwarfism reappears from time to time by reversion to the type of remote ancestors

Disposal of Tuberculous Sputum

M Barth recommends tuberculous patients to replace the handkerchief or the vessel in which they spit by pieces of paper about four inches square such as might, for instance, be cut from a newspaper A daily newspaper would yield 72 such pieces After spitting in the piece of paper the patient ought to roll it into a ball and throw it into a receptacle kept for this purpose and from time to time emptied into the fire so that the sputa and paper are burned A tin box might be used as the receptacle This method would be practical and inexpensive It would also have the great advantage of doing away with the use of spittoons by phthisical patients for these spittoons encourage the spread of tuberculosis and are a source of danger to the person who has to clean them The small tin boxes suggested by M Barth would cost the Assistance Publique less than porcelain spittoons and they would not be so easily broken

New Hospital Buildings

In November last year the Paris municipal council decided that the Assistance Publique should borrow on its property a sum of 40 000 000 francs (£1 600 000) to be employed in the enlargement and reconstruction of hospitals This loan has been sanctioned by the Chambers and a scheme of the work to be undertaken will shortly be submitted to the municipal council for its approval Several members of the commission which in the council deals with questions relating to the Assistance Publique have already proceeded to Belgium and Holland on a visit of inspection to various hospitals In Antwerp under the guidance of M Ambroise Rendu they will visit the Sturvenberg Hospital of 350 beds, this hospital consists of a series of two storey pavilions arranged round an administrative block They will also visit a new hospital at Liege. Work will not be commenced on the Paris hospitals till next spring A hospital to replace the Pitié will be built on the unoccupied site of the Salpêtrière and when it is completed the Pitié will be pulled down

Nov 3rd

BERLIN

(FROM OUR OWN CORRESPONDENT)

Medical Congresses

NUMEROUS congresses were held throughout Germany during the university vacations especially at the end of September Among the more important of them mention may be made of the meetings of the German Association of Naturalists and Medical Men at Cassel, of the German Practitioners' Association at Cologne or the German Public Health Association at Dresden, and of the Government medical officers at Leipsic

German Association of Naturalists and Medical Men.

At the congress in Cassel the first address was delivered by Professor Ladenburg of Breslau on the Influence of

Natural Science on the Spirit of the Time. The learned professor in his speech, which eventually gave rise to a considerable amount of protest in the daily newspapers, expressed his antagonism to current views on the subject of the inspiration of the Bible, the immortality of the soul, and some other tenets of the Christian and Jewish faiths. In his opinion it would be a decided improvement if sound training in the principles of modern biology took the place of the religious instruction which forms a part of most educational systems. Professor Ziehen of Utrecht delivered an address on the Physiological Psychology of Affections and Sensations; it was, however, of purely theoretical interest. Dr. Alsberg of Cassel spoke on the Effect of Social Influences in bringing about the Degeneration of Certain Races. He said that highly cultured European nations showed obvious racial degeneration. The explanation was that when mankind was living in the state of nature the less resistant individuals perished in accordance with the laws of selection, but in the highly cultured nations the progress of hygiene and medical science contributed to preserve these individuals who in their turn produced descendants still weaker than themselves. The increase of town populations, and especially of factory workers, and the decrease of the rural population—a consequence of the growth of modern industrialism—must also be mentioned, as this class of the community very soon underwent degeneration in consequence of the unwholesome conditions of life in cities. The most terrible foe of humanity was alcoholism. The obvious symptoms of racial degeneration were especially the enormous increase of nervous and mental diseases and the inability of mothers to suckle their infants, the degeneration of the mammary glands being the result of the alcoholism of the progenitors. Professor Rieder of Munich spoke on the use of the Finsen light and the x rays as therapeutical agents. Blue light was said to be serviceable in mania and red light in melancholia. A beneficial action of red light was observed by Professor Finsen in small-pox, an observation in accordance with popular views in some countries, such as Roumania, Japan, and Tonkin where the patients were supplied with red coverlets. Red light also produced good effects in measles, scarlet fever, and erysipelas. Speaking of the Roentgen rays Professor Rieder mentioned different skin diseases, such as favus, ringworm, alopecia areata, and especially lupus, in which the Finsen treatment and the Roentgen rays gave excellent results. In Copenhagen 85 per cent. of the cases of lupus were cured by Professor Finsen, whereas in the Budapest hospital previously to the introduction of the treatment by means of light the proportion of recoveries was 7 per cent. only. In cancer of the skin this method of treatment had also a wide field of action. Lupus ought, he said, to be treated in the sanatoriums for consumptives. Professor Allan Macfadyen of London read a paper on Intracellular Toxins. By exposing bacteria to very low temperatures he was able to examine their intracellular plasma and he found that the intracellular plasma of the bacilli of enteric fever and of staphylococci was highly virulent, as guinea-pigs were killed by injections containing such plasma. Experiments on immunisation were made in monkeys, the result being that the serum of the animal had an immunising action against the bacilli of enteric fever as well as against the intracellular toxin. It has also been ascertained that the opinion that the toxic action of bacteria depended on toxic products of metabolism was erroneous, the toxic agent being in reality present within the intracellular substance of the bacteria themselves. Professor Sir William Ramsay of London read a paper on the Periodic System of the Chemical Elements. Professor Griesbach of Mülhausen read an address on the Hygiene of Schools in Germany. He insisted strongly on the medical supervision of schools by specially appointed medical men. A collective investigation has proved that 80 per cent. of headmasters acknowledged the desirability of medical control. The hygienic defects in the present system were obvious: short-sightedness, for instance, existed in the junior classes in proportions varying from 6 to 31 per cent. in different schools, whilst in the more advanced classes the proportions were from 52 to 83 per cent. From a hygienic point of view it was necessary to have a diminution of the number of school lessons which in Germany occupied from 36 to 40 hours a week and in France from 22 to 26 hours a week. It was also necessary to have a greater number of holidays. In conclusion, he made a reference to the instruction in hygiene given in several towns to schoolmasters and recommended that such instruction should be general throughout Germany. The address of Professor Behring on Tuberculosis has already been recorded in these columns.[1] The congress will meet next year at Breslau. Professor Chiari of Prague and Professor Winkel of Munich were elected presidents of the association.

German Practitioners' Association.

The Practitioners' Association (Deutscher Aerztetag) has held two meetings this year. An extraordinary meeting became necessary in the spring in consequence of the recent amendment of the statutory provisions relative to workmen's insurance and the ordinary autumn meeting took place at Cologne, Professor Loebker of Bochum being in the chair. The proceedings opened with a discussion on the proposed formation of an alliance between the association and the Leipziger Verband, which, as was explained in The Lancet of Feb. 21st, 1903, p. 558, is a combination of medical men having for its object the upholding of the rights of the profession against the high-handed policy of the sick clubs. After a short debate the meeting unanimously sanctioned the proposed scheme of alliance. Another subject discussed by the association was the insurance of the members against sickness and accidents. The matter, after a rather long discussion, was referred to a special committee to be reported on at the next meeting. Owing to the overcrowding of the profession a motion was adopted to the effect that youths leaving school to enter on a university career should be warned against becoming students of medicine. The association finally again discussed the question of club practice and adopted a motion to the effect that the local branches of the association were bound to insist on the free-choice system being introduced in the sick clubs and that the members must abstain from taking any action which might be prejudicial to this result. Members holding appointments as medical officers to clubs with fixed salaries were therefore enjoined to resign their positions as soon as possible.

German Public Health Association.

The first business brought before the meeting of the German Public Health Association was the Prevention of Tuberculosis. Professor Gaffky of Giessen recommended the establishment of public laboratories for the examination of sputa, the compulsory notification of consumption, the isolation of patients in sanatoriums, the disinfection of dwellings free of charge to the householder, and other measures which have already been discussed at length in the different congresses on tuberculosis. Professor Dunbar of Hamburg read a paper on the Regulation of the Milk Trade. He drew attention to the fact that in Germany 150,000 children die every year from diseases caused by unwholesome milk. The control at present exercised by the police was insufficient. He recommended that persons engaged in the milk trade should be required to hold special licences and that these licences should be granted only with the sanction of a commission consisting of agriculturists, medical men, and veterinary surgeons. In the discussion it was argued that these proposals were too stringent and that they would tend to raise the price of milk. Dr. Ohlmüller of Berlin spoke on the Purification of Water by Ozone and Dr. Rumpelt of Dresden discussed questions connected with the Hygiene of Dwellings.

Meeting of Government Medical Officers.

The meeting of the Government medical officers at Leipsic discussed the lunacy laws which are different in the various countries of Germany. There was a general agreement as to the desirability of Imperial legislation to establish uniformity of the lunacy laws throughout the whole Empire. There was, on the other hand, great diversity of opinion with respect to the question of insane criminals, as some of the speakers wished them to be confined in special departments attached to prisons, whilst others held that they ought to be admitted to the general lunatic asylums under special control. Other papers read before the Congress were on the Use of Photography in Forensic Medicine, by Professor Strassmann, and on the Prophylaxis of Contagious Diseases in Schools, by Dr. Tjaden of Bremen.

Nov. 3rd.

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[1] The Lancet, Oct. 24th, 1903, p. 1199.

Literary Intelligence.—The address delivered before the Medical Society of Manchester on Oct. 7th by Dr. Charles J. Cullingworth, obstetric physician to St. Thomas's Hospital, on "Charles White, F R.S., a Great Provincial Surgeon and Obstetrician of the Eighteenth Century," will shortly be published by Mr. Henry J. Glaisher of Wigmore-street, W.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS —The following gentlemen have passed the first examination of the Board in the subjects indicated —

Chemistry —Edgar Cecil Banks Owens College Manchester Alfred William Bevis St Mary's Hospital Maurice Frederic Bliss [illegible] Coombs Dawes University College [illegible] e Hospital, William Deane and [illegible] homas's Hospital James Butler [illegible] Leeds and Bradford Grammar [illegible] nt Owens College Manchester [illegible] ondon Hospital Ernest Charles [illegible] Alexander James Kingswood [illegible] n Jenner University College [illegible] s Guy's Hospital Max Nurick [illegible]

[illegible] on Hospital Gerald Munn Charles Melton Ockwell John Edward Prentis Guy's Hospital [illegible]

F[illegible]
C[illegible]
A[illegible]
S[illegible]
T[illegible]
A[illegible]
Ele[illegible]
R[illegible]
A[illegible]

UNIVERSITY OF CAMBRIDGE —The following medical and surgical degrees were conferred on Oct 29th —

Bachelor of Medicine and Bachelor of Surgery —G G Lillett St Catharine's and J R Be[illegible] Emmanuel

Bachelor of Medicine —I Weatherhead St John's H B McCaskie Caius R Butterworth Christ's, and J M Stenhouse Sidney Sussex

FOREIGN UNIVERSITY INTELLIGENCE —*Amsterdam* Dr P Ruitinga has been appointed Professor of Medicine in succession to the late Dr Stokvis —*Berlin* Dr Paul Schultz has been appointed Principal of the Department of *Special Physiology in the Physiological Institute* in succession to Dr Immanuel Munk whose assistant he has been for many years —*Innsbruck* Dr Hermann Schloffer has been appointed to the chair of Surgery —*St Petersburg (Medico Chirurgical Military Academy)* Dr Dêlitsyn of Kharkoff has been appointed Professor of Operative Medicine and Surgical Anatomy —*Turin* Dr Aldo Fabris has been recognised as *privat docent* of Pathological Anatomy, Dr Luigi Ferrio as *privat docent* of Internal Pathology, Dr G B Boccasso and Dr Antonio Perassi as *privat docenten* of Surgery, and Dr Giovanni Petella as *privat docent* of Ophthalmology —*Wurzburg* Dr Max Borst has been promoted to an extraordinary Professorship of Pathological Anatomy —*Zurich* Dr O Mayer Wirz has been recognised as *privat docent* of Midwifery and Gynæcology

CHILDREN'S HAPPY EVENINGS ASSOCIATION —The Countess of Jerse[illegible] of this association of which [illegible]sident for help from young [illegible] hour or two once a week or once a fortnight to supervise boys games The Children's Happy Evenings Association has for its object the provision of recreative evenings for children attending public elementary schools and during the 13 years that the association has been in existence a great deal of good work has been done by affording healthy and educational recreation for the poorer children of London and the provinces Not only this but the children are thus prevented to a great extent from spending their evenings in play in the pernicious environment of the streets Offers of personal help should be sent to Mrs Bland Sutton 48, Queen Anne *street, W, and contributions to Mr William Grantham, the* honorary treasurer, 17, Cadogan place W

THE LATE MR H G CROLY —One of the resolutions passed at the annual meeting of the Royal Academy of Medicine in Ireland was as follows "That the President and Fellows of the Royal Academy of Medicine in Ireland desire to record their sense of the loss which hospital work has sustained by the death of Mr Henry Gray Croly, who has been for so many years an active teacher of surgery and a prominent Fellow in this Academy The Academy desires to express condolence with the members of his family"

THE LONDON HOSPITAL —On Nov 2nd the Lord Mayor and Lady Mayoress unveiled the tablets over the beds in the Royal Ward which was founded in honour of the visit of the King and Queen to the hospital during last summer The Hon Sydney Holland, chairman of the hospital, in opening the proceedings referred to the indefatigable work of the Lord Mayor during his term of office on behalf of the hospitals In his reply the Lord Mayor said that no more lasting memorial could be made to the memory of man or woman than was afforded by the endowment of a hospital bed The credit for the success of the appeal which had been made to the public was due to the King and Queen It was an easy thing to leave money but to *give with a living hand involved some sacrifice The donors* would, however, see the benefits of their acts during their lifetime

THE REGISTRATION OF PLUMBERS —At a meeting held recently at the town hall, Chiswick, under the presidency of Mr Joseph Smith, chairman of the Chiswick district council, for the purpose of forming a Chiswick health society, the following motion, moved by Mr F C Dodsworth, medical officer of health of Chiswick, was carried unanimously —

> That this meeting of inhabita[illegible] of Chisw[illegible] the admirable work that [illegible] local health societies [illegible] the *formation of such a* [illegible]

ROYAL COLLEGE OF SURGEONS IN IRELAND —The following is a list of awards gained during the winter session 1902 03 and s[illegible] Winter session, 1902–03 Stoney [illegible] R Bury *Descriptive anat*[illegible]d medal, D Adams, secon[illegible] Carden Senior First prize (£2) and medal W St L Moorhead, second prize (£1) and certificate, L Lucas Practical anatomy First year First prize (£2) and medal, P G M Elvery; second prize (£1) and certificate, J Murray Second year First prize (£2) and medal, T A Burke, second prize (£1) and certificate, J B Kelly Practice of medicine First prize (£2) and medal, J Parker, second prize (£1) and certificate, A N Crawford Surgery First prize (£2) and medal C A Cusack Midwifery First prize (£2) and medal R Bury, second prize (£1) and certificate A C Adams Physiology First prize (£2) and medal J Prendiville, second prize (£1) and certificate, C W Greene Chemistry First prize (£2) and medal, *D Adams*, second prize (£1) and certificate W H Carden Pathology First prize (£2) and medal, J S Sheill, second prize (£1) and certificate W B Loughnan Physics First prize (£2) and medal, D Adams, second prize (£1) and certificate, W H. Carden Summer session 1903 Barker anatomical prize (£31 10*s*) A N Crawford Mayne scholarship (£15) R W Burkitt Carmichael scholarship (£15) I Allnun Gold and silver medals in operative surgery gold medal, A. N Crawford, silver medal, F J Cairns, honour certificate C A Cusack Practical histology First prize (£2) and medal, W St L Moorhead, second prize (£1) and certificate, S H Massey Practical chemistry First prize (£2) and medal D P Clement, second prize (£1) and certificate H C Carden Public health and forensic medicine First prize (£2) and medal, Miss C O Meara second prize (£1) and certificate, T. W. Browne. Materia medica: First prize (£2) and medal, R M. Brontè; second prize (£1) and certificate, A. J. Faulker. Biology: First prize (£2) and medal, F. M. Hewson; second prize (£1) and certificate, W. A. Ryan.

BOOKS, ETC., RECEIVED.

ALLEN, GEORGE, 156, Charing-cross-road, W.C.
Horses, Guns, and Dogs. By J. Otho Paget, George A. B. Dewar, A. B. Portman, and A. Innes Shand. Price 6*s.*

BEMROSE AND SONS, LIMITED, 4, Snow-hill, E.C.
Beautiful Biskra, "The Queen of the Desert." By C. Howard Tripp. Price 1*s.* net.

GLAISHER, HENRY J., 57, Wigmore-street, Cavendish-square, W.
Ethyl Chloride in Surgical and Dental Practice. With an Account of a simple Device for use with ordinary Gas and Ether Apparatus. By A. de Prenderville, M.R.C.S., Anæsthetist to the London Throat Hospital, W. Price 1*s.* net.

GOOD HEALTH PUBLISHING COMPANY, Battle Creek, Mich., U.S.A.
The Living Temple. By J. H. Kellogg. Price 5*s.* 6*d.*

NISBET, JAMES AND CO., LIMITED, 21, Berners-street, W.
Divine Hygiene. Sanitary Science and Sanitarians of the Sacred Scriptures and Mosaic Code. By Alexander Rattray, M.D. Edin. In two volumes. Price 32*s.*

OLIVER AND BOYD, Edinburgh.
The Transactions of the Edinburgh Obstetrical Society. Vol. XXVIII. Session 1902-1903.

REBMAN, LIMITED, 129, Shaftesbury-avenue, Cambridge-circus, W.C.
Portfolio of Dermochromes. By Professor Jacobi of Freiburg im Breisgau. English Adaptation of Text by J. J. Pringle, M.B., F.R.C.P., Physician to the Department for Diseases of the Skin at the Middlesex Hospital, London. Part 3. Price £3 3*s.* net.

SPRINGER, JULIUS, Monbijouplatz, 3, Berlin.
Lehrbuch der [illegible]. Von Max Runge, Ord. Professor der Geburtshülfe [illegible] Direktor der Universitäts-Frauenklinik [illegible] Auflage. Preis, gebunden, M.10.

STUBER'S, A., VERLAG (C. Kabitzsch), Würzburg.
Beiträge zur Klinik der Tuberkulose. Herausgegeben von Dr. Ludolph Brauer, A.O. Professor an der Universität Heidelberg. Band I. Price M.3.50.

VOGEL, F. C. W., Leipzig.
Archiv für Experimentelle Pathologie und Pharmakologie. Redigirt von Dr. B. Naunyn und Dr. O. Schmiedeberg. Band 50. Heft. 3 and 4. Preis eines Bandes 16 Mark.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ANDERSON, KENNETH, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of the Banewell District by the Axbridge (Somerset) Board of Guardians.

BROWNE, J. J., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Wigton District of the county of Cumberland.

CHOLMELEY, MOUNTAGU ADYE, L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon to the "Court One and All," Ancient Order of Foresters, Truro.

FARNECOMBE, W. T., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Selly Oak District of the county of Worcester.

GROGAN, GERTRUDE A., M.B., B.A. R.U.I., has been appointed Second Assistant Medical Officer to the Cambridgeshire County Council Asylum, Wilbourne, Cambridge.

HAMILTON, ARTHUR F., M.B. Lond., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the West London Hospital.

HESLOP, A. H., M.B., B.S. Durh., has been appointed Second Assistant Medical Officer of the City Asylum, Gosforth, Newcastle-on-Tyne.

LYONS, ALEXANDER, M.R.C.P., L.R.C.S. Edin., has been appointed House Surgeon to the Royal Eye Hospital.

PENBERTHY, W., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Wiveliscombe District of the county of Somerset.

PICKARD, RANSOM, M.S., M.D. Lond., F.R.C.S., L.R.C.P. Lond., D.P.H. Cantab., has been appointed Honorary Surgeon to the West of England Eye Infirmary, Exeter.

TOSSWILL, LOUIS HENRY, B.A., M.B. Cantab., M.R.C.S., has been appointed Honorary Consulting Surgeon to the West of England Eye Infirmary, Exeter.

WILLOUGHBY, W. G., M.D. Lond., D.P.H. Cantab., has been appointed Medical Officer to the Education Authority, Eastbourne.

Vacancies.

For further information regarding each vacancy reference sh made to the advertisement (see Index).

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND U DISEASES, John Bright-street, Birmingham.—Surgical A for six months. Honorarium at rate of 52 guineas per ann

BRIGHTON, HOVE, AND SUSSEX THROAT AND EAR HOSPITAL, street, Queen's-road, [illegible]

[illegible]

CHARING CROSS HOSPITAL.—Assistant Anæsthetist. Salary £6 Also Medical Registrar. Salary £40 a year, with lunch.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.— to Out-patients.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House Surgeon. £80 per annum, with board, lodging, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.- Physician, unmarried, for six months. Salary £20, with bo residence. Also Clinical Pathologist and Bacteriologis resident. Honorarium 50 guineas per annum.

INDIAN MEDICAL SERVICE, India Office.—Twenty Commissions.

LANCASHIRE INEBRIATES' REFORMATORIES, Langho, Whalle cashire.—Director and Medical Officer, married. Salary £ annum, rising to £700, with residence, coal, light, and wash

LIVERPOOL, CITY OF, INFECTIOUS DISEASES HOSPITAL.—A Resident Medical Officer, unmarried. Salary £120 per with board, washing, and lodging.

LONDON HOSPITAL MEDICAL COLLEGE (UNIVERSITY OF LO Demonstrator of Biology. Salary £75 per annum.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House Surgeon. £90, with residence, board, and washing

MARGARET-STREET HOSPITAL FOR CONSUMPTION AND DISE THE CHEST, 26, Margaret-street, Cavendish-square, W.- logist.

MELBOURNE, UNIVERSITY OF.—Chair of Physiology and Histolo

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES CHEST.—Assistant Physician to Out-patients.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. £160, rising to £180.

NEW HOSPITAL FOR WOMEN.—House Physician and House (female).

NOTTINGHAM CITY ASYLUM.—Junior Assistant Medical Offi married. Salary £150 per annum, with apartments, boa washing.

OCHIL HILLS SANATORIUM, Kinross shire.—Bacteriologist and Medical Officer. Salary £120, with board and laundry.

PADDINGTON-GREEN CHILDREN'S HOSPITAL London, W.—Sur Out-patients. Also Pathologist and Registrar. Salary £50

POPLAR UNION, South Poplar District.—Public Vaccinator.

QUEEN ADELAIDE'S DISPENSARY, Pollard-row, Bethnal Green- —Honorary Surgeon Dentist.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Junior Assistant (female) for six months. Board and lodging prov

ST. ANN'S DISPENSARY, 217, St. Ann's-road, Tottenham.— Officer. Also Dentist.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES RECTUM, City-road, E.C.—House Surgeon. Salary £80 per with board, lodging, and washing.

ST. PAUL'S HOSPITAL FOR SKIN AND GENITO-URINARY DISEA Lion-square, High Holborn, W.C.—Two Casualty Out Surgeons.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Resident Assista Surgeon. Salary £80 per annum.

SHEFFIELD ROYAL HOSPITAL.—House Surgeon, unmarried. £120 per annum, with board, washing, and apartments.

SUSSEX COUNTY HOSPITAL, Brighton.—House Surgeon, un Salary £140 per annum, with board, washing, and residenc

TOTTENHAM HOSPITAL, London, N.—Casualty Officer for six Salary £40 per annum, with board, residence, and laundry.

WEST KENT GENERAL HOSPITAL, Maidstone.—Honorary Physi

THE Chief Inspector of Factories, Home Office, S.W., gives n vacancies for Certifying Surgeons under the Factory Act mouth, in the county of Dorset, and at Hinckley, in the of Leicester.

Births, Marriages, and Deaths

BIRTHS.

DOW.—On Oct. 28th, at Lewes, Sussex, the wife of William M.D., of a daughter.

GREY.—On Oct. 30th, at Roseland, Kingsbridge, Devon, the Harry Grey, M.D. Edin., of a son.

SIMPSON.—On Nov. 1st, at Melville street, Edinburgh, the wif G. F. Barbour Simpson, of a daughter.

DEATHS.

LAWTON.—On Oct. 31st, at [illegible] L.R.C.P., M.R.C.S., D.[illegible]

ORMROD.—On the 1st inst., at Hindley, Workington, [illegible] L.R.C.P., M.R.C.S., aged 60 years.

THORNBURN.—On Oct. 30th, at Low Moor, Bothel, John Thornburn, L.R.C.P., L.M., M.R.C.S., Sunnyside, Cocke aged 64 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of B Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A POINT UNDER THE VACCINATION ACTS.

To the Editors of THE LANCET.

SIRS,—Some months ago I vaccinated a child and subsequently inspected the arm and found it "good." The father of the child then [illegible] night who told me that the district medical officer had filled up the paper, so, of course, I do not now expect a visit from the father nor do I expect to get paid voluntarily Now, Sirs, I should like to know if the district medical officer gets the vaccination fee, if the district medical officer is within his right in filling up the certificate. Does this meet with your approval? I may say that the parents have removed from their present address. Thanking you in anticipation,

I am, Sirs, yours faithfully,

Widegate street, E C, Oct 30th, 1903. ISAAC GEORGE.

*** We fear that there may be in this case an attempt on the part of the parent to escape payment and perhaps he has discovered that the services of the public vaccinator were at his disposal gratuitously. We expect that the district medical officer referred to by our correspondent is also a public vaccinator and that such officer has acted under Section 12 of the Vaccination Act of 1871, which provides that "where it appears to the public vaccinator of any district upon personal examination of any child resident in such district who has not been successfully vaccinated by him, that such child has been successfully vaccinated, the public vaccinator may, on the request of the parent of such child, grant a certificate to that effect, and such certificate shall be transmitted and have the same effect as if it were a certificate of successful vaccination by the public vaccinator who gave the certificate." It has, however, to be noted that there is no statutory fee for this certificate and that the public vaccinator must make his own terms with the parent. The public vaccinator is not bound to comply with the request of the parent but it is not desirable except "for very strong reasons" that he should refuse. It appears to us that in the present case, if we rightly interpret our correspondent's letter, the public vaccinator, had he been aware [illegible] 1871, part of which enacts that every "medical practitioner as soon as he has ascertained that the operation has been successfully performed shall deliver to the parent causing the child to be vaccinated a certificate of successful vaccination, in the proper form and duly filled up and signed by him" Our correspondent will do well to think over all the facts of the case in the light of this section before he risks legal proceedings —ED L

THE RÔLE OF SOAP.

To the Editors of THE LANCET

SIRS,—In THE LANCET of Oct 17th, p 1106, I notice under the heading of "The Rôle of Soap" some remarks with regard to a current controversy.

I have read the correspondence in various periodicals and the remarks of some professional men with considerable interest, having made a life-long study of soap from the "chemical" as well as from the "personal" point of view, but I have never seen anyone referring to what has been the universal practice of the company of which I have the honour to be a director in preparing toilet soaps—viz, to finish the soap so that instead of containing any free alkali—either carbonated or hydrated—the soap contains a distinct, though small, proportion of free fatty or oily matter

My theory has always been that it is the free alkali which reduces or abstracts the natural oil of the skin and that a soap absolutely free [illegible] has been studied in any way —I am, Sirs, yours faithfully,

S GODFREY HALL, F C S.

Oct. 21st, 1903. (EDWARD COOK and Co, Limited)

INFORMATION TO THE POLICE

To the Editors of THE LANCET

SIRS,—On finding the body of a baby the police of this district sent an officer to every medical practitioner asking if he had lately attended anyone who might be the mother Should I, then, happening to have a case which I considered one of recent delivery, be right to tell about it?

I am, Sirs, yours faithfully,

Nov. 2nd, 1903. *£10,000 DAMAGES*

*** In the circumstances set out in our correspondent's letter there is nothing to demand, or indeed to justify, his giving information to the police as to any case under his charge which he may consider to be one of recent delivery. The police are bound to make inquiries when they believe crime to have been committed, but no one can be compelled to answer their questions and to make such inquiries of all the medical men in a district in order to get a clue is an unusual and a highly undesirable course for the police to adopt. It would be advisable that all the medical men applied to on such an occasion should answer that they are unable to make any statements to anyone as to matters affecting their patients This is a general rule to which there must occasionally be exceptions arising out of the facts of particular cases.—ED L

MOTOR CARS FOR MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—It is now some few years since I first wrote to THE LANCET on the subject of motor-cars in practice and I venture once again, in response to your invitation, to give the profession the results of my further experience

First, I can cordially endorse the recommendation of the gentleman who advises that two cars should be kept For the last two years I have had two cars in constant use and no horses With the two my expenses for horse hire have been very low and I have always had a car to use; but the occasions on which both were available for a journey might be counted on the fingers, I had almost said on the fingers of one hand.

Next, I once again most emphatically beg of my brother practitioners to have nothing whatever to do with pneumatic tyres. They are the curse of motoring and absolutely and thoroughly unreliable For an ordinary round they are all very well To go to a consultation or an operation in them is to court disaster. Fortunately the current number of the *Autocar* enables me to quote figures in the recent "reliability" trials of six makes of pneumatic tyre:—

One	had a percentage of	46 15	"no trouble" runs
One	" "	0 0	" "
One	" "	53 62	" "
One	" "	23 08	" "
One	" "	100	" "
	(only one car on these tyres).		
One	" "	66 67	" "

I leave it for any of your readers to estimate the desirability of risking this percentage of trouble and hindrance Should any of them wish to study the necessary labour of removing an outer tyre cover and repairing a punctured tube I can refer them to the section on tyre repairs in the Badminton Library book on "Motoring" I can assure them this, that after a most worrying and annoying delay they will be about tired out (no pun intended) and too filthy to visit their next patient, with dirty shirt cuffs and probably some other spoilt clothing. There are some good cars on solid tyres and a considerable number which, in the language of the trade, are "not built to stand solid tyres" To sum up (1) Very few motor cars are worth having at all; and (2) *no car which runs on pneumatic tyres is worth having at all.* Of course, I speak of cars for professional and regular "work." As plaything cars they are another matter. There are some good articles worth study on modern motoring in recent numbers of the *Badminton Magazine.*

I am, Sirs, yours faithfully.

Stratford on Avon, Nov 2nd, 1903. HARRY LUPTON.

To the Editors of THE LANCET.

SIRS,—I am anxious to start a light motor car for my practice and should be glad if any fellow practitioner can help me in the choice of one I live in a very hilly part of Cornwall, a few of the gradients being as steep as 1 in 3 The machine required must therefore be a *first rate hill climber above all things* I should like *one* which would usually carry two persons but having a removeable back seat which could be used if necessary What horse power would be required for the work and how well does a motor car get on with snow on the ground, also can motor-cars be started on a hill without assistance? I shall be very grateful for any suggestions

I am, Sirs, yours faithfully,

Oct. 27th, 1903 TRAMITE RECTA.

CRIPPLED CHILDREN'S CHRISTMAS HAMPERS.

To the Editors of THE LANCET.

[illegible] of your columns to remind [illegible] Christmas hampers to [illegible] metropolis? These welcome [illegible] Guildhall by the Lord Mayor [illegible] when, by permission of the Corporation, we entertain some 1200 ragged school children. His Majesty the King has again given a donation to the fund which it is my privilege to bring to the annual notice of the public. The Right Honourable General Sir Dighton Probyn, keeper of His Majesty's Privy Purse, writes me, Oct 19th. "I am commanded by the King to send you the inclosed cheque for £10 10*s.* as a donation from His Majesty to the Poor Children's Banquet and Cripples' Christmas Hamper Fund which you so kindly organise on their behalf." I am hoping that this year we shall not only be able to say that we have denied no deserving applicant, but that we may have, as we had last year, a little balance in hand to meet those extremely pitiable cases in which a crutch, a cork leg, or the loan of an invalid chair is more welcome even than the hamper. All through the year the work (by the Ragged

School Union) of registration, visitation, and relief continues or we could not undertake the hamper distribution on such a scale with the certainty that not one goes astray or falls into undeserving hands. The little cripple entertains the family and on a modest estimate the fund brightened the lives last Christmas of over 30 000 of the poor of London. I am in receipt of hundreds of most gratefully worded letters. Donations may be sent, as heretofore, to me, addressed Little Cripples' Christmas Hamper Fund, 69, Ludgate-hill, London, E.C. I am, Sirs, yours faithfully,

London, E.C., Oct. 31st, 1903. W. P. TRELOAR, Alderman.

P.S.—This is the tenth year of my fund and every year I have been increasingly successful.

BURGUNDY *v.* CLARET.

To the Editors of THE LANCET.

SIRS,—"A Man of Kent" states that "no wine can equal French burgundy" to produce "the desired effect either of recuperation or of blood making." I assume he has tested the effects of the best South Australian burgundies and I should like to know why he differs from the opinion of other medical men.

I am, Sirs, yours faithfully,
H. ALLFRDALE GRAINGER,
London, Nov. 3rd, 1903. Agent-General for South Australia.

MEDICAL OFFICERS TO SCHOOL BOARDS.

To the Editors of THE LANCET.

SIRS,—I should be obliged for any information from medical officers of school boards respecting their duties and more particularly those concerned with special ophthalmic and aural work.

I am, Sirs, yours faithfully,
JOHN GRIMSHAW, M.D. Lond., &c.
142, Whetstone-lane, Birkenhead, Nov. 3rd, 1903.

THE GENERAL MEDICAL COUNCIL AND MEDICAL MEMBERS OF PARLIAMENT.

IN reference to a report which appeared in the *Evening News* of Nov. 3rd stating on the authority of the *Liverpool Post* that "the Medical Council has resolved to invite medical M.P.'s to confer with the Committee with a view to forming a medical and public health committee in Parliament," we are authorised by the Registrar of the General Council of Medical Education and Registration of the United Kingdom to announce that there is no truth in the statement.

THE BRITISH MEDICAL BENEVOLENT FUND.

THE following sums have been received in response to Sir William Broadbent's appeal:—

	£	*s.*	*d.*		£	*s.*	*d.*
Sir William Broadbent, Bart.	50	0	0	Dr. Mary Thorne	1	1	0
Miss Broadbent	5	0	0	Dr. Hector Robinson ...	1	1	0
Dr. H. De Tatham ...	25	0	0	Mr. E. H. Hicks	2	2	0
Dr. Edward Martin ...	1	1	0	Dr. Moon	5	5	0
Dr. I. Burney Yeo ...	5	0	0	Dr. Barkett	1	1	0
Dr. J. P. Stewart	1	1	0	Dr. R. J. Kerby	10	10	0
Mr Thomas Moreton ...	2	2	0	Dr. M. Greenwood	1	1	0
Dr. Price Williams ...	5	0	0	Dr. W. Andrews	0	10	0
Mr. M. Cutcliffe	1	0	0	Dr. M. J. Doinjo	1	1	0
				Mr. Rayley Owen	1	1	0

Dr. Satchell offers a donation of ten guineas on condition that 16 other donations of £5 each or eight of £10 each are received in response to the appeal before the end of December. The sums received do but little more than cover the amount already granted in relief and leave little to meet the demands outstanding which had to be postponed at the last meeting for want of funds, and make no provision for the applications which have been received since and which will increase in number as the winter approaches. Further help is urgently needed. Subscriptions and donations will be thankfully received by the treasurer, Dr. Samuel West, 15, Wimpole-street, W.

MUSICA LÆTITIÆ COMES, MEDICINA DOLORUM.

THOSE members of the medical profession who can find time to go to concerts—and there is no greater intellectual relaxation than to listen to really good music—will generally find their opportunity at Queen's Hall, Regent's-street, London, W. On Wednesday, Oct. 28th, Mr. Emil Paur conducted at a concert of which the chief items were the C minor symphony of Brahms, and a piano concerto by Mr. Emil Sauer, the part for the solo instrument being played by the composer. On Saturday, Oct. 31st, the first of the Symphony Concerts took place. A very fine performance was secured by Mr. Wood of Brahms's symphony in E minor with its masterly final movement. Other items were the delightful overture to Peter Cornelius's "Barber of Bagdad," an almost unknown work, two tone poems by Arthur Hervey, and the A minor piano concerto of Schumann with Miss Adela Verne in the chief part.

◆

F. E. H.—Mild or anomalous cases of scarlet fever, the nature of which is unrecognised, have usually a large share in the spread of this *disease during an epidemic. On the facts reported we think* that the medical officer of health, in his endeavour to deal thoroughly with the outbreak in the village, was right in desiring to examine the suspected cases. It would have been better if he had been able to make his visits together with the medical practitioner; and we think that an attempt to do this should have been made, though in the country appointments for this purpose are difficult to arrange. In the present instance, where the medical officer of health is not in private practice, we do not think that the medical practitioner need object to the patients having been examined in his absence for the purpose indicated. In the matter of the correct diagnosis the facts are in dispute, and we are unable to give an opinion. In general, we think that the occasions on which a medical officer of health would be justified in expressing to parents any doubt which he entertains as to the correctness of diagnosis in a case of infectious disease must be extremely few.

S. H. S.—A patient has a perfect right to change his or her medical man. It is courteous of the patient to inform the medical man who has been superseded of the change but there is no obligation to do so on the part of the patient who, as a layman, is not bound by medical etiquette. The position of the medical man called in to replace a brother practitioner is always a delicate one. He should not take over the case until his predecessor has definitely received instructions that his services are to be discontinued, and where he has been called to a case owing to the usual medical attendant being away from home he should explain the temporary nature of his services if this is not understood by the patient. But when the position has been regularised he can hardly refuse save in special circumstances, to attend a member of the public requiring his services. *We do not think that the situation described by* our correspondent is one that ought to lead to any unpleasantness whatever between professional brethren.

R. H.—We do not know whether there is any special printed form of the agreement mentioned by our correspondent, but if so we should think that any law stationer would provide one. The agreements in question are, however, generally drawn up in manuscript by a solicitor.

Irish.—Our correspondent might communicate with Mr. William Van Praagh at 11, Fitzroy-square, London, W., or with Mrs. Emil Behnke at 18, Earl's-court-square, London, S.W.

C.—Some of the works in question were sent to this office. Though they are doubtless well-intentioned we do not think that they are suitable for general distribution.

W. K., M.B.—There is no proof that the medical man in question is aware of the use which is being made of his testimonial. His attention might be called to it.

X. Y. Z.—There is none so far as we know.

COMMUNICATIONS not noticed in our *present* issue will receive attentio in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (9th).—London (2 P.M.), [illegible] (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George' [illegible] 2.30 P.M.), Middlesex (1.30 P.M.), Westmi [illegible] (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.).

WEDNESDAY (11th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.) Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M).

THURSDAY (12th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat, (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (13th).—[illegible] Bartholomew's (1.30 P.M.), St. Thomas's [illegible] Charing Cross (3 P.M.) [illegible] Mary's (2 P.M.), [illegible] M.), Gt. Northern Central (2.30 P.M.), West Lo[illegible] London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (14th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (9th).—MEDICAL SOCIETY OF LONDON (11, Chandos street, Cavendish-square W.).—8.30 P.M. Clinical Evening. Cases:—Dr. E. Wynter: (1) Mitral Disease with Pulmonary Regurgitation; (2) Spondylitis Deformans.—Dr. F. J. Poynton: Bilateral Facial Paralysis.—Dr. L. Jones and Mr. C. S. Kingston: Series of Cases of Rodent Ulcer and Malignant Disease treated by the Finsen Light and X Rays.—Dr. S. E. Dore: Cases of Lupus treated by the Finsen Light.—Mr. W. G. Spencer: Scirrhus of the Tongue (third year of exhibition).—Dr. B. Dawson: (1) An Abdominal Case for Diagnosis; (2) Carcinoma of the Stomach.

TUESDAY (10th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Paper:—Dr. C. Riviere: The Anæmias of Infancy.

[illegible] GREAT BRITAIN (17, Bloomsbury- [illegible] —Mr. E. White: Kino.—Mr. W. [illegible] dine.

[illegible] SOCIETY (London Institution, [illegible] Discussion on Appendicectomy, When and How it should be Performed (opened by Mr. H. L. Barnard). Mr. J. Berry, Mr. G. L. Cheatle, Mr. F. J. Steward, and [illegible]

[illegible] Macnaughton Jones, and Dr. B. Fenwick. Cases by Dr. Hodgson and Dr. I. Parsons.

CHILDHOOD SOCIETY (Library of the Sanitary Institute, 72, Margaret-street, W.).—8 P.M. Lecture:—Mr. R. D. Pedley: Healthy Dentition, [illegible]

[illegible] DICAL OFFICERS [illegible] Paper:— [illegible] Asso- [illegible] Annual [illegible] s shown by the [illegible] cer, Dr. Kelson, [illegible]

CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. F. E. Batten: A Case of Myositis Fibrosa.—Dr. G. Newton Pitt: A Case of Measles with Coma.—Dr. Pasteur: A Case of Pernicious Anæmia with Unusual Features.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (9th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.).—5 P.M. Mr. Baldwin: Practical Surgery. (Second Lecture.)

MEDICAL GRADU[illegible] W.C.). 4 P.M. [illegible] Dr. J. Taylor: [illegible] Adults.

TUESDAY (10th).—POST GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.).—5 P.M. Dr. R. H. Cole: Alcohol as a Cause of Insanity.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. T. H. Green: Clinique (Medical.) 5.15 P.M. *Dr. J. Taylor: Common Forms of Paralysis in Children and Young Adults.*

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Ferrier: Cases in the Wards.

GLASGOW [illegible] 8 P.M. [illegible] other Pl[illegible] Clinical [illegible] Graduate Course.)

WEDNESDAY (11th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Russell: Rheumatoid Arthritis.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. A. H. Tubby: Clinique (Surgical.) 5.15 P.M. Mr. C. B. Keetley: Unreduced Dislocations.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Perkins: Pneumothorax.

THURSDAY (12th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Practical Surgery. (Third Lecture.)

MEDICAL GRADUATES [illegible] W.C.).—4 P.M. M[illegible] Mr. H. L. Barnard: [illegible]

SAMARITAN FREE HOS[illegible] 3 P.M. Dr. Lockyer: [illegible]

[illegible] Ormond street, W.C.).— [illegible] LEGE (Tottenham Hos- [illegible] Surgical Diseases of [illegible] (West London Hospital [illegible] ece: Dairies, Cowsheds, and Milkshops.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. E. Clarke: Clinique (Eye.) 5.15 P.M. Mr. E. P. Paton: Tuberculous Disease of the Knee-joint.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. R. Russell: Myelitis.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be *given to this notice.*

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them! Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance. Che[illegible] "London and Westmin[illegible] should be made payable [illegible] THE LANCET Offices, 42[illegible]

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 5th, 1903.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Rainfall	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
Oct. 30	29·71	S.W.	..	92	69	49	50	51	Cloudy
31	30·02	N.W.	0·24	87	57	42	41	45	Cloudy
Nov. 1	29·92	W.	...	77	54	45	50	52	Cloudy
" 2	30·15	S.W.	0·21	69	56	49	49	51	Cloudy
" 3	30·23	N.	...	73	57	51	51	52	Cloudy
" 4	30·40	N.E.	...	69	54	42	42	43	Hazy
" 5	30·60	N.E.	...	68	53	41	41	44	Overcast

During the week marked copies of the following newspapers have been received: *Daily Messenger (London and Paris), Times, Daily Chronicle, Daily Graphic, Star, Macclesfield Courier Supplement, Daily News, Hertfordshire Mercury, Southern Times and Dorset County Herald, Burnley and District Times, Westminster Gazette, Windsor and Eton Express, Manchester Guardian, City Press, Walsall Advertiser, Herts Advertiser, Reading Mercury, Mining Journal, Surrey Advertiser, &c.*

poet, who began and ended his career at Whitby. In the account of his death by an author who was his contemporary [3] is the earliest mention of hospital accommodation in England. "For when the time of his departure drew near he laboured for the space of 14 days under a bodily infirmity which seemed to prepare the way, yet so moderate that he could talk and walk the whole time. Yeardby was the house to which those that were sick and those who seemed likely to die were carried. He desired the person that attended him, in the evening as the night came on in which he was to depart this life, to make ready a place there for him to take his rest." It is not possible from the account to gather what Caedmon's illness was but the conclusion suggests some disease associated with prolonged physical debility and the relation of his last words bears the mark of truth in the way in which it shows his consciousness of approaching death without knowledge of its immediate nearness. "Then strengthening himself with the heavenly viaticum he made ready for the entrance of another life and asked how near might be the hour when the brothers ought to be wakened to say the nocturnal lauds. They answered, 'It is not long.' Then he, 'Well therefore let us wait that hour,' and signing himself with the sign of the holy cross he laid his head upon the pillow and lightly sleeping so with silence ended life." The third literary glory of the north is the "Historia Ecclesiastica Gentis Anglorum" of Bede, the first great historical book of England. It contains many passages of medical interest. I have already quoted his account of Caedmon. That of St. Ethelreda, abbess of Ely, has a more precise scientific value and also contains the earliest mention by name of a physician in England, "medicus Cynifrid." He attended her in her last illness and had opened an abscess in her neck which was much swollen. It was remembered that she was pleased at the nature of her disease and used to say: "I know that I deserve to bear the weight of my disease on my neck, for I remember that in my girlhood I bore there the very foolish weight of necklaces and I believe that therefore the heavenly mercy wills that I should bear the pain in my neck that thus I may be absolved from the guilt of my silly levity, since now, instead of gold and pearls, the redness and inflammation of a swelling stand out upon my neck." [4] St. Etheldreda died at something over 40 years of age, about the same time as Caedmon, the year 680, and it is clear from this description of a prolonged swelling in the neck ending in suppuration that she was the subject of tuberculosis, so that in this passage of Bede we have evidence that the organism which we know as the tubercle bacillus existed and multiplied in the human body in England in the seventh century. This microscopic growth probably existed long before in our island and has continued to our own time. Kings, who could be no better informed than their most learned subjects and were ignorant of the origin of the prominent symptoms, thought that their touch could cure the swellings which the bacillus produced. One of the greatest characters in our literature has preserved in a note a recollection of this practice: "I was taken to London to be touched for the evil by Queen Anne. I always retained some memory of this journey, though I was then but 30 months old. I remember a boy crying at the palace when I went to be touched. My mother was at Nicholson's, the famous bookseller in Little Britain. I remember a little dark room behind the kitchen where the jack weight fell through a hole in the floor into which I once slipped my leg." [5] It is recorded [6] that King Charles II. touched 92,107 patients for such symptoms, and William Clowes, surgeon to Queen Elizabeth and to St. Bartholomew's Hospital, shows his own view in an account of a patient from Yorkshire whom he saw. In his treatise on the struma he says: "And that I should credit him the more he showed me the angell of golde which her Majesty did put about his neck, truly a cure (as I have said) requireth divine honour and reverence: and heere I doe confidently affirm and steadfastly beleeve that (for the certain cure of this most miserable malady) when all artes and sciences doe faile, her Highnesse is the onely Day starre, peerelesse and without comparison, for whose long life let us all continually pray."

The discovery of the tubercle bacillus by Koch has in our time given the true explanation of the varied phenomena of tuberculosis with which we are first made acquainted, as regards England, by our earliest Saxon historian writing nearly 1200 years ago. Bede's history reveals to us the presence of another micro-organism in England—that of the plague. It seems probable that the epidemic of plague in England in 664, of which Bede tells, reached this country from Ireland and not from the continent. The plague raged in Ireland from August, 663, into the year 664, in which there was an eclipse of the sun on May Day. The epidemic came to England in the early summer of 664, perhaps brought by students returning from Ireland, and seems a curious indication of the fact that there was a greater degree of intercourse between the countries of the Roman Empire and Ireland, which had never formed part of that empire, than between the European kingdoms and Kent which had been utterly cut off from the Roman Empire by the conquests of the Jutes and the Saxons. In Ireland the plague had appeared in the sixth century within a few years of the great epidemic in the time of the Emperor Justinian in Constantinople. About the middle of that century the chronicles record that Tara, which till that time was the residence of the chief king, was abandoned. Diarmait MacCearbhaill, the king, left it and never returned and it was never inhabited again. Its great earthworks remain and attest its former importance, while the rich pastures of the plain of Meath by which it is surrounded show its fitness to be the home of a king whose chief wealth was herds of cattle. In later times its desertion was attributed to the curse of a saint, Ruadhan of Lothra, but an investigation of the facts of his contention with King Diarmait shows that the dispute was amicably settled and that the saint's denunciations, which were after all withdrawn, do not bear the interpretation which was put upon them centuries after they were uttered. The story of the curse is, in fact, only an answer to the question, Why was Tara abandoned? which was given long after the facts had been forgotten. There is no destroyer of tradition greater than an epidemic, which kills off a large part of the generation which might transmit the story. The date of the desertion of Teamhair na righ, Tara of the kings, as the Irish called it, corresponds to that of the introduction into the island of the slow-travelling epidemic of plague which came to it from the city of Justinian and a dwelling-place abandoned because nearly everyone had died there came to be regarded with such dread that even its fine position, far extending view, and rich pastures could not induce future kings to return to it.

It was a little more than 100 years later, in 663, that the ravages of the plague had again been terrific in Ireland. The two kings, another Diarmait and Blathmac, and many of the clergy and laity had died. The deaths in the next year in England were not less startling, for the two chief people in the island, Erconbert, the King of Kent, and Deusdedit, the Archbishop of Canterbury, died on the same day, July 14th, 664.

Thus can we trace the existence in England of a second bacillus, that of the plague, from the history of the Venerable Bede. Again and again in succeeding centuries this bacillus was introduced from abroad and perhaps attained its greatest activity in the reign of King Edward III, destroying thousands in 1348–49. A few years ago, when some tall warehouses with deep foundations were being built in Charterhouse-square, in London, I went to see whether any traces of the dead of this great plague were to be seen and saw many of the skeletons of the victims of the epidemic. But severe as this epidemic was, the general public would in all probability know less of the plague than they do of the Constitutions of Clarendon or the *Quo warranto* but for a great piece of literature in which the less severe though yet terrible visitation of 1665 is described. Defoe's "History of the Plague" is a work of imagination which differs from the travels of Mr. Lemuel Gulliver in having some historical foundation and a different object but resembles the adventures of Robinson Crusoe in owing more to the descriptive powers of the author than to his historical research. Who does not remember Defoe's account of the doors marked with a red cross and the words "Lord have mercy on us," and Solomon Eagle going about "denouncing judgment upon the city in a frightful manner, sometimes quite naked, and with a pan of burning charcoal on his head," and the young woman found dead and deserted in the house alone and that terrible account of the shriek. "Passing through Tokenhouse yard in Lothbury of a sudden a casement violently opened just over my head and a woman gave three frightful screeches and then cried, 'Oh! death, death, death!' in a most inimitable tone and which struck me with horror and chillness in my very blood. There was nobody to be seen in the whole street, neither did any other window open for people had no curiosity now in any case, nor could anybody help one another, so I went on to pass into Bell-alley." And the stopping of the dead carts at doors and the sleeping piper carried away with the dead and waking up on the verge of the plague-pit and the desperation of the infected and the pain of the swellings, the terrible indifference of most to the sufferings of others and the ghastly stillness of many of the streets. No picture could be more distinct.

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[3] Bede: Historia Ecclesiastica, Book iv., c. 22 (ed Plummer).

[4] Ibid, Book IV., c. 17.

[5] Boswell: Life of Johnson, Croker's edition, 1831, vol. i., p. 16.

[6] Douglas: The Criterion; edition 1820, p. 482.

It is to this unhistorical History of the Plague, which so well illustrates the remarks of Fielding that the works of imagination may have more absolute truth in them than histories, that we owe the fact that almost every child in England has heard of the great plague of London. The quarto of Diemerbröek, the Loimologia of Dr. Nathaniel Hodges, and the Loimographia of the Apothecary Boghurst are perused by physicians, but such is the power of good literature that what England in general knows of the plague is altogether due to Defoe. A very few years ago, walking down Cheapside, not far from the site of the house of Sir Richard Blackmore the physician—he was a respectable physician if an indifferent poet, you will remember the lines of Pope:—

> "The hero William and the Martyr Charles,
> One Knighted Blackmore, and one pensioned Quarles,"—

it was near his door, I say, that I met the medical officer of the Port of London, a gentleman who has great opportunities of acquiring interesting medical facts and whom I therefore asked if he had seen anything worth mentioning lately? "Yes," he said, "the plague has reappeared in London, I have seen two cases on a ship in the river." Since that day I suppose most people concerned in teaching medicine in London have become familiar with the appearance of the plague bacillus under the microscope and to their childish reading of Defoe have added the perusal of many sanitary reports of the terrible epidemic of Poona, of other places in India, and of Hong-Kong. Students have sent home to us specimens of the solid lung of the pneumonia produced by the plague bacillus and of other visceral changes, the dim indications of which are to be found in Hodges and Diemerbröek, and I, whose former pathological touch with this disease was no nearer than the having seen the bones of 1348-49, have known a nurse who died from the plague.

The life of St. Anselm, Archbishop of Canterbury, by Eadmer, a monk of Canterbury who was in the personal service of Anselm and went with him to Italy, contains an illustration, perhaps the earliest in our history, of an important part of medicine, the nursing of the sick. Eadmer[7] speaking of the saint's life at Bec says: "Oh, how many given over in sickness has he brought back to health by his loving care! You felt it, Herewald, helpless old man, when weighed down not only by years but by a severe illness so that you had no control over any part of your physical frame but your tongue and were fed by his hand and were refreshed by wine squeezed from the grapes by one hand into the other, drinking it from his own hand, so that you were restored to health; for, as you used to say, you could relish no other drink nor from any other hand. Anse[illegible] the house of the s[illegible] the brethren and [illegible] uble what he needed." As I am concerned in everything that adds to the glory of St. Bartholomew's Hospital I like to remember that this kind nurse—perhaps I ought rather to say this great saint and theologian—who, to his intellectual ability and metaphysical powers added those practical virtues and that profound consideration for others which are essential in a nurse—consecrated Richard of Belêsme, the Bishop of London, to whose influence with the king St. Bartholomew's Hospital owes its site. The improvement in nursing, though it has made rapid strides in our own day, has been gradual. The Beguines, whose picturesque residences are to be seen at Bruges and Ghent to this day, must have been good nurses if we may trust the account of them which Corporal Trim gives:[8] "By the persuasion of the young woman, continued the Corporal, the cart with the wounded men set off without me; she had assured them I should expire immediately if I was put into the cart. So when I came to myself I found myself in a still quiet cottage, with no one but the young woman, and the peasant and his wife. I was laid across the bed in the corner of the room, with my wounded leg upon a chair, and the young woman beside me holding the corner of her handkerchief dipped in vinegar to my nose in one hand and rubbing my temples with the other. I took her at first for the daughter of the peasant (for it was no inn); so had offered her a little purse with eighteen florins, which my poor brother Tom (here Trim wiped his eyes) had sent me as a token, by a recruit just before he set out for Lisbon. The young woman called the old man and his wife into the room to show them the money, in order to gain me credit for a bed and what little necessaries I should want, till I should be in a condition to be got to the hospital. 'Come, then,' said she, tying up the little purse, 'I'll be your banker; but as that office alone will not keep me employed, I'll be your nurse too.' I thought by her manner of speaking this, as well as by her dress, which I then began to consider more attentively, that the young woman could not be the daughter of the peasant. She was in black down to her toes, with her hair concealed under a cambric border, laid close to her forehead: she was one of those kind of nuns, an' please your honour, of which your honour knows there are a good many in Flanders which they let go loose. 'By thy description, Trim,' said my Uncle Toby, 'I dare say she was a young Beguine, of which there are none to be found anywhere but in the Spanish Netherlands, except at Amsterdam; they differ from nuns in this, that they can quit their cloister if they choose to marry; they visit and take care of the sick by profession.' 'The young Beguine,' continued the Corporal, 'had scarce given herself time to tell me "she would be my nurse," when she hastily turned about to begin the office of one and prepare something for me; and in a short time, though I thought it a long one, she came back with flannels, &c., &c., and having fomented my knee soundly for a couple of hours, &c., and made me a thin basin of [illegible]d me rest, and promised to be [illegible] This wound was received at [illegible] and Sterne, who has left Corporal Trim to be known and admired by all future generations, was certainly intimate with the old soldier who is portrayed in him, and this has always seemed to me to bring Trim near to our own times, for when I was a boy I was often the guest of an old squire in this county whose father, as he told me, had danced with the Reverend Laurence Sterne's daughter at the York ball.

Societies for the nursing and transport of the sick and similar good works, of which the Misericordia of Florence still flourishes and is one of the most ancient, were in existence in the thirteenth century and perhaps earlier. The house of the guild of the Misericordia is now close to the cathedral and on the other side of the way to Giotto's famous tower. Its original house was a few yards nearer the baptistery. The founder was Piero di Luca Borsi, a porter. He had a profound veneration for the name of God and as he sat waiting to be engaged was shocked by the way in which his fellow porters every moment took it in vain. He persuaded them to agree to put a small fine into a box for every oath and the Misericordia arose from the decision of Piero di Luca Borsi and the porters as to how to dispose of the fund which was thus accumulated. The obvious usefulness of the society led to its increase in means and in numbers, and citizens of Florence of all ranks joined it and took their turn of duty in the four quarters of the town. Its organisation is perfect and its work active to this day, and that the kind of help it can give is needed is sufficient claim to its services. The members wear a long gown and hood over their clothes, so that as they conduct an ambulance through the street their personality is not displayed and a Florentine of the most illustrious descent or a well-known public man cannot be distinguished from a porter or labourer who may chance to carry the litter with him or bear the body of a poor man to the mortuary with proper respect, except perhaps by his boots. Every member of the Misericordia takes his turn of duty without fail and if summoned leaves his own table or work or any social engagement when called.

The earliest English hospitals perhaps owe their origin to similar but earlier institutions in Italy. St. Bartholomew's Hospital was founded by Rahere in 1123 after he had made a pilgrimage to Rome and the seal of the hospital which was in use in his time bears two marks of his Italian pilgrimage, for on one side is a figure in the exact dress worn by the Misericordia in Italy to this day, while the reverse is a classical gem which I have the authority of the late Professor Middleton for saying was probably engraved in the third century of our era and which may have been brought from Rome by Rahere himself.

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[7] Eadmer: De Vita Anselmi, cxli.
[8] Tristram Shandy.

The general destruction of religious societies was no doubt injurious to the nursing of the sick, which became an occupation little esteemed, as may be gathered from numerous passages in English medical writers. The general improvement in the education and training of nurses dates in this country from the public knowledge of the terrible disadvantages of the want of good nurses in the hospitals of the Crimean army. England is at the present day probably ahead of most European countries in the training and general education of nurses, though a great deal yet remains to be done. The little sister in Thackeray's "Adventures of Philip," a book which, if inferior to his greatest works, is yet of interest from the light which it throws on some parts of his own life, is a picture of the best kind of nurse in existence before the time of Florence Nightingale. Having mentioned Thackeray, one is naturally led to think of the great novelist whom he at first made his model. It is curious that as he had studied Fielding so carefully he should have come to admire "Amelia" the most of the three great works of Fielding, and, indeed, that he preferred that novel to "Tom Jones" might be disbelieved did it not rest upon indisputable evidence. In "Amelia" one of the minor characters, Mr. Barnet, is mentioned as having died from polypus of the heart: "the surgeon who opened him after his death advised me that he died of what they call a polypus in his heart."[8] As this expression is not to be found in our official nomenclature of diseases it is worth consideration how a term once so common in daily conversation and in medical writings should have disappeared. The history of polypus of the heart has, of course, a direct relation to Harvey's great discovery of the circulation of the blood. When in 1628 he published his famous "Exercitatio Anatomica de Motu Cordis et Sanguinis" his demonstration was so clear that it was almost universally accepted by the medical world. Dr. Primerose and one or two others did indeed write against it, but they belonged to the group of minds who believe that the world is flat. But it takes a long time for the complete application by men of a great scientific truth. Malpighi about half a century later showed the capillaries which the apparatus of Harvey's time had not enabled him to see and Cowper actually witnessed the movements of the periphery of the circulation in a mammal. The great discovery was completed and confirmed in every particular, yet so imperfect was its application that though James Douglas in 1715 heard a loud murmur synchronous with the beats of the heart as he stood by the bedside of a patient in St. Bartholomew's Hospital and after death saw deformed aortic valves he did not attain to the obvious explanation that the aortic obstruction was the cause of the murmur. It is therefore less astonishing when we find from the numerous theses "De Polypo Cordis" that the firm branching clots often found in the right side of the heart after death were believed to be growths which had formed during life and led to its termination Dr. Matthew Baillie, in 1793, in his "Morbid Anatomy of Diseases," was the first to point out the obvious fact that such a growth would have prevented the circulation, so long did it take for this greatest of discoveries to be thoroughly understood. Indeed, it is hardly too much to say that it was 200 years after the publication of Harvey's book before the whole question was concluded by the general acceptance of our present views on valvular disease; and, indeed, if the understanding of embolus and of hæmorrhagic infarction are to be included several years must be added to the two centuries. "Tom Jones,"—the work which Fielding himself thought the greatest product of his genius and as to which every careful reader shares the admiration of Gibbon who, speaking of the relationship supposed to exist between the Fieldings and the house of Hapsburg, says: "The successors of Charles the Fifth may disdain their brethren of England, but the romance of Tom Jones, that exquisite picture of human manners, will survive the palace of the Escurial and the Imperial Eagle of the House of Austria,"—contains a passage which shows that the discussion of the use of electricity in medicine had begun. Black George the gamekeeper had quieted the scolding of his wife "with a small switch, a remedy of wonderful force as he had often essayed and which the word villain served as a hint for his applying. The whole family were soon reduced to a state of perfect quiet. For the virtue of this medicine, like that of electricity, is often communicated through one person to many others who are not touched by the instrument. To say the truth, as they both operate by friction it may be doubted whether there is not something analogous between them of which Mr. Freke would do well to inquire before he publishes the next edition of his book." Mr. John Freke was surgeon to St. Bartholomew's Hospital, knew Hogarth, and through him was probably acquainted with Fielding. One of the introductory chapters which add so much to the charm of the novel and the succeeding chapter show with how much attention Fielding had read Sydenham's "Treatise on the Gout and Dropsy." The introduction is an invocation of the love of fame and Fielding says: "Comfort me by a solemn assurance that when the little parlour in which I sit at this instant shall be reduced to a worse furnished box I shall be read with honour by those who never knew nor saw me and whom I shall neither know nor see." In the second chapter he returns to the thought. "To have the several elements which compose our names, as Sydenham expresses it, repeated 1000 years hence is a gift beyond the power of title and wealth and is scarce to be purchased unless by the sword and the pen."

The words of Sydenham, somewhat involved in their English version, express his devotion to scientific truth: "And I do not so much inquire whether others are of my opinion as whether what I deliver be agreeable to truth. For what advantage will it be to me after I am dead that eight alphabetical elements, reduced into that order that will compose my name, shall be pronounced by those who can no more frame an idea of me in their minds than I can now conceive what those are to be who will not know such as were dead in the foregoing age." It was the illustration of the nature of posthumous fame on which Fielding reflected, still finding in the hope of that fame an encouragement among the difficulties of life; but the passage of Sydenham goes further and expresses that veneration of truth which the fine lines of Churchill set forth in another phrase—

> "'Tis not the babbling of an idle world,
> Where praise and censure are at random hurled,
> That can the meanest of my thoughts control
> Or change the settled purpose of my soul."

The cerebral effects of raised temperature, which are so much more well marked in children than in adults, are illustrated in the life of an Archbishop of Canterbury whose moral and intellectual qualities were of a high order. St. Dunstan, whose beautiful drawing of himself kneeling at the feet of our Saviour, which is preserved in the Glastonbury MSS. at Oxford and is perhaps the first certainly known picture by a British artist, was brought up as a boy at Glastonbury Abbey. The great church was undergoing repair at the time when he chanced to have a febrile illness, perhaps a pneumonic consolidation of part of one lung. He climbed up on to the roof of the church and was there seen by a person who wisely did not suddenly disturb him. In time the boy climbed safely down unconscious of his dangerous journey. A boy whom I chanced to know, who was at a preparatory school a few years ago and was in a febrile condition connected with a sore throat, climbed out of an upstairs window, down a water pipe, crossed a piece of ground, pulled up some small trees, and returned without any definite object and unconscious of where he had been. A young adult labourer with pneumonia, in the course of his delirium rose from bed, walked the length of the room in which he was, got out of a small window at the end, and dropped some 40 feet to the ground. By an uncommon good fortune he escaped both fracture and internal injury and in course of time recovered. He had no suicidal intention or recollection of having left his bed. Thus an incident which might seem an exaggeration or an improbability to a general reader, when considered in the light of medical experience is seen to be a truthful statement of fact.

The lives of saints contain many passages interesting to a student in medicine the accuracy of which may often justly be considered as evidence of the general veracity of the narrative. A curious example of the uncertainty which prevailed as to the function of the blood occurs in Dryden's Epistle to Dr. Charlton, published in 1662, the finest tribute which science has obtained in English from the poets:—

> "The circling streams, once thought but pools of blood,
> Whether life's fuel, or the body's food,
> From dark oblivion Harvey's name shall save."

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[8] Amelia, Book vii., c. 9.

The poems of Donne, with his taste f
allusions, contain several examples drawn fr
scientific notions of his time, and in a curio
"The Will" he mentions his medical books:—

"To him for whom the passing bell next tolls
I give my physic books."

His poems contain also some allusions curious from their relation to things with which men were then familiar, such as the line—

"Racked corpses make but ill anatomies,"

which brings to our mind the political criminal who after torture and death in prison or on the gallows was handed over for dissection.

The greatest of all our authors, of course, contains many passages which show that he had thought on medicine as on everything else and these repay consideration, but they would require an essay to themselves. My object in this address has been to show how we who are acquainted with medicine may use literature as one of the many means of improving ourselves in our own subject. I have therefore said nothing of the errors of authors who have approached medical subjects nor alluded to those passages of literature which merely relate to the histories or characters of physicians. These afford abundant material worth consideration and some of them, like the account of the doctor of physic in the "Canterbury Tales," which describes his pathological views as well as his turn of mind, his dress and his library, almost belong to the actual illustration of medical study and observations in our literature.

As to the relations between physicians and the world of letters, how much there is that contributes to the permanent honour of our profession in Swift, in Johnson, and in many others. I began by showing how a knowledge of medicine was long ago thought a part of a complete education and in the altered conditions of our times I like to feel that our laborious studies, besides their usefulness, as we apply their results to mankind, also make us part of the learned world. We cannot but value the honours which have been conferred by literature upon medicine, such as the verses of Cowper to one of my predecessors at St. Bartholomew's Hospital, Dr. Austen:—

"Austen! accept a grateful verse from me,

[illegible]

A Lecture

ON

OCCUPATION AS A CAUSE OF LUNG DISEASE.

Delivered at the Mount Vernon Hospital for Consumption, London, on Oct. 15th, 1903,

BY THOMAS OLIVER, M.A. DURH., M.D.
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GENTLEMEN,—When honoured with an invitation from the subcommittee of the Mount Vernon Hospital to deliver the opening lecture of the post graduate course of study for this session, I felt that while I was not in a position to convey any fresh information I might yet accomplish some useful purpose if I refreshed your memory by presenting old facts in the light of recent pathology. I have chosen as the subject of this lecture "Occupation as a Cause of Lung Disease" and while in the main my remarks will apply to phthisis they will of necessity include affections of the respiratory tract generally. It is gratifying to know that the mortality from tuberculous phthisis in this country has for many years past been declining. For each million of the death-rate began anterior to the discovery of the tubercle bacillus by Koch there can therefore be no causal relationship, as has sometimes been assumed, between the two. More exact knowledge of the infectiousness of tuberculous phthisis has certainly strengthened the hands of the physician so far as treatment is concerned. If this is the case in ordinary phthisis then to the improved conditions under which work is carried on in the coal mines of this country must be attributed the great diminution in the death-rate of miners from pulmonary disease. Since, however, statistics still show that the mortality from phthisis in people who follow certain trades is much greater than in others there can be no doubt of the causal relationship between occupation and pulmonary disease and of dust being the *causa causans.* So much is this the case that to a group of lung diseases characterised by excessive development of fibrous tissue throughout the lungs the term "pneumoconiosis," introduced by Zenker, is still applied and according to the character of the dust so are the pulmonary lesions described as anthracosis, silicosis, siderosis, &c. These words were framed before Koch's discovery of the microbe of tubercle. Most of the opinions held by medical men to-day in regard to pneumoconiosis are pretty much those that prevailed previously to the discovery of the tubercle bacillus. It is worth our while therefore to review the subject of pneumoconiosis in the light of the knowledge we now possess of the specific micro-organism of tubercle.

In 1860 Sir John Simon, in drawing attention to statistics compiled by Dr. Greenhow, remarked that "certain diseases, which among them make up fully one-half of our annual mortality, are fatal in widely different degrees in different districts of England."[1] The death-rates of the adult population by pulmonary diseases had ranged, as regards grown-up men, from 221 and 306 to 1298 and 1440 per 100,000 of the population. Death-rates from phthisis alone among grown-up women had ranged from 229 to 558, and "to account for so unequal a distribution of particular kinds of death there must prevail almost corresponding inequalities in the distribution of the causes of disease." The problem discussed at this particular period was why in some districts in England grown-up men and women should die from certain diseases of the lung three, four, or even six times as abundantly as in other districts. As regards tuberculous phthisis and bronchitis it was felt that the large mortality from these two diseases in particular districts was influenced by the industrial relations of the people, so that when comparisons were made between agricultural and manufacturing populations it was found that "in proportion as the male and female populations are severally attracted to in-door branches of industry, other things being equal, their respective death-rates by lung disease increased."[2] Dr. Baly of Millbank Penitentiary experience had just published his essay on "Diseases of Prisons" and in it had drawn attention to the extremely high death-rate of convicts from lung disease, which he attributed to the operation both of physical and moral causes. On making a comparison between the life of a worker in a textile factory or other in door occupation with that of a prisoner it was seen that in textile factories there are the same monotony, seclusion from air and sunshine, also the breathing of impure air for the greater part of the day, all of which depress the vital resistance of the individual and predispose him to catching cold.

In 1860 it was demonstrated that among the suffering districts there were places which were the chief seats of metal mining, of metal manufacture, and of pottery manufacture, and that in these places the predominant lung disease was at least primarily bronchitis, in regard to which two kinds of occupation had long been recognised as hurtful—viz.: (1) those that give rise to mechanical or chemical irritation of the air passages by dust, grit, or fluff being diffused through the atmosphere; and (2) those in which the operatives are exposed to abrupt changes of temperature. The report showed with reference to phthisis and bronchitis and the influence of occupation "that the high death-rate from lung diseases belonged specially according to the occupation to the men or to the women of the district; that it was sometimes nearly twice as high for the employed sex as for the unemployed; and that of debility, cough, and difficulty of breathing on exertion but there is an absence of hæmoptysis, of night sweats, and of rise of temperature. Physical signs of consolidation of the lung develop, followed by those of excavation. Death often comes suddenly and is due to heart failure. The relation of ganister miners' phthisis and tuberculous disease of the lungs may be dealt with, according to Dr. Robertshaw, under three heads: (1) those cases in which after the fibroid change has damaged the lungs true tuberculous phthisis plays the chief part; (2) those in which tubercle is found but which is only very secondary to the fibroid disease; and (3) those in which there is no tubercle at all, the disease being entirely due to the fibroid change brought about by the ganister dust. Dr. Robertshaw is of the opinion that the majority of the cases fall under the last two headings and that few of the cases are mainly tuberculous partly on account of their chronicity and partly owing to the fact that the pulmonary lesions found after death are not exactly the same as those met with in chronic tuberculous disease of the lung.

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[1] Public Health Reports, John Simon, vol. ii., p. 19.
[2] Ibid., p. 20.

Portions of the lungs of two ganister miners who had died from silicosis were submitted to Dr. F. W. Andrewes, pathologist to St. Bartholomew's Hospital.[11] His examination proved beyond doubt the correctness of Dr. Greenhow's conclusions published many years ago in regard to dust diseases of the lungs—viz., the presence of nodular consolidation of the lung, deposition of black mineral matter around the bronchial tubes, arteries, and veins, and the fact that while the development of tuberculous phthisis is intimately associated with, it is yet independent of, the lesions produced by dust. Dr. Andrewes at the close of his admirable report of the second case says: "I conclude from the examination of these lungs that the primary changes are dependent upon the chronic irritation of an inhaled mineral dust which, being absorbed by the lymphatics, gave rise to a fibrosis which is lymphatic in its distribution in its earlier stages though it subsequently extends to large areas of lung tissue. Upon this fibrosis a secondary tuberculosis has been grafted; the tuberculous changes are more widespread and obvious in this case than in Case 1, but there is no evidence that the tuberculous disease is primary."

Coal Miners' Phthisis or Anthracosis.

I have so recently discussed this subject elsewhere[12] that I shall only briefly allude to it now. Coal miners' phthisis, formerly of common occurrence, is now rarely met with owing to the improved ventilation of the mines. So far as lung disease is concerned coal mining in this country is comparatively speaking a healthy occupation. When colliers become the subjects of bronchial and pulmonary catarrh they bring up large quantities of a black spit; it is thin and inky in colour and on microscopical examination is found to contain large cells studded with granules of coal. An interesting point in regard to anthracosis is that the lungs may be deeply pigmented for years without any signs of ill health and that there are some forms of coal dust which do very little harm to the lungs compared with others. The larger the amount of stony particles in coal the greater is the tendency for the lung to suffer. Virgin coal contains no micro-organisms. How far the particles of carbon exercise, as some writers maintain, an antiseptic influence upon the lung I am not prepared to say.

Gold Miners' Phthisis.

"Gold miners' phthisis" formed the title of a paper by me which was published in The Lancet.[13] To this subject, therefore, I must only briefly allude. In consequence of working in mines the air of which is impregnated by dust given off from the percussion drills used for boring the rock, also the absence of any satisfactory system of ventilation, Transvaal gold miners are a short lived class of men. As an illustration of the disastrous results of dust in ordinary rock mining Mr. Francis Fox, M.Inst.C.E., says that he was personally connected with a certain heading which was being driven by a gang of 16 miners, all fine, powerful fellows, and yet within a comparatively short time every one of them had died from consumption. Without giving absolute credence to the statement that the average life of a rock driller in England is eight years and in South Africa only four we cannot but, on the other hand, attribute a tendency to miners' phthisis on the Rand to the fact that as the rock drillers in South Africa work on contract the eagerness of the men to earn from £60 to £70 a month deters them from waiting until the dust has settled after an explosion and consequently very shortly after a blast has taken place the miners go into the poisonous and dusty atmosphere. Although dust is generally admitted to be the cause of silicosis in the Rand miner there is a belief that the impure atmosphere in which the miner works is also responsible for part of the illness. The air of the South African mines contains a high percentage of carbon monoxide and carbon dioxide and is laden with the nitrous fumes given off by the use of the higher explosives. When miners become "gassed" the symptoms generally point to an acute intoxication which soon subsides on the men being brought to the surface. As in some forms of gas poisoning—e.g., nitric peroxide—there is found after death acute congestion of the lungs it is a point worth investigating whether as a consequence of the repeated inhalation of an atmosphere poisoned by the gases already mentioned, but not present in sufficient quantity to cause intoxication, there may not be induced a diminution of the vital resistance of the lung followed by structural alterations.

In December of last year Lord Milner appointed a commission composed of mining engineers, chemists, and medical men "(1) to inquire into the extent to which miners' phthisis prevails; (2) to ascertain the cause of the disease; and (3) to make recommendations as to the preventive and curative measures which should be adopted by legislation or otherwise.[14] The commission reported that miners' phthisis is largely found in the rock-drill men of the Witwatersrand district. Of 4403 miners working underground in the gold mines of the Witwatersrand 1210 were medically examined by the commission, and of these 187, or 15·4 per cent., were found to be suffering from the disease, while a further 88 were suspected cases. Of these 187 men, 20 gave a family history with a tendency to phthisis. That miners' phthisis is particularly prevalent in rock drillers whose occupation is admitted to be extremely dusty is shown by the fact that 172, or 91·98 per cent., of the men had been employed on rock drills. Out of 1377 rock drill miners employed on the Witwatersrand it is stated that 225, or 16·34 per cent., had died during the two and a half years immediately preceding the war. All the evidence, practically speaking, shows that the inhalation of minute particles of inorganic matter is the primary and exciting cause of the malady. One point to which attention is drawn, and very properly too, for it applies pretty well to all forms of pneumoconiosis, is the difficulty of diagnosing the disease in its earliest stages; also this very important fact that once the disease is extensively developed it gradually but surely destroys life. The medical evidence tendered to the commission did not disclose the existence of an appreciable amount of tuberculous disease among the miners. A similar opinion was expressed by me more than a year ago, which recent experience has confirmed. The lungs of a Rand miner who died a few months ago and whom I had watched carefully during the greater part of a year were perfectly black and consolidated but free from tubercle. At his death this miner was 31 years of age. A few months before he died I asked him to supply me from memory with the names and ages of men who had worked with him in the Transvaal mines and who had died from phthisis. He knew of 16 men who had succumbed between the ages of 35 and 45 years after having worked for five or six years; also of 17 men, aged from 28 to 35 years, who had died, having worked on an average from four to five years. These and the other statistics I have given show what a fatal calling rock drilling on the Rand is and of the immediate necessity for introducing into South African mines those precautionary measures which have made coal mining in our own country a comparatively speaking healthy industry.

Metallic Trades: File Cutting by Hand, Steel Grinding, &c.

Of the various Sheffield trades file cutting by hand is admitted to be one of the most unhealthy. Apart from the risks of lead poisoning and its attendant evils, file cutters have a mortality from pulmonary phthisis far above that met with in most trades. Dr. John Robertson, formerly medical officer of health of Sheffield and now of Birmingham, has been good enough to favour me with some statistics. Taking the mortality returns from phthisis and respiratory diseases of several occupations as supplied in Part 2 of the Supplement issued by the Registrar General to his fifty-fifth annual report it will be observed that in only three other occupations is the mortality from phthisis and diseases of the respiratory system greater than it is amongst file cutters and that of these three other occupations one is that of cutler, scissor maker, &c., including grinders, and that when the mortality amongst agricultural labourers is taken as unity the mortality from these diseases amongst file cutters is found to be really four times as great.

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[11] Ibid., p. 493.

[12] British Medical Association Meeting, Swansea, August, 1903.

[13] The Lancet, June 14th, 1902, p. 1677.

[14] Report of the Miners' Phthisis Commission, 1902-03, Pretoria.

Taking for 1889 the mortality figures of phthisis in agriculturists as 106 and diseases of the respiratory system as 115, the mortality figure from these diseases in file makers was 402 and 423 respectively, while in cutlers and scissor makers it was 382 and 518. Taking the mortality returns for Sheffield for 1902 there were registered the deaths of 116 steel grinders; of these 60 were certified as due to phthisis, equal to 51 per cent.; of 116 cutlers who died 20 succumbed to phthisis, equal to 17 per cent.; of 69 file cutters nine died from phthisis, equal to 13 per cent.; while of 321 labourers of various kinds who died in Sheffield during 1902 40 died from phthisis, equal to 12 per cent. High as is the mortality from phthisis among the steel and knife grinders of Sheffield it is not so high as that in Germany. In 1898 the Government factory department at Düsseldorf issued a special order in consequence of the prevalence of phthisis among knife grinders. During "the ten years 1885-95, 72·5 per cent. of the deaths among knife grinders in the Solingen district were due to phthisis, against 35·3 per cent. for the rest of the population over 14 years of age, and an official medical examination showed that out of 1250 grinders only 85 were over 45 years of age."[15] What makes knife and scissor grinding such a dangerous occupation from a phthisis point of view is the fact that the grinding is usually done upon a dry stone. Hand file cutting, on the other hand, is dangerous, not so much because it is a dusty trade as that it is generally carried on under extremely bad hygienic conditions. The shops in which the men work are small, low-roofed buildings. They are generally situated at the rear of other houses and usually look into a courtyard. The shops have simply an earthen floor, are overcrowded, have no fireplace as a rule, and as the work is cold ventilation by an open window is never encouraged. While the trade is a dusty one the circumstances in which it is carried on favour infection by tubercle. Hand file cutters are notoriously a dirty class; very few of the men pay any attention to personal cleanliness. Add to the harmful influences of working in a dusty atmosphere and breathing an impure air, the possibility of tuberculous infection owing to the contaminated state of the earthen floor by expectoration, an the high death-rate from phthisis is not only explained but the lines are indicated along which the high mortality may be diminished.

Dr. Arthur J. Hall of Sheffield has been good enough to send to me for inspection the lungs of a steel grinder who died from phthisis, also some microscopical sections. The lungs, which are greyish-blue in colour, show very distinct excess of fibrous tissue with here and there in the upper lobes cavities of various sizes in all probability due, as Dr. Hall states, to tuberculous infection. On examining sections of the lung, particles of dust are observed to be freely but unevenly distributed throughout the fibrotic tissue. It is difficult to say how far these granules are particles of stone or particles of steel. In the ordinary process of wet grinding the quantity of dust given off from a stone is not great, but when the men are preparing a new grindstone and are what is called "racing" it a considerable amount of dust is given off.

Potters' Rot; Potters' Asthma.

The liability of potters to pulmonary disease has for centuries been known. Ramazini drew attention to it in 1750. Sir Charles Hastings in his work on Bronchitis published in the second decade of last century makes special mention of it. Dr. Greenhow found that potters' phthisis or asthma resembled that to which colliers, razor grinders, and other operatives who inhale dust are liable. The pottery workers who suffer most are the china scourers, flat pressers, and hollow ware pressers, but workers in some of the other processes are not exempt. China scouring is probably the most dangerous. True potters' phthisis, according to Dr. S. King Alcock of Burslem, is the result of inhalation of clay dust. This, however, is a condition which the Home Office has almost improved out of existence. The main constituents of the clay used in pottery manufacture are silica and alumina; on the other hand, in the dust given off during china scouring there are fine particles of flint. Dr. Greenhow regarded the malady as a chronic bronchial affection to which either pneumonia or tuberculous phthisis might be added. The disease is therefore often mixed in character, being partly of the nature of a bronchial affection excited by a mechanical irritant, dust, and partly tuberculous. Dr. Alcock considers the sequence of pathological events to be an irritation fibrosis which may sooner or later cause fatal results by its displacement of true lung tissue and concomitant want of aeration or by becoming the seat of tuberculous infection. It is the siliceous constituent of potters' clay that accounts for the mischief caused to the lungs. The late Dr. J. T. Arlidge[16] maintained that the particular branch of the industry that suffers most is that in which the largest amount of dust is evolved—hence the greater frequency of lung lesions among turners and pressers than among throwers; but the strongest example of injury to health from dust is found in the case of the china scourers, always women, who have to brush and to beat off the dust from the china ware after it has been fired and is being removed from the saggars. Potters' phthisis when uncomplicated by tubercle "advances imperceptibly and without constitutional disturbance. One of its first symptoms is a clearing cough on first rising, but soon to be met with on any change of temperature and accompanied by shortness of breath. Hæmoptysis does not usher in the malady and more frequently than not never makes its appearance. The appetite and the general bodily functions remain long intact; there is no febrile action, no accelerated pulse, no hectic, and no rapid emaciation."[17] By degrees the cough becomes more paroxysmal and is even more violent than that of ordinary phthisis, signs of consolidation are detected, and, as in all forms of pneumoconiosis, an urgency of dyspnœa is developed out of all proportion to the ascertained extent of consolidated lung. Even in advanced cases Dr. Arlidge found that the general aspect and the physiognomy in potters' phthisis differ from those of tuberculous phthisis. "The features are rather those of asthmatical subjects; the countenance is not pinched or sunken; the lustrous eye, the often pink and transparent skin of phthisis, the clubbed finger ends, and the incurved nails are wanting." As might be expected, the advent of tuberculous disease in the lung will alter the picture of fibrosis just drawn. Dr. Arlidge found the mean age at death of male potters, aged 20 years and upwards, to be 46½ years, whilst that of non-potters was 54 years, and that while potters died from consumption in the proportion of 12 97 per cent., in non-potters the index only reached 9 20 per cent. The excessive mortality of pottery workers is therefore mainly due to phthisis and disease of the respiratory organs. "The mortality of potters from bronchitis is more than four times as high and that from other respiratory diseases is three times as high as the mortality of occupied males in the aggregate. Potters succumb to non-tuberculous disease of the lungs much more rapidly than they do to tubercular phthisis, and it is certain that much of the so-called potters' phthisis ought properly to be called cirrhosis of the lungs."[18]

During one of my official visits to France while acting as medical expert to the Home Office I had the opportunity of visiting some of the porcelain factories in Limoges, where I was informed that a larger proportion of workers in the china factories die from phthisis and disease of the lungs than persons engaged in other trades. During 1887, of 75 deaths registered in Limoges as occurring among porcelain makers, 36 were due to phthisis, and in 1888 of 30 porcelain makers examined by Dr. Raymondaud of the Limoges School of Medicine 20 were found to be suffering from pulmonary consumption and two had had pneumonia. Professor Lemaistre, with whom I had the opportunity of discussing this subject, found on analysing the air of the workshops that it contained particles of granite, flint, dried glaze, charcoal, &c., also that the air in the workshops which the brushers-off, the finishers, and the porcelain makers breathed contained 640,000,000 particles of dust to the cubic metre. It is to the presence of this large number of particles of dust in the air that is attributed the frequency of bronchitis and of pulmonary disease. The average age at death of men from fibroid phthisis in the potteries of Limoges is 43 years and of women 38 years.[19]

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[15] The *Times*, Industrial Germany, Solingen, Sept. 21st, 1903.

[16] [illegible]

[17] [illegible]

[18] Dangerous [illegible] Dust-producing Occupations, p. [illegible]

Gases.

Time will not permit of me dealing with occupation lung disease caused by the inhalation of vegetable dust and it will only allow me briefly to touch upon those maladies that are caused by gases. Most of the ill effects that follow inhalation of gases by men when at work partake too much of the nature of acute intoxication and are rather illustrations of rapid death due to the entrance of poison by the lung than of disease of the lung. In death caused by inhalation of nickel carbonyl there has generally been found acute congestion of the lungs; so, too, this arises as a consequence of breathing nitric peroxide formed after explosion of nitrous compounds. In the case of men engaged in chemical works in manufacturing caustic soda and bleaching powder, &c., the risks are immediate and remote. In what is known as the Leblanc process Mr. A. P. Laurie[20] draws attention to the large quantities of hydrochloric acid gas that are liberated. This gas has a suffocating and irritating effect when breathed and if given off in large quantities respiration becomes impossible. When breathed in even small quantities over a lengthened period it is injurious. Although the workmen protect themselves with a flannel muffler tied over the face the acid fumes cause the teeth to rot. Were it not for a similar protection worn by the bleach packer he could not stand in the chlorine chamber more than a few seconds. The effects of chlorine are irritant and suffocative, and although these effects are usually temporary they yet lay the seeds of bronchitis and emphysema. Chemical workers have a comparatively low death-rate from phthisis—162 as against 402 of file makers and 185 of occupied males; but they have a very high mortality from diseases of the respiratory system—viz, 502 as against 423 file makers and 221 occupied males. The mortality from bronchitis in chemical workers is 249, as against 83 for occupied males. This figure 249 is the largest of all ordinary trades and, so far as diseases of the respiratory system are concerned, there are only two industries in which higher figures are given—viz., cutlers 518 and pottery workers 668. Laurie gives it as the opinion of medical men in St. Helen's that such gases in the air as sulphur dioxide, hydrochloric acid, nitrous fumes, and chlorine are beneficial to phthisical patients, for not only is phthisis rare in that town, but when present the progress of the disease is slow. A similar opinion has been expressed by Dr. James Beatty of Belfast who attributes the low death-rate from phthisis in chemical workers to some antiseptic action of such gases as sulphur dioxide and chlorine.

Pathology of Pneumoconiosis.

The particular structural alteration of the lung found in pneumoconiosis is an excess of fibrous tissue which transforms the spongy texture into material of a solid nature. The bronchi are seen to be wider than usual, with thickened walls, and from them there radiate outwards to the surface of the lung thick strands of fibrous tissue. Occasionally small cavities are seen. The pleura at places may be thickened and adherent. Although Laennec described cirrhosis of the lung it was Corrigan of Dublin who revived interest in the malady in 1838, who demonstrated the association of pulmonary fibrosis with dilatation of the bronchial tubes and who spoke of the lesion as interstitial pneumonia. Local irritation preceded by diminished resistance is believed to be capable of inducing this form of chronic inflammation. Fibrotic reaction to irritation is not so strongly marked in the child as in the adult, and it is probable, although it is difficult to prove the statement, that in the case of adults some persons exhibit a greater idiosyncrasy to fibrosis than others. A great deal depends, too, for example upon the character of the dust that may be inhaled. In anthracosis miners may have inhaled for years particles of coal dust without injury. Claisse and Joué[21] did not find beyond the discolouration any marked structural alteration in the lungs of animals that had breathed for a short time daily during several months smoke given off from burning turpentine. The particles of carbon in their experiments were too soft and altogether different from the hard angular particles of stone or metal found in the lungs of the Transvaal gold miner or the Sheffield steel grinder. The pulmonary parenchyma can tolerate the presence of certain particles but not that of others, and when pathological changes occur it is not always easy to say how much of these is the result of the direct action of dust itself or of superadded infection. To some writers there is no such disease as simple inflammatory pneumoconiosis; all are the result of secondary infection. Particles of dust, if small and soft, may penetrate the walls of the alveoli and produce no effects, but if they are hard, angular, and large they wound the tissues and by irritating them create a soil upon which microbes may flourish and cause secondary infection.

Previous diseases of the lung may be a cause of fibrosis as is seen in acute pneumonia becoming chronic. What is it that brings about the development of an excess of fibrous tissue in this latter affection? We know how the previous debility of a patient gives a bias to his illness and how the presence of microbes in the lung other than pneumococci may influence his ultimate recovery. The presence of such other microbes as those of influenza or of tubercle, also of streptococci, may convert an acute into a chronic or interstitial pneumonia and there is every reason to believe that repeated catarrhs and the presence of irritant dust that has been inhaled will induce the same results. What is the fibrosis that occurs in all these circumstances? Is it an inflammatory or a dystrophic lesion? The supporters of the inflammatory theory hold that the exudate which has been thrown out is not absorbed and therefore it plays the part of a foreign body which irritates the connective tissue and causes it to become infiltrated with round cells that ultimately fibrillate. According to the dystrophic theory, on the other hand, a diseased portion of the lung becomes useless in function, loses its structural character, and becomes replaced by a low form of fibrous tissue which keeps encroaching upon the pulmonary parenchyma and ultimately replaces the spongy substance of an air-filled organ by material of a more solid nature.

Microscopic Anatomy.

The narrow openings of the nares, the abundant secretions of the nasal, laryngeal, and tracheal mucous membranes, as well as the activity of the ciliated epithelium which lines the respiratory tract are natural barriers to dust reaching the lungs and yet in time, if the inhalation of dust is frequently repeated and the atmosphere is in any way thick, these fail to prevent its entrance. In the case of a small, rough, long-haired, terrier dog, whose mouth and nose were pretty well concealed by hair and who was simply placed in a coal-dust atmosphere for an hour or so every day or two during a period of four months, the lungs were found to be studded with bluish-black particles of pigment and the bronchial glands were inky-black. As the conditions under which this animal was placed were exactly the same as those of coal miners when at work, only perhaps somewhat exaggerated, the lesions therefore may be taken to represent fairly accurately the development of uncomplicated anthracosis in the coal miner. Any pathological remarks made in regard to this experimental anthracosis may, I think, be equally applied to pneumoconiosis in general. As already mentioned there are in coal dust two constituents to be considered—viz., the comparatively soft carbon and the stony particles to which the carbon adheres. It is the stony particles which cause the greatest amount of irritation to the lung when inhaled. In addition to signs of reactive inflammation there can be observed in microscopical sections of the lung either massed together or discrete, numerous particles of dust, also numerous large phagocytic cells laden with minute granules of coal in the alveolar wall and surrounded in places by masses of small round cells. Whether these phagocytes are normal habitants of the pulmonary alveoli, altered epithelial cells, or enlarged leucocytes stimulated into activity by the presence of dust in the lung and overfilling of the capillaries in consequence I am not prepared to say. They are found *par excellence* in certain catarrhal conditions—e.g., broncho-pneumonia. These wandering cells take up coal and other dust with great rapidity. Many of them make their way to the bronchial glands where they either unload themselves of their burden or in the act of disintegration discharge their contents. In one of the sections of a bronchial gland this is quite apparent. A few of these phagocytic cells can also be seen in the small bronchi and although the thick basement membrane of the large bronchial tubes forms an effective barrier to the entrance of dust *per se*, yet here and there in the sections can be seen phagocytic cells penetrating the mucous membrane of the smallest bronchi and carrying in with them considerable quantities of coal dust. A few of the minute bronchioles have become occluded by particles of dust and the parts of the lung supplied by them are in a condition of atelectasis. Around the walls of the infundibula, in the alveolar walls, also in and around the mucous membrane of the smallest bronchi, may be observed minute particles of coal dust either lying free or deposited in the interior of the macrophages already alluded to. The facts that these pigmented wandering cells can be detected carrying off dust in the direction of the bronchial glands and that they are met with in lungs that have not been specially exposed to dust show that they are scavengers and that in thus operating they are one of nature's methods of clearing the lungs of dust.

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[19] Report to Her Majesty's Principal Secretary of State for the Home Department upon the Pottery Industry of France, by Thomas Oliver, M.D.; Messrs. Eyre and Spottiswoode, 1899, p. 14.

[20] Dangerous Trades, by T. Oliver; article on Chemical Trades, Laurie, p 568, &c.

[21] Recherches Expérimentales sur les Pneumoconiosis, P. Claisse et O. Joué, Archives de Médecine Expérimentale et d'Anatomie Pathologique, Paris, 1897, p. 205.

In the later stages of pneumoconiosis the round cells thrown out under the influence of inflammation, which lie at first loosely in the pulmonary parenchyma, ultimately become transformed into fibrous tissue which assumes a laminated form around the vessels and gives to the lungs the nodulated and consolidated feeling experienced on handling and cutting into these organs. The newly formed fibrous tissue is at places observed to be strewn with minute particles of pigment and as these are usually extremely minute they must have been deposited there, many of them, by the wandering cells during their disruption, while the harder and larger particles of angular form have been deposited without the influence of cells. However much these larger particles of inorganic matter may by themselves have been a source of direct irritation to the lung and a cause of reactive inflammation, it is more than probable that the phagocytes laden with particles of dust throw off, just as bacilli evolve toxins and leucocytes alexins, some material which acts as a poison and an irritant to the connective tissue of the lung. The sclerogenic power of tubercle bacilli and of their toxins is well known, and if these micro-organisms are capable of inducing well-marked fibrosis of an organ there is no reason why the large leucocytes in the lung in abnormal circumstances may not secrete material that also stimulates into activity the reproduction of the connective-tissue cells. In the lung it is difficult to say how much of the reactive inflammation is the result of the direct irritation by dust and how much the result of laden phagocytes, but that a sclerogenic power is exercised by the dust-laden phagocytes is shown by the fibrosis that has taken place in the peribronchial glands of a patient who died from steel grinders' phthisis. The bronchial glands in that patient had undergone a change of structure akin to that in the lungs. The cause of the fibrosis in this man was probably the disruption of dust-laden cells in the glands and the liberation of pigment particles, but on this, as on several other points in the pathology of pneumoconiosis, it is well not to dogmatise too absolutely at present.[22]

THE OPERATIVE TREATMENT OF TUBERCULOUS GLANDS OF THE NECK.

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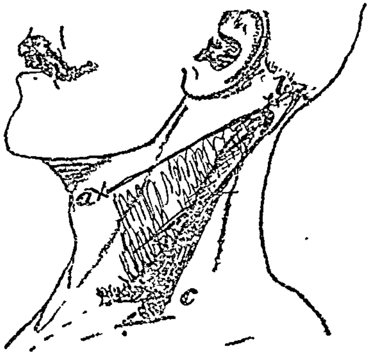
HONORARY SURGEON TO THE ROYAL SEA-BATHING HOSPITAL, MARGATE, AND TO THE MARGATE COTTAGE HOSPITAL.

So much has been written on this subject that it is difficult to say anything that has not already been published by surgeons of wider experience and greater knowledge, but as a very large number of these cases are seen in Margate, at the Royal Sea-Bathing Hospital and elsewhere, many of which have been operated upon by other surgeons, a few remarks founded on that experience may even now not be out of place.

It is generally recognised that climatic and hygienic treatment with a liberal dietary are important factors in securing the diminution in size, and in some few cases the actual disappearance, of the glands, though it is but seldom in an old established case that their removal is to be effected by other than surgical means, and it is with those cases that I propose to deal. In undertaking an operation on tuberculous glands, especially in the neck, several points are to be considered. First, the desirability of completely clearing out the glands, however deeply situated, so as to avoid the disappointment of the patient at the recurrences that are so often seen. The second point is that all operations should be planned with a view to make the resulting scars as little visible as possible. The third point is that as these glands are seldom if ever in themselves fatal and are only rarely followed by tuberculous general infection, the operation should be attended with as little risk to the patient and with as little damage to the vessels and nerves of the neck as is consistent with a complete removal of the disease. No routine incision or operation can be laid down for all cases for the obvious reason that the groups of glands affected vary so much in size and in situation. In some instances a few superficial glands only are affected and their removal is an extremely simple matter, but such uncomplicated conditions form a very small proportion of those that are sent to Margate.

The older incision along the anterior border of the sterno-mastoid, especially when it extends along its whole length, leaves a most unsightly scar, and the incisions are now always planned so as to fall as far as possible into a natural sulcus of the skin or where the mark can be concealed easily by the hair or dress. The incision usually adopted for the most commonly enlarged set of glands, that in the anterior triangle beneath the sterno-mastoid, is one following accurately the creases of the neck as first suggested by Kocher of Berne. In most necks two slight grooves can be made out in the skin running obliquely across the neck from the thyro-hyoid region to below the lobe of the ear, and one of these folds is selected as the site of the incision according to the position of the larger part of the glands to be removed. Through this transverse incision fairly large masses are readily accessible, especially when both edges of the cut are freed from the underlying structures for about an inch or so.

Where the greater part of the mass is in the posterior triangle an additional longitudinal incision is made from the posterior edge of the swelling downwards and obliquely forwards so as to hit the posterior border of the sterno-mastoid about its middle. In this case the transverse incision need not be prolonged so far backwards. In very large cases where apparently all the glands in the neck are



U[illegible] incision for very large cases. The flap *a b c* is [illegible] r line is [illegible] ne smaller

diseased the scar that shows the least is to be made by turning a flap forwards and downwards. The transverse incision is carried well backwards to a little below the posterior border of the mastoid process, from that a longitudinal incision is carried down obliquely so as to reach the sterno-mastoid a little above the clavicle, and the whole of this triangular flap is dissected up and thrown forwards. When replaced after removal of the masses of glands, the posterior longitudinal cut is nearly all out of sight and the transverse scar shows very little—so much so that on seeing the patients some months after it would hardly be credited that such an extensive dissection had been carried out—and while the operation is being done the whole dangerous area is under direct control. These incisions are necessarily modified by the presence of broken-down skin, superficial abscesses, and by the existence of scars of previous operations. It would seem obvious that where a scar already exists that its site should be utilised for the new incision, the old scar, if fibrous and unsightly, being removed at the same time. But this does not appear to be the universal practice in the metropolitan hospitals, as there was recently in the Royal Sea-Bathing Hospital a girl who had been operated on in two different London hospitals and who on one side showed a long scar in front of the muscle and no less than three parallel ones behind. The other side had two crescentic scars, evidently the site of a fairly large operation, from beneath one of which incisions I have removed a considerable quantity of deep caseous glands.

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[22] I regret that at the time of writing the above I had not noticed [illegible] was done by the late Dr. J. W. [illegible] ne particles and which is reproduced [illegible] LANCET, Dec. 6th, 1902, p. 1528).

When sinuses exist their orifices should be where possible included between elliptical incisions so as to make a transverse scar. Any damaged skin in connexion with superficial abscesses should be removed with a free hand, when it will in nearly all cases be possible to sew up the wound after the operation has been completed. In most cases when there is a superficial abscess projecting out from the neck the deeper glands will be found to be enlarged and suppurating and their free removal will allow a much more liberal excision of the damaged skin than would otherwise be the case.

Whatever incision be adopted, as every writer on this subject has insisted, attention must be paid to two very important structures, the internal jugular vein and the spinal accessory nerve, neither of which, and most assuredly not the latter, should be interfered with. At one time my impression was that the removal of glands *en masse*, rather than individually, increased the danger that these structures run, but a more extended experience has convinced me that such is not the case and in my later cases I have always endeavoured to extract the diseased structures with their capsules intact and as far as possible in one mass or chain. Taking the more common cases, those in which the enlarged glands are situated in the anterior and posterior triangles, their exposure is effected by the transverse incision I have already mentioned, the edges of skin and superficial fascia are freed for about an inch throughout the whole length of the cut, the anterior edge of the sterno-mastoid is defined, and the deep cervical fascia between it and the front of the neck is freely divided. This facilitates the exposure of the glands and allows the muscle to be retracted easily; the often large communicating facial vein is generally easily seen and avoided or ligatured if necessary. The muscle is freed for some distance above and below the margins of the incision from the glands beneath and then they themselves can be dealt with. The mass is seized and pulled up and its lower end defined; when separation from the underlying structures is begun the carotid sheath with the bulging internal jugular vein at once comes well into view and with that in sight there is no necessity to divide it. Even in very old cases where the masses were of enormous size and the adhesions particularly dense and fibrous the capsule of the glands has peeled readily enough off the vein. There is fortunately a fairly thick layer of fascia constituting the carotid sheath between the glands and the vein and it is to this intervening layer of fascia rather than to the thin-walled vein that adhesions are usually seen. Personally I have found after getting the glands raised at the lower end that separation of the mass from the sheath is best effected by the point of a sharp scalpel; the vein is more likely to be torn by a so-called blunt dissector applied with even slight force than injured by the point of a knife carefully used on the under surface of the glands. My experience is that once the mass is freed from the place where it is usually adherent to the sheath—that is, at its lower end—it is quite possible to peel it upwards. Although the ligature of the vein apparently makes no difference—in two of my earlier cases it was torn and had to be tied and Mr W. Watson Cheyne[1] recommends it as almost a routine procedure—the deliberate obliteration of such a large vessel should, I think, be avoided as it is possible to clear out the triangles very effectually and still to leave the vein intact. Further, it is permissible to doubt with Mr. W. H. A. Jacobson[2] whether the effect of the ligature on both sides of the neck on the cranial circulation is altogether harmless. I also question whether it adds in any way either to the rapidity or the ease with which the operation is performed, as the vein itself requires a ligature at both ends and so do as a rule four or five of its tributaries, including the facial, lingual, and superior thyroid; and in old cases with sinuses the risks of complications of a septic nature are obviously greater. As a rule the whole of the glands of the anterior triangle and those under the sterno-mastoid as far as the spinal accessory nerve can be removed through this transverse incision after separating them from their connexions and working entirely from the front of the muscle. In the larger cases I generally find that the chains of glands are practically divided into two by the spinal accessory nerve which in the posterior triangle crosses the lower part of the space in a kind of sulcus in the mass, and it is as well on reaching its vicinity in the upper part of the anterior triangle to have the muscle well retracted, when the nerve can be brought into view, as it is liable to be cut in separating the glands from the fascia on the under surface of the sterno-mastoid just where the nerve enters it, and is also in danger as it lies over the transverse process of the axis on its oblique course backwards into the muscle. For here a fairly constantly enlarged group of glands is to be found beneath a tough fascial covering between the axis and the mastoid process, and as the dissection is necessarily carried on at a considerable depth the muscle should be pulled well backwards and the nerve identified and avoided. Where there is a fairly large mass in the upper end of the posterior triangle, after loosening most of the glands from the front, and particularly after clearing the vein and the spinal accessory nerve, a vertical incision should be made along the back of the muscle, its edge should be defined and lifted from the glands beneath, and their removal is then proceeded with by working from behind forwards until the connexions with the anterior group are reached. The posterior set of glands will also have to be separated from the carotid sheath and this procedure is very much facilitated by the previous exposure and definition of the vein through the anterior wound. Even if the glands pass, as they occasionally but only rarely do, beneath the vein, they are readily separated from it as the vein itself can be retracted, when by pulling on the already loosened group of glands the deeper ones can be released with a few touches of the knife. It is seldom requisite to divide the sterno-mastoid as the muscle can be lifted up quite sufficiently for all practical purposes. If the submaxillary glands are enlarged their removal is a very simple matter and they are best cleared out of the way first. The branch of the facial nerve to the lower lip can hardly escape division and the facial vein has often to be divided between ligatures, but the labial paralysis as a rule improves in a few months and the division of the vein is of not much importance.

It is well in the larger cases to remove the glands in two or more groups so as to insure the definition of the spinal accessory nerve in the posterior triangle, and in perhaps most cases it may be easier to clear the anterior group out of the way rather than to bring them all out with the posterior ones. Again, in the larger cases, in working in the lower part of the area under the sterno-mastoid where a chain of glands, usually separate from the upper groups, often extends below the clavicle in close contact with the jugular, vertebral, and innominate veins the glands should be pulled well out behind the muscle and separated from the carotid sheath, brought well into view by having the sterno-mastoid drawn firmly forwards. Once the process of separation is started by dividing the fascial attachments to the sheath their removal is effected with little risk. In this situation a blunt dissector is a highly dangerous instrument as the large veins in this region are put on the stretch and would tear easily. The glands should be pulled well into actual sight and their excision should be carried out by light touches with the point of the scalpel directly on to the capsule of the gland. It is well not to pull glands out from under the sternum and the clavicle unless their attachments can be brought up with them and the position of the thoracic duct on the left side should be remembered before attempting the removal of deep and adherent glands in this highly dangerous situation. If in addition the subclavian glands are enlarged their removal is best effected at a subsequent operation. Access to the glands is obtained by a transverse cut across the space, about an inch above the clavicle, and the superficial veins having been tied and divided the space is cleared from above downwards. Here the capsules of old glands are often adherent to the pleura and here, as a rule, it is better not to attempt to remove the capsule but to incise it and to shell out the glands. This region is perhaps the least satisfactory in the neck; the glands are often very adherent, frequently several veins require ligature, and it is most difficult to apply pressure with any comfort to the patient when the dressings are applied. Where both subclavian and axillary sets require excision the question of dealing with both at the same operation is always considered, but if the case be at all a large one, and especially if it be complicated by sinuses or scars of previous operations, the operator will perhaps best serve the interests of his patient by deferring the axillary region till the subclavian has healed. When the glands are removed in this way with as much of the cellular tissue as is possible with them, the resulting wound should show a complete dissection of the anterior and posterior triangles, and unless the carotid sheath with its branching vessels in front and the muscular wall of the posterior triangle behind are seen quite clearly it is impossible to say with certainty that a goodly portion of the capsules of the glands, and not improbably many of the glands themselves, have not been left behind to give trouble at a later date. Where sinuses have been present or where broken-down glands have burst in the wound I have been in the habit of flushing out the entire area with a 1 in 1000 solution of biniodide of mercury and so far have had no cases of sepsis. All hæmorrhage is, of course, carefully arrested, the bleeding points are tied with fine silk, and the wounds are sewn up with the finest gossamer gut, a large number of stitches being inserted and pressure kept up by a very copious dressing. It is well to remove the stitches not later than the fourth day as otherwise the stitch marks will show, and to insure healing of the deeper parts of the wound it is well to keep the patient lying down for from ten to 14 days at least.

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[1] Surgical Treatment, part 6, p. 148.

[2] Operations of Surgery, fourth edition, p. 560.

I have certainly seen good results follow in Margate from the more partial operations, such as incising and curetting a superficial abscess and scraping out the underlying glands, or the dissection of the greater part of the glands off the sheath and scraping the rest, but the after-treatment of these cases included prolonged rest and the best of open-air treatment and food. Such conditions are only obtainable when the patients are well-to-do and can give time and attention to the treatment, whereas with a more complete operation—and I have treated nearly 100 cases of various sizes in this manner—healing is as a rule rapid and permanent and the thickened masses under the scar that are often seen after a partially cleared case appears to have soundly healed scarcely ever occur. Recurrences of glandular enlargements certainly may, and often do, take place if the general health of the patient be not maintained by keeping him in a proper atmosphere and surroundings, but at all events recurrence in the same place is practically impossible as all glands and infected cellular tissue have been removed from the operated area.

The rapid improvement in the general health of the patients after these operations is quite remarkable in spite of the frequently difficult and tedious dissections incurred in clearing the diseased areas; such improvement is no doubt accelerated by the system at the Royal Sea-Bathing Hospital of putting the patients in the open air and practically on the sea front almost on the day after the operation, as my recollection of such cases in London and a large provincial hospital is by no means so favourable. Here in Margate the results of clearance in cases where large masses are much broken down and where the contents of the capsules are of a cheesy, semi-fluid consistence are almost always satisfactory, the patient's strength is quickly built up, and if the other side or the axillæ have to be dealt with a week is usually a sufficiently long interval. If both sides are affected and the glands are not excessively large I usually clear them out at the same operation, but considering the often feeble condition of the patients it is hardly wise to subject them to an anæsthesia for more than 90 minutes at a time and this limit is often exceeded for one side, though possibly operators of greater experience would look on this as an extremely liberal estimate. I have had cases this year where four and five operations have been performed on the same patient, a different area being cleared at each sitting; in one case in particular, that of a young adult female who had already had a foot amputated as a child for tuberculous disease, both sides of the neck and both axillæ were cleared in three weeks. Both sides of the neck were treated by throwing a flap forwards as already described and the triangles were completely cleared. The scars of the operation are scarcely visible at all from the front and the improvement in the patient's appearance and general condition when she left the hospital a few weeks after the operations was enormous.

Some months back my attention was directed to a communication in the *British Medical Journal* quoting four or five cases of meningitis occurring in patients after removal of tuberculous glands. I have only seen one case of this condition occur after operation on the glands and I have been present at several hundreds. I have seen several cases occur at the hospital here in spine and joint cases and have seen one man develop it a month or so after amputation for disease of the knee-joint. The one case in my recollection associated with glands was in a very unhealthy child with large masses of broken-down glands in both sides of the neck and both axillæ. The child was kept in the open air and fed up for several weeks in the hope that some improvement would take place, but as she was steadily getting worse it was decided to clear out the worst of the glands. One axilla was accordingly operated on, this being followed a week later by an operation on the posterior triangle through the scar of an old incision and a large number of broken-down glands were removed. In the course of doing this a large abnormal vein was cut and had to be tied but as the condition of the patient became critical under the anæsthetic the operation was not satisfactorily completed. The wound in the neck did not heal and in a month from the operation definite signs of meningitis showed themselves. The patient was taken home soon after and I have not been able to trace her. It is absurd to attempt to argue from one case and especially one in which there was such extensive disease, but it would appear to the ordinary mind that tuberculous infection of the meninges is more likely to follow an incomplete operation such as curetting and leaving the infected capsules in the wound than one in which nearly every particle of diseased tissue is taken away. It is also just as likely that tubercle bacilli can be conveyed to the meninges as the result of the glands bursting into the cellular tissue of the neck when left to themselves, so that the occasional occurrence of tuberculous meningitis in connexion with glands becomes an additional argument for a radical and complete operation.

The conclusions to which my present experience in the operative treatment of glands of the neck has led me are that if an operation is decided on the glands should in all cases be removed with their surrounding cellular tissue and that the internal jugular vein so far from being divided and tied as a routine procedure can almost always be avoided. The drooping of the shoulder caused by the division of the spinal accessory nerve is a very real deformity, causes considerable loss of power, and if the patient is a child is a source of almost certain lateral curvature. I have seen many old cases where both the sterno-mastoid and the trapezius have atrophied and their appearance, with the longitudinal scars extending from the mastoid to the clavicle, has been a sufficient object-lesson, not only to try to treat the nerve with the greatest respect, but to put the incisions in the least visible region.

Margate.

THE SUCCESSFUL TREATMENT OF A FEW CASES OF LUPUS.

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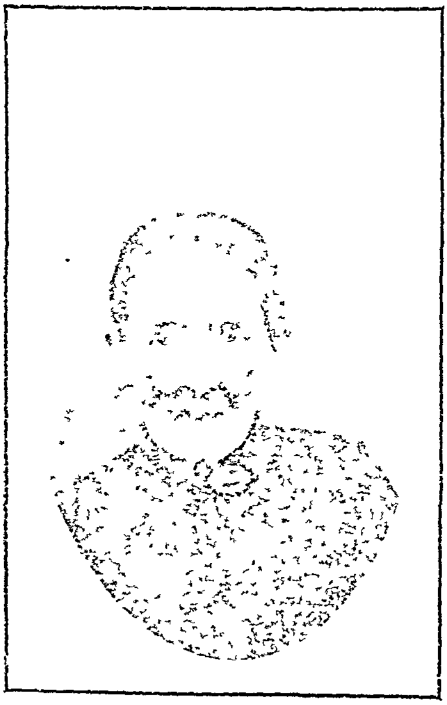
LUPUS may be regarded as one of the most disfiguring as well as one of the most formidable diseases which a medical man is called upon to treat, and from the fact that it is classed amongst the incurable diseases has not received sufficient attention to stay its progress and transgressions or arrest its evil results. Whatever treatment is adopted the progress is slow and requires patience and perseverance both on the part of the patient and of the medical man.

The following seven cases which I have taken from my note-book extend back a period of thirteen years and in all the cases that I have had occasion to treat very satisfactory results have been achieved in those cases where the disease has not been in a very advanced condition.

CASE 1.—The patient, a married woman, aged 42 years, had suffered from lupus for six years previously to the time that she came under my care, which was in March, 1890. The disease at this time had extended as high as the nasal bones and involved the whole portion of the nose below this point, attacking the mucous membrane of both nares, and there were various scattered foci on either cheek. Indirectly the disease affected both eyes which were more or less inflamed and watery and the sense of smell and of taste was practically gone. The treatment I adopted was the removal of the diseased tissue by excision as far as was possible, injections of Koch's lymph alternated with the injection of arsenic in the form of Fowler's solution, and wherever a suspicious-looking spot occurred it was immediately excised and the resulting wound was painted or dressed with a mixture of carbolic acid and guaiacol. The first injection of lymph produced a reaction of 101° F. and in all the patient received about 80 injections of lymph and arsenic, the highest reaction being 103°. This patient was under treatment for six months, at the end of which time I dismissed her as being quite well and she has remained so up to the present time, there being no sign of recurrence. I may mention that in this case the wounds had been scraped and burnt a considerable number of times but without any permanent good result.

CASE 2—A boy, aged 14 years, came to me in 1890 with a considerable lupoid patch, about one and a half inches square, situated over the first metacarpal bone of the right hand. The boy was an all-round delicate subject and his parents informed me that the wound had been scraped and burnt at various intervals but to no purpose. The treatment adopted was similar to that in the previous case. The whole of the diseased tissue was excised and the wound was dressed every day with the solution of guaiacol and carbolic acid. The injections of the lymph and arsenic produced very considerable disturbance, the highest temperature reached being 104·3° F. This boy was under treatment for three months and improved very considerably from the time that the lupoid patch was removed and the injections were commenced. He was dismissed at the end of three months perfectly well, the wound being quite healed, and his general health having much improved. There has been no recurrence of the disease since.

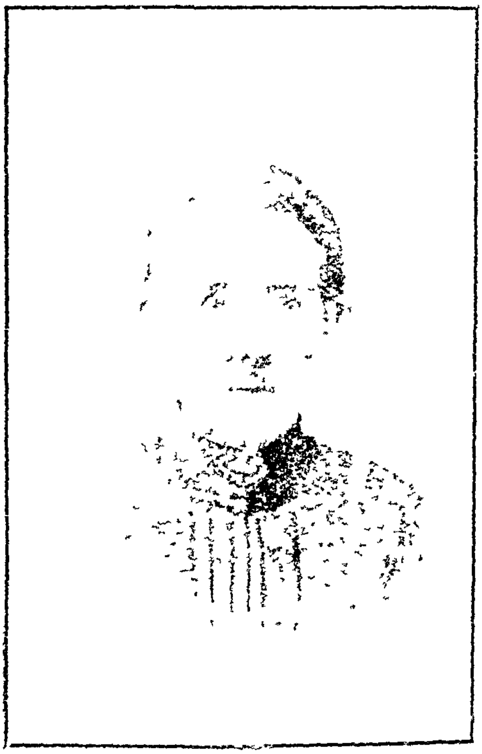
FIG. 1.



Condition of patient before treatment

CASE 3—A married woman, aged about 40 years, came o me in June, 1891, with lupus affecting the nose, the cheeks, and the entire surface of the upper lip. In this case a strong solution of cocaine was applied to the sores after the scabs had been removed until complete anæsthesia was produced; a small scalpel was taken and the disease was completely excised. A portion of both alæ was removed as the disease had penetrated most deeply at these places and the face was dressed with the same solution as in the previous cases. After excision the patient was injected continuously for about four months, no reaction being produced at the end of this time, and the highest temperature produced was 103° F. I may mention that after excision of the disease which covered a large portion of the face a very considerable wound remained, and as soon as healthy granulation tissue sprang up innumerable small skin grafts were dotted over the surface which gradually spread and coalesced. The patient was dismissed after four and a half months' treatment. Herewith are appended reproductions of photographs showing the condition of the face before and after treatment (see Figs. 1 and 2).

FIG. 2.



Condition of patient after treatment.

CASE 4—The patient, a man, aged 60 years, came under treatment in 1893 for lupus affecting and limited to the nose Incision of the whole of the disease was easily done in this case and the injections of lymph and Fowler's solution were persevered in until no reaction took place and the patient was dismissed after two and a half months with the nose perfectly healed.

CASE 5.—The patient, a married woman, came under treatment in 1893 with the disease affecting the inner canthus of the left eye, extending on to the nose and implicating a small portion of the lower lid. In this case, as in the previous cases, everything had been done in the way of scraping and burning to stay the progress and to rid the patient of this much dreaded malady but to no purpose, the disease slowly but surely extending. Thorough excision was performed, keeping well clear of suspected diseased tissue, and the resulting wound was dressed with guaiacol alone Injections of the lymph and arsenic were given as before mentioned until there was no reaction and the patient was given a clean bill of health at the end of two months. The result has been of a permanent nature up to the present time.

CASE 6.—A man, aged about 40 years, came to me in 1895 suffering from a very considerable lupoid sore situated about two inches below the mastoid process and immediately over the sterno mastoid muscle. The patient stated that this ulcer had been gradually extending for some years past, although he had had it cauterised and scraped on innumerable occasions, but it had never shown any tendency to heal. Excision was performed, keeping well beneath the base of the ulcer and well outside the margin of the disease. A few suspicious-looking spots situate around the main ulcer were also excised and the resulting wound was dressed every day with the guaiacol and carbolic solution. A week after the excision healthy granulation tissue made its appearance and before the termination of the injections of the lymph and arsenic the neck was perfectly and solidly healed. The patient has had no recurrence, having enjoyed very good health since.

CASE 7.—This case is interesting, since the disease was rather advanced, affecting the whole of the lower half of the nose, extending to both alæ nasi and involving in scattered patches both cheeks, attacking the lower lip, mucous membrane of both nares, and the skin covering the inferior border of the septum nasi, but not involving the septum. Complete excision of the lower portion of the nose was done, including the alæ nasi, the inferior border of the septum was skinned, and practically the whole of the diseased tissue was removed. After the operation the injections were commenced in very minute doses, as I discovered some cardiac valvular mischief which I decided might be tuberculous; there was also a suspicious spot in one eye which became very much inflamed under the influence of the injections but this inflammation ultimately disappeared. This patient had entirely lost the power of smell and the sense of taste was practically gone. A short time, however, after the removal of the diseased portion of the nose and after a few injections both smell and taste returned. *The highest reaction of the lymph took place* after the twelfth injection, the temperature reaching 104° F. and producing very considerable disturbance of the system in the shape of severe headache, pains in the legs, and a stiffness about the neck with vomiting of a yellowish material streaked with blood, and a very dry tongue, together with considerable disturbance of the circulatory system. However, this condition soon passed away and the injections were continued. The wound resulting from the excision rapidly healed and there was a decided improvement in the general health of the patient. This case having undergone treatment recently and the disease apparently being extirpated it was decided to wait for a few months to see whether any recurrence would take place and if not to perform a plastic operation in order to give the nose a better appearance, although the disfigurement is not at the present time objectionable. Suffice it to say that although the disease was extensive the treatment has, up to the time of writing, produced a very beneficial and satisfactory result.

It will be seen from the above cases that the main treatment consists in the injection of Koch's lymph and arse[illegible] combined with the thorough extirpation of the dis[illegible] *tissue, and the local* treatment must be adapted and [illegible]ed to suit individual cases. If the wound left after exc[illegible] be extensive small skin grafts will be found of great service in hastening the healing process; and I have had occasion in several cases to do plastic operations in order to restore the nose to something like its original shape and in the cases where this has been necessary the result has been fairly successful and with every satisfaction to the patient. The cases above quoted had all been treated previously by the method of scraping or burning and there was no doubt as to the diagnosis.

Newport, Mon.

A NOVEL SMALL-POX WARD.—At the meeting of the Calne (Wiltshire) district council held on Oct. 26th, the clerk was instructed to make inquiries as to the cost of a disused railway carriage which is to be utilised for the reception of small-pox cases should an outbreak occur.

ROYAL ALBERT HOSPITAL, DEVONPORT. — A public meeting of the inhabitants of Stonehouse was held at the town-hall on Nov. 5th to take steps to obtain increased support from Stonehouse for the Royal Albert Hospital. The Earl of Mount Edgcumbe, Viscount Clifden, Lord St. Levan, and several others were present. It was eventually decided to elect a committee of working men for the purpose of collecting subscriptions and also that an appeal should be made to the private residents and tradesmen of Stonehouse. It was also agreed that the ladies of the district should be invited to assist the institution.

ON SUPPURATION OF THE BURSA OVER THE TROCHANTER MAJOR AND ITS OCCASIONAL IMITATION OF HIP DISEASE.[1]

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IN THE LANCET of Oct. 8th, 1870 (p. 506), I published an essay on this subject, the opening paragraph of which I will quote.

> [illegible] bursa [illegible] between the trochanter major and the flat tendon of the gluteus maximus which is inserted into the fascia lata. Although the affection cannot be of very rare occurrence, and must be known to many surgeons, I cannot find any definite mention of it either in general works on surgery or in special works on joints and not even a hint as to the importance of appreciating it in the diagnosis of hip disease. The nearest approach which I can find is a notice of caries of the trochanter major, which I suspect may at times originate in the disease in question.

This was written 33 years ago. My attention to the subject has been drawn to it anew by a case recently under my care in the Leeds Infirmary and by a letter from an old house surgeon, Mr. F. W. Storry of Stroud, stating his recollection of a clinical lec[illegible] asking where he could meet [illegible] could not find mention of it i[illegible] Moreover, I have failed to find any adequate appreciation of the question in recent works. The case recently under my care possesses a special point of interest in the occurrence of a plate of bone in a septum separating the main bursa under the flat tendon of the gluteus from a secondary bursa over the trochanter and seems to afford a suitable pretext for reviving the points of diagnosis and practice laid down in the original essay of 1870.

A man, aged 51 years, a patient under the care of Mr. F. Laird of Ravensthorpe, was admitted into the Leeds Infirmary on June 22nd last *with two discharging sinuses, one* behind the trochanter, the other just below the buttock leading to a suppurating cavity extending about three inches down the back of the thigh. There were also two scars of old sinuses in front of the upper part of the femur. Though slightly lame he could walk with tolerable comfort and except for the situation of the scars and sinuses there was nothing to suggest hip disease. There was little impairment of the mobility of the joint. In this respect it differed from my first case and some others in which the femur was rigidly fixed until the muscles were relaxed under an anæsthetic, when all rigidity disappeared and the movements of the femur became smooth and almost unrestricted. The patient gave the following history. When about 14 years of age he was kicked in the region of the trochanter. He had pain for about an hour and then went on with his work. 16 years later a lump of about the size of a walnut appeared at a point about one and a half inches below the trochanter. A year later this lump was opened by Dr. A. Anderson of Mirfield, and as far as the patient recollects clear fluid was let out. After discharging for three years the sinus healed. Fifteen years later—i.e., four or five years ago—the sinus opened out again and continued discharging until his admittance under my care. *Three years ago a second sinus in front of the* trochanter was formed and nine months ago a third sinus below the buttock opened and was discharging pus freely on his admission. The opinion formed by the resident surgical officer and my house surgeon was that the hip was sound but that the source of the trouble was necrosis of the upper part of the femur. I suggested the probability that the case was one of diseased trochanteric bursa.

Having enlarged the sinus behind the trochanter so as to introduce the finger the interior of the bursa was reached, the floor of which was rough as if from a carious surface of the trochanter. The next step was to lay open the bursa by direct incision, dividing the gluteal aponeurosis so as to expose to touch and view the rough bony surface. This surface, to my surprise, was loose, gliding over the trochanter, and it proved to be a bony plate of about the size of a shilling in the septum between the great bursa and a small subsidiary bursa in contact with the trochanter There was no trace of any other diseased bone but a healthy fixed plate of bone could be felt extending deeply behind the trochanter. The bursal plate was excised, leaving a perfectly smooth synovial surface of the trochanter, and the division of the gluteal tendon was completed. The sinus below the buttock was enlarged and was found not to communicate with the bursa above. A counter opening for drainage was made at the lower part of the suppurating cavity. The patient returned home on the twenty-fourth day. When he called on me in the last week of September he was walking with perfect comfort and the sinuses were all but healed.

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[1] A paper read at the meeting of the Leeds and West Riding Medico-Chirurgical Society on Oct. 23rd, 1903.

Not long after the publication of my essay in 1870 I had an interesting letter from Dr. R. Macnab of Bury St. Edmunds, now residing at Tobermory in Argyllshire, in reference to two cases evidently of the same character which he published in November of the same year in THE LANCET.[2] In one of these he maintained, in opposition to the very strongly expressed opinion of his colleagues, that the case was not hip disease, but trochanteric abscess. Fortunately, he held to his opinion. He opened the abscess freely and, as he believes, in doing so freely divided the gluteal tendon and the patient made a very rapid recovery. It may be that the affection is a rare one, as I do not remember to have seen more than two or three besides these related either in the practice of my colleagues or myself.

In further illustration of the subject I recall an instance of a girl who, having fallen heavily on the trochanter, came to the infirmary two or three weeks after the fall with a swelling in the situation of the bursa and consequent lameness. I divided the gluteal aponeurosis subcutaneously and she very rapidly recovered. This I relate from memory.

The points I would lay stress upon are these: (1) a *prima facie* suspicion of hip disease; (2) either no marked muscular rigidity and fixity of the hip-joint or, where such exist, their disappearance under an anæsthetic; (3) the absence of tenderness on pressure of the head of the femur against the acetabulum; (4) the frequency of the history of a fall on the trochanter; and (5) the effect of the flat tendon of the gluteus maximus as a factor in keeping up the diseased condition of the bursa and the importance of the division of this tendon in the surgical treatment of the disease.

In the work by Rose and Carless disease of this bursa is referred to as "not uncommonly the seat of tuberculous disease" and that "it somewhat resembles the earlier stages of hip disease." "Treatment consists of incision, scraping, and disinfecting the interior and allowing it to heal from the bottom."

The points which need to be enforced by teachers are: (1) the importance in many cases of a traumatic and non-tuberculous origin; (2) the fact that simulation of hip disease is at times so close that experienced surgeons may on first seeing the case be misled and even after mature consideration be mistaken; and (3) that above all things the division of the flat tendon of the gluteus is a dominant factor in promoting rapid cure.

Leeds.

PS.—Mr. Laird reports to me that his patient now goes about with more comfort than he has done for 30 years.

A GROUP OF CANCER CASES.

BY W. GIFFORD NASH, F.R.C.S. ENG.,

SURGEON TO THE BEDFORD COUNTY HOSPITAL.

WHILST collecting information as to the incidence of cancer in North Bedfordshire for the decennial period 1890-99 I came upon a group of three cases of cancer of the tongue in the same village in which the patients all died within a period of 16 days. As cancer of the tongue is a comparatively rare disease, only 20 cases occurring in a population of over 102,000 in ten years, I was induced to make further inquiries into these three cases and into two others which appeared to be associated with them. This series of cases is so interesting that I think it best to make it known. Early this year Mr. Kilham Roberts, medical officer of health of the Ampthill rural district, kindly made inquiries into the five cases, four of which, including the three cases of cancer of the tongue, occurred in one village and the other, marked A below, in an adjacent village.

CASE 1.—A, a man, aged 67 years, died from cancer of the rectum on May 22nd, 1892.

CASE 2.—B, a man, aged 79 years, died from cancer of the tongue on June 4th, 1893.

CASE 3.—C, a man, aged 69 years, died from cancer of the tongue on June 11th, 1893

CASE 4.—D, a man, aged 67 years, died from cancer of the tongue on June 20th, 1893.

CASE 5.—E, a man, aged 43 years, died from cancer of the lip on Oct. 18th, 1893.

The patient A was brother-in-law to the patient D. I cannot do better than give the results of Mr. Roberts's inquiries in his own words, substituting, however, for the names of the patients the first five letters of the alphabet respectively as in the foregoing.

"First I will take the cases of C and D. The widow of C, who was an innkeeper, informs me that D and her husband were great friends and that they *frequently drank together out of a large tankard;* in fact, before their illnesses they used to meet two or three times a week. D seems to have contracted the disease first and on more than one occasion when drinking he complained of soreness under the tongue. The widow of C says that she always believed her husband caught it from D although I did not suggest any connexion. B was no friend of the men previously mentioned but occasionally as he passed through the village he stopped at the inn kept by C to have a drink and C's widow is certain that her husband and D never drank with B, but it is possible that the last mentioned drank out of a vessel which C and D had previously used. The cleansing which drinking-vessels get at the majority of village inns is not sufficient to destroy the infectivity of any disease. E lived in the same hamlet as B and came little in contact with C and D. He, however, frequented the same inn as B but did not drink out of the same vessel. Soon after his illness started he used to take his own glass to the tavern.

"I now come to what I consider the most interesting portion of the narrative. C's widow informs me that A was a bosom friend of D and also of her husband. They frequently drank together out of the same vessel both at C's inn and at each other's houses."

Bedford.

A CASE OF LUPUS OF THE FOREHEAD, THE RIGHT ARM, AND THE ELBOW TREATED BY EXCISION.

BY CECIL H. LEAF, M.A., M.B. CANTAB., F.R.C.S. ENG.,

ASSISTANT SURGEON TO THE CANCER HOSPITAL, BROMPTON, AND TO THE GORDON HOSPITAL FOR RECTAL DISEASES.

THE following are brief notes of this case.

The patient, aged 36 years, unmarried, came to [illegible] patient department of the Cancer Hospital, Brom[illegible] Oct. 15th, 1902. She was found to have a patch of lupus of about the size of a shilling which was situated above, and to the outer side of, the left eyebrow (Fig. 1). There was another patch, two and a half inches in the vertical and two inches in the transverse diameter, on the outer side of the right arm. The upper part of this was situated at about the junction of the upper and middle third of the arm. Over the front of the right elbow was a still larger patch, measuring about three inches in the transverse and two inches in the vertical diameter (Fig. 3). Treatment with a 5 per cent. solution of formalin, which I ordered to be painted on every third day, and subsequently once a fortnight, at first caused a marked improvement. However, it soon became clear that it would be useless to hope for a permanent cure from this method. I therefore admitted the patient into the hospital with a view of excising the patches. This I did, the patches on the forehead and arm being excised on April 3rd, and that on the elbow on April 17th. The latter operation left a large, raw area which was subsequently grafted by Thiersch's method on the 24th. There was a slight amount of tension in bringing the edges of the wound on the forehead together, but, as Fig. 2 shows, there *is no* disfigurement left except a trifling pulling upwards of the

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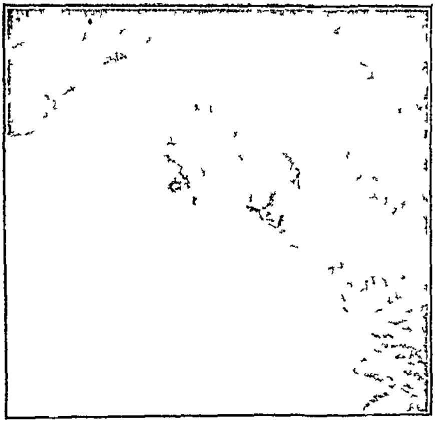
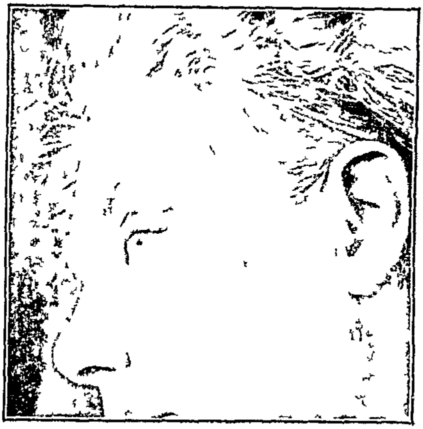
[2] THE LANCET, Nov. 12th, 1870, p. 666.

FIG 1



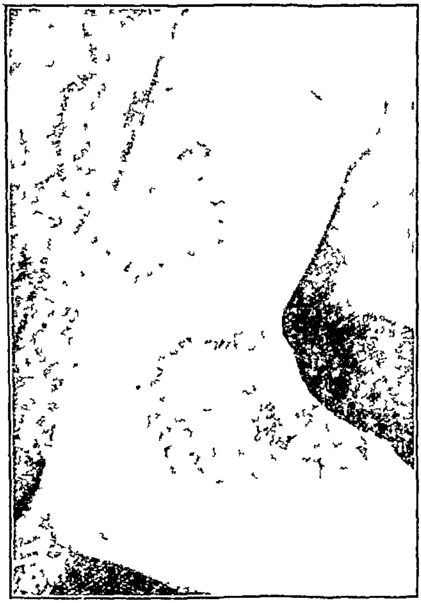
Condition of the patient's face before operation

FIG 2



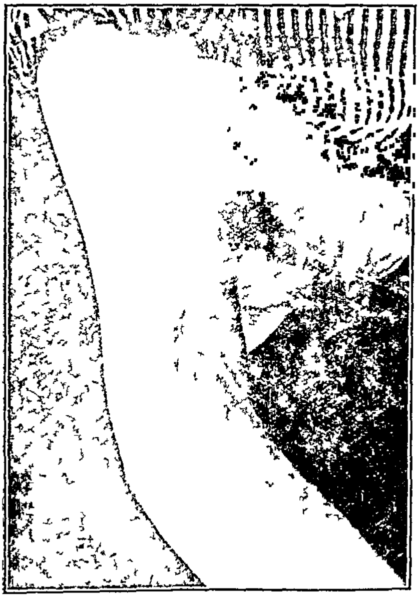
Condition of the patient's face after operation

FIG 3



Condition of the patient's arm before operation

FIG 4



Condition of the patient's arm after operation between the gums, the patient having previously had her artificial teeth removed. On the 20th and 21st ten cubic centimetres of antitetanic serum were injected on each day, the patient's condition improving after each injection. In all, nine injections of ten cubic centimetres were given. From this time her recovery was uninterrupted, with the exception of the adductors of the thigh, which remained in a state of tonic spasm for several days after the other muscles had become quiescent.

This case is of interest for several reasons. First, the apparent rapid onset of tetanus, within 36 hours after the injury, and then the disappearance of the symptoms; secondly, after the excitement of seeing friends, the sudden reappearance of tetanus on the ninth day; and thirdly, how the spasms yielded to the antitetanic serum and how on Sept. 15th when no injection was given the spasms were very severe. I may say that this is the only case of tetanus in which I have had an opportunity of using the serum. The few other cases which I have attended previously to the introduction of the serum all terminated fatally.

Amhurst-park, Stamford-hill, N.

A CASE OF CHONDROMA ATTACHED TO THE SUBMAXILLARY SALIVARY GLAND.

By H. J. ILOTT, M.D. ABERD., M.R.C.S. ENG.,
MEDICAL OFFICER, BROMLEY (KENT) COTTAGE HOSPITAL.

A TALL, rather anæmic girl, 16 years of age, was admitted into Bromley (Kent) Cottage Hospital on July 28th. She had a hard, moveable, nodular growth in the right submaxillary region. It had been slowly developing for the past seven or eight years. It was then of about the size of a large walnut. The growth was removed by me on August 4th. It was situated beneath the deep fascia, was encapsuled, and by its base was adherent to the submaxillary salivary gland. On section the growth was firm and white, with a few small yellowish-brown patches of somewhat softer consistence. It was sent to the Clinical Research Association for examination and Mr. J. H. Targett reported as follows: "This tumour is a chondroma of the submaxillary salivary gland. It is well encapsuled and shows no signs of malignancy. There is much imperfect gland-tissue mixed with the cartilage. It is now usually regarded as an endothelioma." The wound healed quickly and the patient was discharged on August 13th. These growths have been noticed as occurring in connexion with the parotid glands, but as they are rare and I have never heard of one in connexion with the submaxillary gland I think the case is worth recording.

Bromley, Kent.

SEAMEN'S HOSPITAL, CARDIFF.—The new Seamen's Hospital at Cardiff is now approaching completion. The total cost will be about £35,000, towards which about £17,000 have been promised.

THE NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION.—A meeting of the council of the association was held at 13, Hanover-square, W., on Nov. 9th, Sir William Broadbent being in the chair. Previously to holding the council meeting a preliminary meeting of the general committee for making arrangements for the Paris Congress in 1904 was held. At this meeting Sir William Broadbent was unanimously elected chairman of the general committee and Dr. J. J. Perkins honorary secretary. An executive committee was also formed, consisting of 12 names. It was decided to invite members of the staffs of the various hospitals for diseases of the chest to join the general committee, as well as several influential laymen who are interested in the subject of consumption. It was also resolved that the medical officers of health from the counties as well as from the chief towns should be invited. The secretary read a *précis* of the replies from the medical officers of health of the metropolitan boroughs with regard to spitting in public-houses. It was resolved that the matter should be postponed and that no further action should be taken for the present, as the whole subject was shortly to be considered by the Incorporated Society of Medical Officers of Health. The secretary reported that branches of the association had been formed at the Aberyswyth University and at Adelaide, South Australia.

A Mirror
OF
HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Procœmium.

NORWOOD COTTAGE HOSPITAL.

A CASE OF REMOVAL OF THE APPENDIX WITH CONCRETION; RECOVERY.

(Under the care of Dr. JOHN H. GALTON.)

A MAN, aged 23 years, was admitted into the Norwood Cottage Hospital on May 6th, 1903. The family history was good. In 1896 he had an attack of pain in the right iliac region and was in bed for six weeks. In 1898 he again had an acute attack and was then taken to St. Bartholomew's Hospital. On Dec. 15th he ate half a pound of raw chestnuts and on the 16th he was doubled up with severe pain which was accompanied by semi-collapse and cold sweats. His temperature was 99° F. and his pulse was 100 The abdomen was slightly full and rigid and did not move on inspiration; it was tender everywhere, especially over the right iliac fossa. There was rather more resistance at the right iliac fossa but nothing could be felt. The percussion note was resonant in both iliac fossæ. On the 18th he was seen by the surgeon who thought that there were no indications for immediate operation. On the 22nd in the right iliac fossa above Poupart's ligament there was a distinct swelling in the region of the appendix. On Jan. 11th, 1899, he was quite convalescent and was taken into a surgical ward for the purpose of examining the appendix, and on the 21st he was discharged without undergoing an operation. (These notes were copied by the patient from the bed card at St. Bartholomew's Hospital). After his discharge he went to Folkestone and while there had a slight return of pain. During the last three years he had had several attacks of pain in the same region but had never been laid up. On examination there was no dulness on percussion over the right iliac fossa, but two and a half inches above Poupart's ligament and parallel with it a line of hard tissue one inch long could be rolled under the finger which on examination at another time was found to be in a different position one inch away from the former, and just over the middle of Poupart's ligament was a small hard swelling of the size of a hazel nut.

On May 7th, at 11.30 A.M., chloroform was administered by Mr. A. Scott Turner by means of Junker's apparatus and Dr. C. E. Michael assisted at the operation. The abdomen was opened by an incision four inches long and two and a half inches above Poupart's ligament and the healthy omentum disclosed was found not to be adherent. A nodule of the size of the tip of the index finger pointing upwards represented the appendix which was thickened, one and a half inches long, and firmly adherent to the caput coli. The adhesions were divided with a sharp dissector and one ligature of sterilised silk was applied to a bleeding vessel The appendix was tied half an inch from the colon, the free end was touched with pure carbolic acid, and the peritoneal edges were brought together with a suture of sterilised silk. The appendix showed hypertrophied walls and a very hard stercolith one inch long, there being at the free end one and a half turns as of a corkscrew, as if the hypertrophied appendix had been trying hard to get rid of it. The abdominal wound was closed with four deep silver-wire sutures including the peritoneum and seven superficial horsehair ones and was dressed with sal alembroth gauze, cotton-wool, and spica bandage.

After the operation the pulse was 72 and good. On May 8th the pulse was 84 and the temperature was 98·4°. The patient complained of pain at the upper part of the abdomen. The progress continued to be good. On the 11th he was given half an ounce of castor oil at 3 P.M. and an enema of warm water at 8 P.M. On the 12th, no action of the bowels having taken place, white mixture was given every four hours. On the 14th the bowels acted. All deep sutures were removed. The wound had healed except half an inch in the middle. On the 15th the pulse was 80 and the temperature was 97·8°. The unhealed middle portion of the wound was discharging dirty pus. The suture wounds were angry-looking so hot boric acid fomentations were ordered. On the 17th the wound was looking quite healthy. On the 21st it had quite healed and was free from discharge and the scar was firm and sound. On June 3rd the patient was discharged cured.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Anæmias of Infancy.

A MEETING of this society was held on Nov. 11th, Mr. **ALFRED WILLETT**, the President, being in the chair.

Dr. **OLIVE RIVIERE** read a paper on the Anæmias of Infancy, which will be published in full in an early issue of THE LANCET. He adduced facts to show that anæmia of slight grade was common in infancy, but cases of more severe anæmia also presented themselves and were commonly described under the name "anæmia splenica infantum." These cases presented certain definite characteristics—enlarged spleen and liver, peculiar blood changes, nucleated red cells, a fairly large percentage of myelocytes, and often a leucocytosis. On account of these peculiar features such cases had been generally claimed as a distinct group, but it was probably more correct to suppose that they were in no way specific, but that all anæmias of infancy would show such changes if sufficiently severe, they being due to the peculiarities of the infantile blood and not to any specific causation.

Dr. **J. H. DRYSDALE** said that he, in conjunction with Dr. J. H. Thursfield, had during the past ten years examined the blood from cases of splenic anæmia in infants. Without controverting Dr. Riviere's facts he still could not agree that anæmia from any cause in infancy might give rise to "splenic anæmia." He thought that the primary disease must be of a severe type. He did not think that either rickets or congenital syphilis was the direct cause of the disease since both were common conditions while "splenic anæmia" was rare, though both these diseases were seen in conjunction with splenic anæmia and pseudo-leukæmia. He believed that the disease was due to some disturbance in the intestinal tract although gastro-intestinal catarrh was not present nearly so frequently in his own cases as in those quoted by Dr. Riviere. If the disease was due to this factor then careful feeding and diet should lead to rapid recovery which was not, however, the case. He then quoted two cases in which the blood examination presented an entirely different type from the cases quoted by Dr. Riviere, proving that all the anæmias could not be regarded merely as different stages of the same disease. It was important to remember, first, that the red cells and the white cells in the blood varied independently of one another, and that the diminution of the red cells might be of a slight degree, while the changes in the leucocytes might be very marked; and, secondly, that the changes which were found in blood in disease were symptomatic and not the disease itself. The clinical features of the disease were pallor, hæmorrhages, bleeding from the nose, the gums, and the rectum, and irregular rises of temperature. The duration of the disease was long, the average period in his series of cases being five and a half months. The spleen was enlarged and the liver was apparently enlarged (though after death on being weighed there was but little increase in weight). The superficial glands were not enlarged, whilst the mesenteric glands were enlarged. Treatment was usually unsuccessful whatever measures were tried. He thought that if rickets or improper feeding played any important part in the etiology then the cases should do well, but this was not so. The primary cause of the disease was still obscure.

Dr. **F. A. BAINBRIDGE** criticised the view advanced by Dr. Riviere that splenic anæmia and pernicious anæmia were both due to the absorption of toxin from the intestinal tract, in splenic anæmia the toxin passed into the blood stream, whereas in pernicious anæmia it was arrested in the liver. He pointed out that in splenic anæmia there was no free iron in the liver and also that in whatever portion of the body destruction of red cells took place the free iron was stored in the liver. He questioned whether there was any evidence for Dr. Riviere's statement that toxins absorbed from the intestine were excreted in the bile and so returned again to the intestine.

Mr. **L. S. DUDGEON** said that he considered the presence of the mast cells important in the diagnosis of a myelogenetic leukæmia, and that he had never seen an increase of mast cells in the blood of infants who appeared clinically to be cases of leukæmia. The blood had been of the chlorotic type with numerous nucleated red cells. The blood had been typical of a secondary anæmia. He had seen most of these cases improve under arsenic and mercury and considered that many were due either to congenital syphilis or to intestinal infection.

Dr. **S. VERE PEARSON** said that his experience with regard to the occurrence of hæmorrhage in splenic anæmia had been different from Dr. Riviere's for in four out of five of his cases there were epistaxis, purpura, and bleeding from ulcers on the scalp. He had seen twins both affected by the same disease. He thought that Dr. Riviere had not proved the connexion between the simple anæmia and the splenic anæmia, since he had shown no intermediate cases between the two conditions. He did not think that gastro intestinal disturbance was an important factor in the etiology of the disease, since such disturbances were common, while splenic anæmia was rare. He agreed with Dr. Riviere that there was no true leukæmia in infants.

Dr. **A. E. RUSSELL** quoted the case of an infant, aged 12 months, who had a greatly enlarged spleen. The blood count showed a very large number of nucleated red cells. The child rapidly improved under inunctions of mercury though there was but indefinite evidence of syphilis.

Dr. **E. P. BAUMANN** said that during the past two years he had had the opportunity of investigating cases of anæmia admitted to the Children's Hospital, Great Ormond-street. Many cases showed changes characteristic of secondary anæmia; these differed entirely from cases of splenic anæmia for from the beginning the blood changes were characteristic of this condition. The presence of myelocytes and nucleated red corpuscles was not the characteristic feature but he considered the polymorphous character of the blood to be of the most diagnostic value. In addition to the presence of abnormal cells, both finely granular and coarsely granular, there were polychromatophile degeneration and extreme poikilocytosis and marked variation in the size and shape of the red corpuscles. This polymorphous character of the blood he had never been able to demonstrate in the blood of secondary anæmia He had never been able to demonstrate the peculiar polymorphous change in cases of congenital syphilis although the blood had presented marked chlorotic characters, a diminished number of red corpuscles, poikilocytosis, nucleated red corpuscles, and some myelocytes being present. In every case of splenic anæmia examined the typical polymorphous character of the blood was present from the first and continued practically unchanged throughout the disease.

Dr. **RIVIERE** replied.

MEDICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Nov. 9th, Dr. **F. DE HAVILLAND HALL**, the President, being in the chair.

Dr. **W. ESSEX WYNTER** exhibited a case of Addison's Disease occurring in a married woman, aged 40 years. Pigmentation had been noticed for two summers (about 15 months), during which time she had been growing weaker and had suffered from syncopal attacks. Wasting had been noticed for nine months. There were now general bronzing of the skin, intensified in the face, hands, and flexures of the joints, definite pigmentation of the mucous membrane of the mouth and tongue, and marked circulatory debility.

Dr. **WYNTER** also exhibited a case of Spondylitis Deformans ("poker-back").—The **PRESIDENT** remarked that the case differed somewhat from those which he had previously seen in which there had been more marked deformity of the spinal column.—Dr. **F. J. POYNTON** also agreed that there were generally much more thickening and distortion of the spinal column. One case which he had seen improved under massage and iodide of potassium.—Dr. **ALEXANDER MORISON** referred to a case in which there was a history of gonorrhœa.—Dr. **F. PARKES WEBER** thought that the case was a typical one of spondylitis deformans. Post mortem specimens generally exhibited bone formations in the vertebral ligaments.—Dr. WYNTER, in replying, said that the patient had been lying down for a long time and perhaps this explained the straightness of the back.

Dr. POYNTON showed a case of Bilateral Facial Paralysis occurring in a boy, aged five years, who was quite healthy until he had a fall downstairs in December, 1902 He was not unconscious or apparently much shaken by this fall. While in bed with the illness after the injury he developed difficulty in speaking and lost all expression in his face and could not close his eyes in sleep. There was now bilateral facial paralysis of an infranuclear type with evidence of some damage to the left auditory nerve. There were no symptoms pointing to diphtherial paralysis or to syphilis.

Dr. H. LEWIS JONES and Mr. C. S. KINGSTON exhibited three cases of Rodent Ulcer. Dr. Jones explained that they were shown for the purpose of eliciting opinions as to the best method of conducting x-ray treatment in such cases. There could no longer be any question of the efficacy of the treatment. The effect produced by the x rays could continue after suspension of treatment, as in the case of a man he referred to. Dr. Jones was inclined to think that the efficacy of the x rays in rodent ulcer was due to their special destructive effects on the sebaceous glands in which structures rodent ulcer started. X-ray dermatitis might be explained in the same way by the effects upon the sebaceous glands. The less effect in superficial epithelioma might be explained by the latter not starting in the sebaceous glands.—Mr. Kingston explained the method of the applications. It was remarkable that the resulting scar became quite level with the skin. The value of general as well as of local treatment was referred to. As regards superficial carcinoma x-ray treatment was also efficacious, especially in the relief of pain.

Mr. L. V. CARGILL exhibited a case of Rodent Ulcer treated by Radium Bromide. The patient, a man, aged 62 years, had had 21 applications of from 5 to 10 minutes' duration. The disease, which had existed seven years, had been operated on twice previously unsuccessfully. Radium was of value as needing no elaborate apparatus. The relative value of the x rays and radium had yet to be settled but there was no doubt as to the efficacy of the latter in this case.

Dr. S. E. DORE exhibited four cases of Lupus Vulgaris treated by the Finsen Light and the X Rays. The first case was that of a woman, aged 40 years, the disease being mixed with troublesome scar tissue and the 271 applications of the Finsen light had been very successful. The second case had been treated by x rays and the Finsen light combined. The third and fourth cases had been treated by the light only. All showed very satisfactory results. The value of successive and continuous applications of the Finsen light, especially to superficial nodules without allowing healing to take place between the sittings, and the usual absence of unsightly scarring afterwards were points in favour of the Finsen light. On the other hand, the x rays seemed advantageous when large areas and deep seated lesions had to be dealt with. Nevertheless, the x rays were liable to produce telangiectasis.

Dr. BERTRAND DAWSON exhibited an Abdominal Case for diagnosis in a man, aged 28 years, who had first noticed a lump in the right side of the abdomen three years before when he was serving in South Africa.—Mr. V. W. LOWE had seen the case previously and he thought the long history was against the diagnosis of sarcoma and suggested the possibility of hydatid tumour.—Dr. WYNTER, Dr. SEYMOUR TAYLOR, and Dr H. A CALEY concurred in the possibility of this view and Dr. DAWSON replied.

Dr. DAWSON also exhibited a case of Carcinoma of the Stomach.

Mr. W. G. SPENCER communicated a case of Scirrhus of the Tongue, which had been brought before the society for three consecutive years, showing the efficacy of treatment. The glands in the neck were becoming softer and were disappearing.

Dr. PARKES WEBER and Mr. R. LAKE exhibited a case of Epithelioma of the Lower Portion of the Pharynx in a woman, aged 31 years, who was affected with pulmonary tuberculosis. In June, 1901, she spat up some blood but the difficulty of swallowing had only come on six months ago. Microscopically the pharyngeal growth presented the typical structure of epithelioma.

Dr. C. S. DE SEGUNDO exhibited a woman, aged 25 years, who presented Swellings in the Subcrural Spaces which had developed in the last 12 months.—Mr. SPENCER suggested that these swellings might be chronic rheumatic thickenings of the synovial membrane, but Dr. DE SEGUNDO could not concur in this view, suggesting that they might be of tuberculous or syphilitic origin.

Dr. B. E. POTTER showed a case of Congenital Absence of the Right Hand in a male child, aged two years. The mother of the child mentioned that four months before his birth she had been much frightened by seeing a dog attack one of her children whose hand she thought was bitten.—Mr. SPENCER referred to a similar case in which he had found the remains of an amniotic band across the wrist.

OBSTETRICAL SOCIETY OF LONDON.

Acute Contagious Pemphigus in the Newly Born.—Ovarian Cyst.—Exhibition of Specimens.

A MEETING of this society was held on Nov. 4th, Dr. EDWARD MALINS, the President, being in the chair.

Dr. GEORGE J. MAGUIRE read a paper on Acute Contagious Pemphigus in the Newly Born. Authorities were quoted to show that infantile pemphigus other than syphilitic, though known to occur, was rare, especially in this country. After stating the constitution of the charity in the practice of which the epidemic dealt with occurred, and after giving data as to the carrying on of the work up to the time of the outbreak of this epidemic, the period over which it extended was recorded, the number of deliveries during that period being 20, the number of infants affected with pemphigus being 18, and the number of deaths eight The clinical symptoms in the first case seen were described, followed by detailed notes of the history and symptoms in each case, with the result, and an abstract in tabular form was appended. It was concluded that the cases arose from a common contagion of septic origin (its source, however, being unknown) conveyed from case to case by a certain midwife, the probable method of conveyance being given. The contagiousness of the affection was proved and the number of cases infected from each infant was given. After quoting a paper by Bulloch in the *British Journal of Dermatology* in 1896, which contained an account of the micro-organisms found in previous epidemics of pemphigus neonatorum, there was given the result of the bacteriological examination of serum from two of the cases, the pathogenic germ isolated being the staphylococcus pyogenes aureus. The incubation period was then inquired into and an endeavour was made to fix the time required—(1) for the development of a bulla; and (2) for the earliest signs of the skin lesion. This last was then described in detail, the method of formation and spread of the bullæ being given, with the appearance presented after their rupture, and their course—(1) in the recovering cases; and (2) in the fatal cases—followed by a short account of the microscopic appearances of sections of an old and a new bulla. The additional symptoms in the fatal cases were detailed, the condition of the umbilicus and abdomen being particularly noticed. It was concluded that these symptoms were those of an acute toxæmia, the infection having gained entrance through the unhealed umbilicus. Notes of the necropsies on Cases 10 and 11 were given, after which the therapeutic measures were discussed and a suggested line of treatment in future cases was laid down. The conclusions arrived at were: 1. This epidemic was one of the comparatively rare disease pemphigus acutus neonatorum. 2. It was due to infection by a pathogenic micro-organism, the staphylococcus pyogenes aureus, conveyed from case to case by a certain midwife. 3. That although it appeared chiefly in the newly born, and was fatal to these only, it also attacked older children and adults. 4. It was characterised by a bullous eruption on the skin, variable in distribution and extent, the specific micro organism being found in the contents of the vesicles. 5 In many of the cases no symptoms other than this eruption were manifested, but a certain number of cases showed grave symptoms of a general infection and invariably ended fatally. 6 The point at which the systemic invasion began in these fatal cases was the unhealed umbilical scar. 7. Treatment to all appearances had little or no effect upon the course and duration of the disease whatever the result.—Dr. C. J. CULLINGWORTH said that one President of the society after another had expressed his regret that so few papers were presented dealing with the diseases of the newly born He therefore thought that [illegible] be specially welcomed as [illegible] iety's claim to embrace within [illegible] and diseases of children. Apart from that, however, the paper was in itself an admirable one and showed a capacity not only for careful and accurate observation but for making clear and painstaking records of such observations. It was interesting to note that in a considerable number of the cases the disease had been communicated to older children and to adults. This fact threw some light upon a case of acute pemphigus which he had himself seen in an adult and which at the time puzzled him extremely. With regard to the special micro-organism that had been discovered in connexion with two of the cases in this remarkable epidemic, he could scarcely bring himself to believe that so widely diffused a microbe as the staphylococcus pyogenes aureus ought to be regarded as the specific source of this particular infection. He was not a bacteriologist and therefore could not speak with authority on this point, but he felt disposed to suggest that on further investigation some infect[illegible] tinctive character would [illegible] with this disorder.—Dr. [illegible] similar epidemic occurred at the Foundling Hospital at Parma in 1901-02 and was described by Dr. Pasini at great length in the *Giornale Italiano delle Malattie Venere e delle Pelle* of this current year. The clinical histories of 14 cases were given, most of which ended fatally; examination of the blood showed a marked leucocytosis, especially in mononuclear cells, pointing either to altered chemiotaxis or to efforts of defence on the part of the subject against pathogenic agents. The cases pointed indubitably to the conclusion that a specific organism was the exciting cause and that there was no relation between this disease and syphilis. Dr. Dickinson thought that the primary mode of infection was not through the umbilical scar which only became infected later through the discharge from the bullæ, general systemic infection with a fatal result then occurring, as shown by Dr. Maguire's cases. The fact that adults became infected also pointed to the same conclusion.—Dr. J. M. H. MACLEOD, after thanking Dr. Routh for giving him the opportunity of being present to hear Dr. Maguire's lucid and scientific report, referred to a few points which had been raised in the paper. He remarked on the increasing rarity of this affection at the present time compared with its prevalence a few years ago, and believed this to be due to the better antiseptic precautions taken in lying-in institutions and elsewhere. He agreed with Dr. Maguire that the disease was due to infection by a pathogenic micro organism, but disputed his conclusion that the specific microbe was the staphylococcus pyogenes aureus, believing it to be a streptococcic infection due to the streptococcus pyogenes or a variant of it. He pointed out that unless special methods were employed in taking cultivations from the skin, and especially from the contents of vesicles or bullæ, cultures of staphylococci would invariably be obtained. He described a method devised by Sabouraud in Paris, in which the contents of the bullæ were aspirated into a sterile pipette containing ascitic fluid after sterilising the skin and the pipette was then incubated for 48 hours at 37° C. By this means Dr. MacLeod had obtained pure culture of streptococci in a fatal case of pemphigus neonatorum. He referred to the relation of this disease to impetigo contagiosa and reminded the members that the initial lesion of the latter disease was a vesicle and that the infective agent was now generally believed to be the streptococcus pyogenes and not the staphylococcus, as was once thought. He noted the occasional occurrence of impetigo contagiosa in the same family as pemphigus neonatorum. He referred also to the close relationship of the disease to the acute pemphigus of adults. With reference to Dr. Maguire's notes on the umbilicus as the seat of infection, Dr. MacLeod believed that in a large number of cases the inoculation did take place there but that it might occur on any abrasion of the skin and mentioned a case in which the mucosa of the lip was the site of infection. With regard to differential diagnosis, he believed that there was no great difficulty in distinguishing this affection from the so-called "congenital syphilitic pemphigus" for various reasons which he detailed, but he considered that it might more readily be confused with the rarer bullous affection known as "epidermolysis bullosa hereditaria," the pathology of which was absolutely different in that it was not due to a microbe but was essentially a condition of excessive vulnerability of the skin in which even slight traumatism resulted in the formation of flaccid bullæ and was probably caused by an instability of the vaso motor system of the skin analogous to that which is present in factitious urticaria.—Dr. P. HORROCKS thought there could be no doubt that pemphigus, as well as many other skin lesions and illnesses, was commoner in the newly born in former times than at present owing to the want of surgical asepsis on the part of the attendants He considered the paper a scientific contribution to the elucidation of the cause of a rare condition but he did not think that the staphylococcus was the culprit, neither did he think with Dr. MacLeod that it was the streptococcus, because both these microbes were so prevalent that it was exceedingly difficult to get rid of them from one's hands. After as thorough a sterilisation as possible the staphylococcus albus could be found under the nails. Hence he thought that pemphigus neonatorum would be common instead of rare if either of these microbes was the cause of it. Probably it was due to some other microbe or else if due to one or both of the above-mentioned germs there must be another factor necessary, which other factor was rarely present. He asked if any of the mothers were ill at all and if they nursed the infants.—Dr. MAGUIRE, in reply, said that the disease was one confined to the skin in the majority of cases and was without symptoms of systemic invasion; where this took place the umbilical scar was always previously involved and the cases ended fatally. It seemed fair, therefore, to conclude that this was the channel by which a simple skin disease became a grave general disorder. Replying to Dr. Horrocks, he said that all the mothers were healthy, with one exception, nor had this woman any grave disease. All the infants were breast-fed.

Dr. W. H. B. BROOK (Lincoln) showed an Ovarian Cyst which had made its way between both broad ligaments, separating the peritoneum from the uterus, the cæcum, and the sigmoid flexure of the colon. The history of the case was as follows. A single woman, aged 56 years, was admitted into the Lincoln County Hospital on April 6th, 1903, for an abdominal tumour which she had noticed since the previous December. She presented all the signs of an ovarian cystoma. The uterus was freely moveable and appeared to be normal. On April 11th the abdomen was opened and the tumour was removed; it proved to be an ovarian cystoma, one large cyst containing 23 pints of thick ovarian fluid with two small loculi. The base of the cyst, which appeared to have originated in the left ovary, extended between the layers of the broad ligaments from one side of the pelvis to the other, passing behind and above the uterus which was buried in the cyst. The peritoneum was stripped off the sigmoid and the cæcum, so that the cyst wall was in direct relation with these, two large layers of vessels spreading over its surface from the mesosigmoid and mesocæcum. The vermiform appendix lay on the upper part of the cyst. As it was impossible to separate the base of the cyst its wall was cut through and the remaining portion was sutured to the abdominal wound and drained. The fundus of the uterus and a subperitoneal fibroid projected into the cyst. This fibroid was cut away and caused no trouble. The patient made an uneventful recovery. A section of the cyst wall consisted of ovarian tissue and showed old corpora lutea. A second section showed the tube stretched out in the cyst wall, its lumen containing a few flattened-out rugæ, and its walls consisting of unstriped muscle arranged in bundles cut across and obliquely.—The case was discussed by Dr. A. H. N. LEWERS, Mr. J. H TARGETT, Mr. MALCOLM, and the PRESIDENT.

Mr. E A BARTON, in showing a specimen of Fœtus Compressus, pointed out that the ovum was passed ten hours after the normal delivery of an eight months living child. The woman had married twice. By her first husband she had had three single children and by her second husband three sets of twins, besides a single child and a miscarriage. There was no history of twins on either side or of syphilis. The fœtus measured seven centimetres by three centimetres but was only five centimetres thick and appeared to be macerated. The cord was ten centimetres long by one centimetre thick The placenta was 7·5 centimetres by 6·4 centimetres but was only 1·75 centimetres thick. It appeared to be normal to the naked eye, though the ovum had remained in utero for five months. On section the placenta showed marked degeneration of the chorionic villi and also in a less degree of the decidual cells.

Dr. LEWERS and Mr. MALCOLM showed specimens of cases of Extra-uterine Fœtation and these were discussed by Dr. HORROCKS, Dr. CULLINGWORTH, and Dr. G. E. HERMAN.

MANCHESTER MEDICAL SOCIETY.

Rheumatic Hyperpyrexia.—Post-operative Hæmatemesis—Acid Auto intoxication.

A MEETING of this society was held on Nov. 4th, Dr. A. M. EDGE, the President, being in the chair.

The PRESIDENT related a fatal case of Rheumatic Hyperpyrexia treated by cold baths. The highest temperature reached was 110° F. Quinine in large doses, cold sponging, continuous application of ice, and even rubbing with ice had failed to reduce the temperature, but immersion in the cold bath was always successful in bringing it down temporarily to a normal or subnormal point. Eight baths were used during the hyperpyrexial period, which lasted seven days, death being preceded by the signs of hypostatic pneumonia. Although the patient was always removed from the bath before the temperature had fallen to 102° collapse frequently ensued, requiring the use of stimulants and hot applications There were very well-marked nervous symptoms, including pain and stiffness in the neck, delirium, clonic convulsions, internal strabismus of the right eye, spasm of the left facial muscles, spasm of the masseters interfering with the opening of the mouth, and protrusion of the tongue. Reference was made to the tetaniform nature of many of these symptoms. The necropsy proved the case to have been one of pure hyperpyrexia without complication except the terminal pulmonary congestion.

Mr. CHARLES ROBERTS read a paper on Post-operative Hæmatemesis with illustrative cases. He described 12 cases, dividing them into two groups. In the first the condition was associated with profound toxæmia and was satisfactorily explained on the theory that it was due to sepsis, the operation acting only as a possible predisposing factor. In the second group the condition occurred apart from sepsis. Three cases were described in detail. The various theories as to the cause of post-operative hæmatemesis were discussed.

Dr. F. CRAVEN MOORE read a communication on the subject of Acid Auto-intoxication *sui generis.* After referring to the clinical and experimental basis of the modern conception of acid intoxication, the prototype of which obtained in connexion with diabetes mellitus, the occurrence of such intoxication apart from diabetes was dealt with and a division of such cases into two groups was adopted—viz. : (1) those in which manifestations of acid intoxication occurred in association with, and probably secondary to, some general morbid state; and (2) those in which they occurred apart from any general disease to which they might be regarded as secondary and apart from any lesions post mortem which would afford adequate explanation of their obtaining to this group, the term acid intoxication *sui generis* being here properly applicable. As illustrative of this condition the following cases from the hospital practice of Professor J. Dreschfeld were described. The first case was that of a female, aged 30 years, who had for some two months suffered from attacks of vomiting, gastralgia, constipation, pallor, and weakness. Four days before death she suffered from drowsiness, prostration, air hunger, and exhibited a strong odour of acetone. The urine gave no reaction for glucose. On admission to hospital the vomiting ceased, the patient became rather excitable, and then lapsed into a comatose condition which terminated fatally in about 20 hours. The urine was highly acid, contained a trace of albumin and no sugar, gave well-marked reactions for acetone and aceto-acetic acid, and also for β-oxybutyric acid. A filtered specimen gave a rotation of – 3° (2 dm. tube); an ethereal extract exhibited negative rotation and crotonic acid was obtained on distillation with H_2SO_4. The second case was that of a female, aged 14 years, who had suffered from recurrent attacks of vomiting and constipation without indications of gastro-intestinal lesion, the condition being apparently "hysterical" vomiting. The breath and urine contained acetone; the latter also contained aceto-acetic acid and β-oxybutyric acid ($\alpha = 0{\cdot}46^\circ$ in 2 dm. tube). With suitable dieting, evacuant enemata, and alkalies internally these manifestations disappeared. The third case was that of a female suffering from mitral disease with broken compensation; she exhibited for a few days acetone, aceto-acetic acid, and β-oxybutyric acid ($\alpha = -0{\cdot}2^\circ$) in the urine. Of these cases the first represented the severe form of acid intoxication *sui generis;* the second to some extent simulated the condition of cyclical vomiting regarded by Edsall as an acid intoxication; and the last was apparently acid intoxication of slight degree and secondary.

LIVERPOOL MEDICAL INSTITUTION.

Pleural Effusion.—Pylorectomy.—Suprapubic Prostatectomy.—Rheumatoid Arthritis.

A MEETING of this society was held on Nov. 5th, Mr. J. RUSHTON PARKER, the President, being in the chair.

Dr. JAMES BARR described his method of treating pleural effusions. After removal of the fluid from 40 to 60 minims of adrenalin chloride, 1 in 1000, were injected. He had used it in many cases with invariable success. In ascites the method was not so successful. He also described an apparatus for the introduction of aseptic air into the pleural cavity.

Mr. F. T. PAUL reported several cases of Pylorectomy. Two patients operated upon *in extremis* died. The other three recovered—(1) a woman, aged 56 years, with extensive cancer of the pyloric end of the stomach who died 16 months later from recurrence; (2) a man, aged 46 years, with an early cancer; and (3) a woman, aged 56 years, in whom the tumour proved to be an inflammatory mass. The two latter patients were so far in excellent health. Mr. Paul also showed a man with Carcinoma of the Pylorus who had improved so much after gastro-enterostomy that he proposed to excise the growth.—Sir WILLIAM M. BANKS said that his experience of removing the pyolrus for cancer was but slight, as he never had any great opinion of the operation owing to the impossibility of removing completely the affected lymphatic glands lying in the curve of the duodenum and embedded in the head of the pancreas. He had operated in about half a dozen cases. They all recovered and for a while appetite returned, weight increased and so on, only to be followed by death in every case. He was not sure whether patients did not live as long and as comfortably with a successful gastro-enterostomy as with excision of the cancer.—Mr. R W. MURRAY said that if a radical cure was to be hoped for in cases of carcinoma of the pylorus the growth must be more freely excised than pylorectomy with union of duodenum and stomach permitted of. In such cases he advocated gastro enterostomy with removal of about one-half of the stomach.—The PRESIDENT remarked that cases suitable for pylorectomy were quite exceptional among cases of malignant disease When he had performed a pylorectomy the narrow duodenal tube had been sewn to the upper part of the wider opening in the stomach and then the redundant remainder of the latter closed.—Mr. PAUL replied.

Mr. G P. NEWBOLT read notes of two cases of Enlarged Prostate treated by Suprapubic Prostatectomy. One patient, aged 70 years, from whom a prostate weighing five and three-quarter ounces was removed in May, 1903, was shown in good health, being troubled only by frequency of micturition. The other patient, aged 62 years, died from uræmia four days after operation. His bladder was shown, the space from which the prostate, weighing one and a quarter ounces, was removed being demonstrated; its base was formed by a well-marked layer of recto-vesical fascia. In both cases the prostatic urethra was torn away together with the ejaculatory ducts.—The PRESIDENT said that he had devoted what attention he could to the perineal method described by their American colleagues, Professor Alexander and Dr. Parker Sims of New York, at the Manchester meeting, 1902. The operation had proved satisfactory to him and to his patients.—Mr. D. DOUGLAS CRAWFORD recognised Freyer's operation as the ideal one. Although easy in adenomatous cases it was difficult in the fibroid form, and he preferred to punch out portions of the prostate in the latter cases.

Dr. C. J. MACALISTER read a paper on Rheumatoid Arthritis and its Relation to other Diseases. He pointed out that the disease as generally seen in institutions was in the stage of deformity and that very often the active processes had been arrested, and he indicated that it was very necessary to treat the disease during its very earliest and acute stages if any real benefit was to ensue. Having referred to the fact that acute rheumatoid arthritis frequently resulted from infections from the nasal, gastro-intestinal, and other mucous membranes, he proceeded to cite a number of examples where rheumatoid conditions had been associated with some perversion of the thyroid functions and stated that the symptoms in these cases had disappeared altogether or had been greatly ameliorated by the administration of thyroid gland. Dr Macalister then proceeded to deal with the early symptoms of rheumatoid arthritis and he pointed out how frequently vascular spasms of the extremities precede the joint affections and also that muscular *cramps were of frequent occurrence as initial symptoms* and he suggested that the poison was very like ergot in its general effects. He considered that there was a close association between Raynaud's disease and some cases of rheumatoid arthritis and, furthermore, that he had seen cases of Graves's disease which suggested that a relationship existed between all three diseases. After referring to the fact that iodine might possibly produce its occasional

this particular poison from the blood and that in order to be eliminated the constitution of the poison had to be changed. In support of this hypothesis he quoted a case where in the acute stage a patient with intensely swollen and painful joints remained unrelieved in spite of the fact that the kidneys and skin were acting profusely until *(all other drugs having failed) large doses of quinine* were given which caused the poison to be poured out through the skin in the form of a horribly smelling, volatile matter which was so offensive that the patient could not be kept in the ward and that with this elimination there were an immediate subsidence of the pains and swellings and a speedy convalescence.—Dr. R. LLEWELLYN JONES (Bath) regarded rheumatoid arthritis as a symptom-complex and thought that given any source of auto-intoxication the resulting toxæmia might through its action on the cord segments produce what was *called rheumatoid arthritis. He emphasised the* importance of the gastro-intestinal tract as a source for such poisons. He alluded to the occurrence of recurrent attacks of local syncope and asphyxia in these cases and also to the presence of muscular cramps affecting mainly the extremities and in others also the muscles of the head and neck. This might suggest a common parent origin, a cerebro-spinal toxæmia, for Raynaud's disease, tetany, and early rheumatoid arthritis. He had also noted the connexion of Graves's disease. Dr. Macalister's *gratifying results with thyroid feeding afforded him much* pleasure, all the more so as he was able to confirm it from his own experience.—The PRESIDENT said he knew from the practice of a friend that feeding was a most important factor in the treatment of these cases. His friend advised the consumption of three pints of milk in addition to the ordinary meals and the President had seen benefit accrue even in some well advanced cases.—Dr. BARR, Dr. G. G STOPFORD TAYLOR, Dr. S. A. GILL, and Dr. W. B WARRINGTON spoke, and Dr. MACALISTER replied.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Enterectomy for Tuberculous Stricture of the Intestine.—Valedictory Address.—Election of Office-bearers.

THE first meeting of the eighty-third session of this society was held on Nov. 4th, Sir THOMAS R. FRASER, F.R.S., the retiring President, being in the chair.

Dr. NORMAN WALKER demonstrated a case of Multiple Rodent Ulcers on the face of a female patient. The original ulcer on the usual site had healed under the influence of the x rays. At present there were about a dozen small ulcers scattered over the forehead and the face. This multiplicity was important from a diagnostic point of view.

Mr. HAROLD J. STILES showed a boy after Transplantation of Tendons for Paralytic Equino-varus. The long extensors of the leg were paralysed with the exception of the extensor longus hallucis. The peroneal and superficial muscles of the calf were likewise paralysed. The deep calf muscles were active. In the leg both in front and behind the tendons were transplanted into active muscles and the boy now possessed a little movement of the ankle-joint.

Dr. EDWIN BRAMWELL showed a case of Hemiplegia of 12 months' standing in a man, aged 51 years, who had had syphilis 24 years previously. The Argyll Robertson pupil was present on both sides. The right Achilles jerk was absent, although the knee-jerk on that side was markedly

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however, on the right side. Stimulation of the sole of the left foot was followed by a flexor movement of the right great toe. The sign of "flexion of the thigh on the trunk," described by Babinski, was present on the right side; the tibialis phenomenon of Strümpell was also well marked on this side.

Mr. A A. SCOT SKIRVING showed two patients after Wound of the Knee Joint. The first patient was a man, aged 52 years, who fell through a glass plate, partially dividing the quadriceps extensor and opening into the knee-joint. *The wound was very dirty. After the application of a* carbolic poultice the wound was enlarged and two large pieces of glass were removed ten hours after the injury. After thorough cleansing of the wound the capsule of the joint was closed and the wound healed by first intention. The second patient was a boy who suffered from acute suppuration of the knee-joint as a result of a wound from a dirty needle. The joint was freely drained and extension was applied. Passive movements were commenced fairly early. The usual statement in text-books was that the best result which could be *hoped for in such cases was ankylosis. It might be that a* more hopeful result was to be expected in children. At any rate the boy shown had very free movement in the knee-joint.

Mr. DAVID WALLACE showed: 1. A lad, aged 19 years, who suffered from a Congenital Hypertrophy of the Left Half of the Tongue. The left half was twice the size of the right and had a papillomatous appearance and varied in size from time to time. The latter condition was noted in a case recorded by Hutchinson. 2. A man who had a Dislocation of the Acromial End of the Clavicle which had been *treated by wiring. Though the movement was very good the* bone was not in proper position.

Dr. W. ALLAN JAMIESON showed: 1. A case of Parakeratosis Variegata in a woman, aged 35 years. The disease commenced eight years ago and at present the whole body was more or less affected, the skin of the trunk and limbs being of a deep crimson red colour shading into brown in places and dotted over with white spots. The epidermis seemed to be looser on the cutis than normally. The surface was glossy like silk and itchiness was complained of. Much *improvement had resulted from the use of glycerine of starch* with 40 grains of resorcin to each ounce. 2. A case of Mycosis Fungoides in the erythrodermic stage. The patient was a woman, aged 49 years, and almost the whole body was covered with ill defined brick-red patches or slightly roughened yellow areas on parts of which were crusts. The inguinal and cervical glands were enlarged. As yet there were no tumours. Exposure at a distance of ten inches to the x rays was being tried as treatment. 3. A patient to show the Results of Treatment in a severe case of Ichthyosis. The lad, *aged 16 years,* had been *treated* by daily washing with a resorcin and salicylic soap, followed by inunction twice in 24 hours with glycerine of starch containing a drachm of resorcin to the ounce and with marked benefit. 4. A case of Ichthyosis showing unusual distribution. The girl, aged 13 years, showed on the palms and the soles great thickening of the epidermis, that on the soles being more than a quarter of an inch in thickness. At the bend of each elbow and in the axillæ large areas were covered by an almost black filiform growth interspersed with fine hairs. The same condition was present on the nipples and their areolæ, the flanks, the front of the abdomen, the groins, the patellar area, the popliteal spaces, the ankles, and the front of the toes. The appearances were those of ichthyosis hystrix.

Mr. J. M. COTTERILL exhibited a man with a Sarcoma of the Shoulder at present being treated with the x rays.

The following card specimens were shown:—

Dr. A. HILL BUCHAN: Two Microscopical Preparations from a case of Asthma.

Mr. SCOT SKIRVING: (1) Stereoscopic Photographs of a series of Extragenital Chancres; and *(2) Specimen and* Photograph of a peculiar Foreign Body (Extremity of a Locust Bean) impacted in the Left Bronchus.

Mr. COTTERILL: (1) a Large Multiform Ovarian Cyst; (2) a Kidney removed from a child, aged five years, for hydronephrosis due to congenital occlusion of the ureter; (3) a Tumour removed from the gluteal region of a child, aged nine months (with slide); and (4) Specimens to illustrate longitudinal splitting of the internal semilunar cartilage in so-called "dislocation" of that structure.

Mr. F. M. CAIRD: Specimens of Stricture of the Bowels.

Mr. CAIRD read a paper entitled "Enterectomy for Tuberculous Stricture of the Intestine." He said that there were but few papers upon, and scanty attention had been given to the subject of, tuberculous stricture of the intestine in English medical literature and that they owed their knowledge of the condition mainly to continental authorities. Therefore the experience derived from the cases to be shortly related might be of some value from a diagnostic, prognostic, and therapeutic point of view. Tuberculous stricture appeared to be most frequent in early life, up to 30 years of age, and became rarer with advancing years. It was interesting to note, however, that four of the following patients were over 30 years of age. The disease favoured the sexes alike although they might anticipate that extension from the Fallopian tubes might predispose to its more frequent occurrence in the female. In Mr. Caird's cases marked stenosis was due to three very definite varieties of fibrous hyperplastic change. The most frequent type was that in which zones of tuberous papillary projections developed to a variable extent. At the maximum point of stenosis annular constrictions might also occur and might so encroach on the lumen as almost to cause obliteration and to convert it into a narrow tunnel. Both forms had been observed in one patient. A solid bobbin-like mass strongly suggestive of a new growth was discovered on one occasion. Forms intermediate between all the above abounded. The cæcum and the lower part of the ileum were the favourite sites. The ileo-cæcal valve and the cæcum were affected in six of the cases. The appendix was then lost in the general mass of proliferated tissue and could only be recognised by making sections. In four cases the small intestine only suffered. There was a tendency to the formation of fresh zones of hyperplastic growth in the distended hypertrophied gut immediately above the level of the main stricture Multiple strictures might, however, exist with some intervening areas of healthy gut The diagnosis of the cases during life might present considerable difficulty and they had to differentiate between the inflammatory mass of a chronic appendicitis, the varieties of malignant disease, and the other swellings which might be found in the ileo-cæcal region. When the small intestine was alone at fault the recognition became simpler. The clinical features usually presented a long history of failing health and indigestion associated with progressive emaciation. The bowels were usually constipated and purgatives were generally required. Severe colic pain and tenderness became gradually pronounced and very loud borborygmi annoyed the patient and were audible to bystanders Vomiting might be frequent and often afforded relief. Hæmatemesis was not met with nor yet diarrhœa or the passage of blood, although piles might co-exist. The abdomen became swollen and tense and ladder-like patterns and marked peristaltic waves were seen. A tumour might be palpated in ileo-cæcal cases. Owing to the site of the lesion the cases were chronic and the stricture must be very tight, be blocked with some foreign body, or be complicated by adhesions to adjacent coils of intestine before complete obstruction with its usual manifestations developed. The principles common to enterectomy for malignant disease, gangrene of the bowel, &c, guided them in dealing with tuberculous stricture, but the operative measures were frequently more difficult, and this was especially the case when they had to deal with adhesions. The surgeon might shell out a loop of intestine affected with carcinoma from a mass of surrounding dense inflammatory tissue, as was well seen in cases of adherent cæcal and sigmoid tumour, but in tubercle there was greater infiltration and while carcinoma might be shut in by the new fibrous tissue the tuberculous process frequently burst through the muscular and serous coats and infiltrated widely. The free non-adherent strictures of the small intestine gave rise to less trouble, but in any case an anxious element existed in the form of extensive implication of lymphatic glands which might necessitate a far-reaching removal of mesentery and entail the sacrifice of healthy intestine. Or again some of the caseating glands might have softened or suppurated and might rupture into the peritoneal cavity during manipulation and so determine a fatal issue. In operating, then, the patient should be suitably prepared and the surgeon should cut wide of the diseased area and see that a distended intestine above the stricture was thoroughly emptied. It was always important to plant the sutures in healthy non-congested bowel. There were three series of cases to be dealt with 1. If the stricture be localised, solitary, and non-adherent, it should be divided well above the proximal dilated portion, since there was a tendency for the development of secondary tubercle at points of erosion and ulceration above the primary lesion. Should there be multiple strictures separated by a lengthy interval of healthy intestine, it was better to deal with each stricture individually than to sacrifice a huge stretch of the alimentary canal. 2. In dealing with an area of matted coils it was advisable to ascertain in the first instance the extent and relation of the parts involved; the surgeon must then carefully identify the free healthy proximal and distal intestine and applying clamps proceed to remove the entire mass. The mesenteries might be divided close to their origins as this entailed the ligation of fewer, if larger, vessels and allowed the operator to remove all the lymphatic glands. Since the latter could not well be dissected out without damage to the blood-supply of the intestine it might be necessary to remove much bowel in clearing away the infected glands. Should the mass at any point be firmly adherent to an adjacent healthy loop it would appear needful to resect that loop also or to resect the implicated wall and so to avoid the possibility of leaving a future focus of disease. 3. When there were numerous adhesions of coils, not only to each other but also to adjacent structures and the implicated mass could not be liberated without grave risk, it might be safer to sever the healthy proximal and distal coils of gut and to unite them end to end; the divided lumina in connexion with the diseased area might be conducted externally so as to open on the abdominal wall. It was also probable that a short-circuiting by lateral anastomosis in such circumstances might give better results than any other method of treatment. Of 11 patients subjected to enterectomy seven recovered and four died. The amount of intestine resected had varied with the size and situation of the stricture, the condition of the gut above, its adhesions, and the extent of lymphatic glandular infection. In one patient double enterectomy was practised with the removal of two strictured portions, five and eight inches respectively in length. In one other 40 inches of small intestine and in a third no less than 80 inches, including the cæcum and greater part of the ascending colon, were resected.

Table of Cases of Enterectomy.

No.	Age (years, and sex.	Condition.	Operation.	Result.	After-history.
1	9, M.	Ileo-cæcal; quiescent; tuberculous stricture.	Resection, 1899.	Recovery.	Well.
2	7, F.	Ditto; many enlarged and caseating glands	Resection, 1895; secondary suture.	"	"
3	24, M.	Ascending colon; extensive matting.	Resection, 1890.	Died; fæcal infection.	—
4	12, M.	Ileum.	Resection of six inches, 1891; primary suture.	Recovery.	Well.
5	61, M.	Ileum; extensive infection of mesenteric glands.	Resection of 80 inches, 1901; secondary suture	"	Died; recurrence.
6	68, M,	Ileum; matting of glands.	Resection of 40 inches, 1901; primary suture.	"	Died; cardiac failure
7	57, M.	Ileum; two strictures.	Double enterectomy, 1901; primary suture; 13 inches.	"	Died; recurrence.
8	34, F.	Ileum; cæcum; Fallopian tubes.	Resection, 1902.	Died.	—
9	30, F.	Ileum; cæcum.	Resection of seven inches, 1902; primary suture.	Recovery.	Poor health; fæcal fistula.
10	34, M.	Ileum; glands suppurating	Enterectomy, October, 1903.	Died.	—
11	46, M.	Ileo-cæcal and ileum.	Double enterectomy, 1903.	"	—

The patients did not seem to suffer inconvenience from this excessive loss of intestinal surface. In regard to the further history of the cases the three young patients recovered and continued well. The three elderly men did not long survive. The eldest, aged 68 years, made a good recovery but suddenly dropped dead from cardiac failure. The two others, after enjoying a short period of renewed health, succumbed to emaciation and general enlargement of the whole mesenteric and abdominal lymphatic glands. In these three cases a section was obtained and each showed evidence of old pulmonary tubercle. The sites of junction were perfectly patent without the slightest trace of contraction. There was evidence, however, of the formation of further stenosed and ulcerated areas and a fistula bi mucosa existed between the lower part of the ileum and the sigmoid in one instance. A fæcal fistula developed some months after resection of the ileo-cæcal region in one weakly patient. A second exploration revealed extensive matting and lateral anastomosis was then performed but without marked benefit ensuing. Malignant disease was associated with tubercle in two cases of ileo-cæcal tubercle and colloid cancer and probably in one other case sarcoma was associated with the local condition in the small intestine.

The retiring PRESIDENT then delivered his Valedictory Address. He said that the record of the society was that of its members and that success or the contrary must largely depend on the vigour and activity that were brought to the society by the number of the members who took part in the proceedings. It was therefore gratifying to find that since the end of 1901 the membership had increased by 33, the total number of ordinary members being now 426. The President then gave a record of those honorary and ordinary members who had died during the past two years and paid tributes to Virchow amongst the former and to Dr. Stewart Stirling and Dr. R P [illegible] non-resident member [illegible] names of Dr. George [illegible] Dr. W. S. Playfair ar [illegible] and Dr. Archibald Dickson stood our prominently. The most important work of the society consisted in the original communications read before it and during the past two sessions 36 such communications had been given. 28 of these related to medicine and eight to surgery. Curiously enough, and in contrast with previous years, papers dealing with the heart and circulation were absent. The nervous system, special therapeutics, and affections of the respiratory apparatus were the groups most largely represented. The aims and endeavours of the society were not, however, limited to the diffusion of professional knowledge amongst its members, but also included the advancement among the general public of improvements and reforms in the prevention and treatment of disease and the promotion before a wider public than was usually present at the meetings of schemes which appeared likely to promote the social and the physical well-being of the inhabitants of the country and upon which they were convinced the prosperity of the nation was largely dependent. Sir Thomas Fraser did not think that there had been any lack of endeavour in these directions during the two years in which he had occupied the President's chair. He referred to the fact that after careful consideration the society last year resolved to petition the town council to continue the notification of measles and although the request had not been acceded it was probable that some practical results would be obtained. In that year also at a special meeting largely attended by representatives of the chief public and social institutions of the city an important discussion took place on the advisability of more largely providing for the treatment of incipient and transitory mental disorders in wards connected with the Royal Infirmary. A recommendation so influentially advanced naturally received careful consideration from the managers of the Royal Infirmary, but difficulties had arisen at present in providing this necessary accommodation. When this temporary obstacle had been removed there was reason to believe that the recommendation of the society would be realised, to the great advantage of a deserving section of their fellow men and of the public generally by the increase that would thereby be gained in the educational resources of the medical profession and the consequent enhanced ability of the members of that profession to cure disease. In the meantime the action of the society had rendered it probable that a much-required improvement would soon be effected in the organisation of the wards of the Royal Infirmary. A second special meeting was also held in the hall of the Royal College of Physicians of Edinburgh for the purpose of discussing the prevention of pulmonary phthisis and the notification to the sanitary authority of cases of that disease. A motion was adopted at that meeting favourable to compulsory notification, but at the same time several of the speakers expressed themselves with some hesitation on the adoption of this extreme measure, mainly, the President thought, on the ground that there would thereby be thrown upon the sanitary authorities responsibilities which they could not undertake. On that occasion the President had stated that he felt much doubt whether material benefit would be gained by isolation because of its impracticability or by a diffusion of knowledge because of its probable barrenness of results among the least enlightened members of the community, or by such precautions as the prohibition of expectoration in streets and public places because of the impossibility of carrying it into effect and of the probability that in the open air of streets tuberculous sputum was not an important danger. More benefit, he thought, would be gained by the adoption of the relatively simple measures which were required to improve the health and to increase the physical strength of all classes and especially of those who occupied the lower stratum of society. All experience had shown that the chief and at the same time essential of these simple measures, with which at the present time there was no competing rival, was the providing of sufficient pure air, light, and space in dwelling houses. It was to all intents a special meeting at which Dr. T. S. Clouston, the President of the Royal College of Physicians of Edinburgh, initiated a discussion on the Scottish Medical Corporations and the Common Weal: how they might Develop a Health Conscience. With his great courage and untiring energy the author of this proposal was, he believed, still engaged in the work of carrying it to a practical issue. The President referred with satisfaction to the institution of clinical meetings in the Royal Infirmary and in the Sick Children's Hospital and to the large attendance of members at the meetings as contrasted with former years as well as to the satisfactory condition of the funds of the society. In concluding, he thanked the members for the high honour which they had done him in electing him two years ago to the distinguished position of their president and felt it a great pleasure and gratification that under the direction of his successor, Professor Chiene, the society would have the best of prospects of continuing its career of prosperity and of maintaining its usefulness.—On the motion of Dr. CHARLES E. UNDERHILL a cordial vote of thanks was awarded to the President for the able and kindly manner in which he had fulfilled the duties of the chair.

The following gentlemen were elected as office-bearers for the session 1903-04. President: Professor J. Chiene, C.B. Vice-Presidents: Sir John Halliday Croom, Dr. James Ritchie, and Dr James Ormiston Affleck. Councillors: Dr. Edward Carmichael, Dr. Thomas B. Darling, Dr. William Stewart, Dr. William George Sym, Sir Thomas Fraser, Dr. Charles E. Underhill, Dr. Dawson F. D. Turner, and Dr. Norman Walker. Treasurer: Dr. H. Harvey Littlejohn. Secretaries: Mr. H. Alexis Thomson and Dr. G. Lovell Gulland. Editor of Transactions: Dr. William Craig.

WINDSOR AND DISTRICT MEDICAL SOCIETY.—The first ordinary meeting of the session of this society was held on Oct. 28th, Mr. W. B. Holderness, the President, being in the chair.—Dr. Fletcher Beach delivered an address entitled "Types of Weak-minded Children met with in Daily Practice." The address was illustrated by lantern slides. He described 13 types and gave examples of each. The first was the simple congenital type, in which there was no marked deformity of the head or the limbs. Photographs of six of these cases were shown, three being of a low type and three of a higher type. Next he described the Mongolian type, so called from a resemblance in facial characteristics to the Chinese physiognomy. A group of cases exhibiting these characteristics was shown and the history of a typical case was given. Dr. Fletcher Beach then passed to the cretin il type and described the symptoms met with in cases that had not undergone the thyroid treatment, illustrating them by the photograph of a group of five cases. He then showed a case before and after the treatment and mentioned the differences in the symptoms which were seen after the patient had been under the treatment. He said that it was necessary to watch the patient carefully, for if he should lose weight too rapidly, or if the temperature and pulse should rise much above normal, the treatment must be stopped for a time or the dose must be reduced. The microcephalic type was next described and it was shown that heads of this kind were much smaller than normal. The microcephalic brain was also smaller than it should be and, moreover, was incompletely developed. The parts chiefly affected were mentioned, a photograph of a microcephalic brain being thrown on the screen to make these differences more clear. Two cases of this type were also exhibited and their histories were described. Very different from this type was the hydrocephalic in which the heads were larger than normal. The characteristics of this type were pointed out and the histories of two cases were fully given. A type which was sometimes mistaken for this was the hypertrophic, in which the brain was larger than normal. The diagnosis between the hydrocephalic and the hypertrophic types, which was described by Dr. Fletcher Beach some years ago, was given at length. Photographs were exhibited showing the differences between the two shapes of head and the history of a case illustrated by photographs was given. Another important type was the traumatic in which the defect was due either to a fall or a blow on the head or injury to the head during birth. In this type the degree of mental deficiency varied with the extent of the destruction of brain tissue and the presence or absence of hereditary predisposition. Closely allied to this type was the eclamptic in which convulsions supervened soon after birth, continued for some years, and then ceased, but the effect on the brain was so injurious that the child became mentally deficient. The histories of two such cases were mentioned and a photograph was shown. The epileptic type included patients who recovered under treatment, patients who improved considerably, others who remained stationary, and others who deteriorated and became demented. Photographs were exhibited of each of these classes and the history of a case which remained stationary was described. Another important type was the inflammatory or post-febrile, in which the mental deficiency came on after an attack of measles, whooping-cough, typhoid fever, or scarlet fever. Many children of this type did remarkably well under training; two photographs were exhibited and the histories were given. A type frequently met with was the paralytic and the paralysis might occur before or after birth. An illustrative case of each class was described and photographs were shown. A less frequent type was the scaphocephalic in which the patient presented a keel-shaped head—narrow from side to side and elongated from front to back. A case of this kind was described and a photograph was shown. Finally, Dr. Fletcher Beach mentioned the feeble-minded, which type was a much higher type than those which had been previously described. Three photographs of this type were shown and the history of one who was employed as a shoemaker was given. He had considerably improved in school work before being sent out to pass the whole of his time in the shop.—A vote of thanks to Dr. Fletcher Beach for his interesting address terminated the proceedings.—The annual dinner of the society took place after the meeting at the White Hart Hotel. There was a good attendance of members.

Midland Medical Society. — The second ordinary meeting of this society was held at the Medical Institute in Birmingham on Nov. 4th, the President, Dr. Robert Saundby, being in the chair.—Dr. J. R. Charles showed a case of Huntingdon's Chorea in a woman. A peculiar feature of the case was that of all the cases occurring in the patient's family—three generations—the majority were females. The patient presented the usual features of the disease, the movements especially being characteristic.—Dr. J. Douglas Stanley stated that the patient had formerly been under his care at Queen's Hospital and that this was the third instance occurring in Birmingham within the last nine years of a family affected with Huntingdon's chorea. He considered that no clinical difference could be drawn between Huntingdon's chorea and senile chorea, except that of a family history in the former.—The President referred to cases of senile chorea formerly under his observation and considered that they were quite distinct in character from Huntingdon's disease.—Dr. Charles, in reply, considered that senile chorea was a sporadic instance of Huntingdon's disease—Dr. C. E. Purslow reported that at the March meeting of the society he showed a specimen of Uterine Appendages with a small body situated in the broad ligament close to the ovary which he had ventured to call an accessory ovary. This body bore an exact naked-eye resemblance to the ovary near which it lay and at the meeting none of the members present who examined the specimen raised a doubt as to its being an accessory ovary. A microscopical examination had not then been made, as to have done so would have destroyed the specimen. Sections had, however, since been cut and these clearly showed that the nodule was a small fibroma and did not contain any ovarian structures.—Mr. Jordan Lloyd showed a specimen of Enucleated Prostate and also a Vermiform Appendix which presented a well-marked stricture and a dilatation beyond. Mr. Jordan Lloyd then read a paper entitled "The Pathology and Treatment of Diseases of the Natural Cavities and their Ducts." He instanced the condition of the urinary bladder, the appendix, the bronchi in cases of obstruction, and especially the stomach when there was pyloric obstruction. He was rather inclined to believe that when gastric dilatation existed there was obstruction to the outlet through the pylorus and that, therefore, the rational treatment was to relieve the obstruction.—Mr. William Thomas referred to a case quoted by Mr. Jordan Lloyd in which tracheotomy had given relief to a patient with cicatricial contraction due to cut-throat.—Dr. Stanley asked Mr. Jordan Lloyd if muscular defects were not competent to cause gastric dilatation. He thought that every case of dilated stomach should be taken on its merits and that every means should be taken to ascertain its cause before resorting to operative procedure.—Dr. T. Nelson referred to a case of aortic aneurysm in which there were marked bronchial symptoms.—Dr. Walter R. Jordan asked Mr. Jordan Lloyd how he would decide clinically between cases of gastric dilatation due to pyloric obstruction and those the existence of which he believed to be due to muscular relaxation.—The President referred to the important aid to diagnosis obtained from examination of the gastric contents in the morning as ascertained by means of the stomach tube. In cases of primary gastric dilatation no food material could be found in the morning. He believed primary dilatation of the stomach to be a rather frequent condition. In his own practice he found modern methods of gastric investigation of great service if only in indicating cases that should be treated surgically.—Mr. Jordan Lloyd, in reply, deprecated undue haste in forming an opinion in all gastric cases and said that the interests of the patient required that medical treatment should have a fair trial. He was still of opinion, however, that many cases of gastric dilatation could only be relieved by surgical means.

Society of Anæsthetists.—A meeting of this society was held on Nov. 6th, Mr. C. Carter Braine, the President, being in the chair.—The Senior Secretary read for Mr. Norman Bennett, who was unable to be present, notes of a case of Death under Nitrous Oxide. The patient was a youth, 17 years of age, who suffered from enlarged cervical glands. He showed no dyspnœa and had had nitrous oxide a few days previously without any untoward symptom. "Gas" with air was administered for extraction of teeth by an assistant. The face piece was removed before stertor occurred; the patient became more cyanosed and ceased to breathe. During artificial respiration several spontaneous attempts at respiration were made. An attempt to perform a low tracheotomy was unsuccessful. It was afterwards found that the patient had been suffering from dyspnœa associated with stridor and had had respiratory difficulty on another occasion when nitrous oxide had been administered. The necropsy showed that there were enlarged glands in various parts of the body and that the diameter of the trachea was reduced by one-half. The heart muscle was degenerated. The following took part in the discussion: the President, Dr. J. F. W. Silk, Dr. J. Blumfeld, Mr. W. Tyrrell, Mr. J. H. Chaldecott, and Mr. H. Hilliard.—Dr. Moritz read a paper on the Combined Administration of Nitrous Oxide and Ethyl Chloride by Dr. Hewitt's Method. Dr. Moritz's experience extended to 350 cases. He said that the anæsthesia obtained was deeper and longer than that after any other anæsthetic for dental operations in one administration. The average operative anæsthesia is about 60 seconds though often much more, while struggling, cyanosis, and muscular rigidity are absent. Recovery is not so quick as after "gas" or "gas" and oxygen but is more rapid than after somnoform and ethyl chloride. The patients were not prepared for anæsthesia. With regard to after-effects, vomiting appeared in about one case in seven and was variable in degree up to three hours. Headache was fairly common but usually did not last long. Vertigo occurred in a few cases. Hysterical demonstrations and in men violent hitting out occasionally were seen. The conjunctival vessels were injected. Different brands of ethyl chloride gave the same results. The severity of after-effects seemed to depend on the absence of dieting and the quick resumption of the erect posture. Under favourable conditions the combination in question was the finest anæsthetic at present at their disposal for short operations.—The paper was discussed by the President, Dr. Bakewell, Mr. Chaldecott, Dr. Scharlieb, Dr. Noble, Dr. Blumfeld, Dr. R. J. Probyn-Williams, Dr. Silk, Dr. G. B. Flux, Mr. Hilliard, Dr. McCardie, and Mr. Wallis —Dr. Moritz then replied.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held on Oct. 30th, Dr. A. F. Street, the President (Westgate-on-Sea), being in the chair.—The President delivered an address on Some Questions in Seaside Climatology. He suggested that there were physical differences between the atmospheres of different places beyond those comprised in the factors ordinarily considered as constituting climate and it was contended that this view was borne out by more or less generally [illegible]ity of certain diseases s[illegible] of cases imported in [illegible] adduced to show that ozone had been credited with too great a share in the stimulating properties of sea air, that its prevalence had not been completely demonstrated, and that the salts diffused by spray could not have a notable therapeutic effect. The questions of a percentage of oxygen and of the possible influence of the rarer atmospheric gases, of atmospheric electricity, and of any physiological effects of radio-activity and its presence in sea air and sea water were raised. Reference was made to the principles governing the selection of climates for invalids and to the public duty of avoiding pollution of the atmosphere.—Dr. Leonard Ll. B. Williams proposed, and Dr. G. W. Hamilton Cumming (Torquay) seconded, a vote of thanks to the President for his address.—The President replied.

ROCHDALE AND DISTRICT MEDICAL SOCIETY.—A meeting of this society was held on Nov. 5th at which Dr. J. A. Ashcroft, the President, gave an address on Appendicitis. After some remark[illegible]n the various morbid conditio[illegible] iliac fossa, the causation of [illegible] There were four varieties clinically (1) slight cases amenable to medical treatment; (2) more severe cases with the formation of abscess; even some of these might yield to non-operative treatment; (3) acute perforating cases which required operation; and (4) relapsing cases. Pain was frequently referred to the back or to the inner aspect of the thigh. As regards treatment the general principles were rest, the withholding of food, and the avoidance of opium. Opinions differed as to the time for operation, American surgeons inclining to operate early, while British surgeons, generally speaking, preferred expectant treatment at first and operation between attacks. Patients liable to appendicitis should be careful as to what they ate, should have regular meals, and should avoid hurry.—Mr. S. T. Lord, Mr. W. Pooley, Dr. H. Brooks, and Mr. H. H. I. Hitchon joined in the discussion, Dr. Brooks stating that he had had two severe attacks of appendicitis and had undergone operation; he gave his personal experiences.—The President was cordially thanked for his address.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND —At a meeting held on Oct. 28th, Dr. J. H. Stowers, the President, being in the chair, Dr. P. S Abraham showed: (1) A case of Xanthoma Diabeticorum; and (2) a case of Scleroderma.—Dr. E. G. Graham Little showed: (1) A case of Epithelioma which had developed on the site of a nævus; (2) a case of Symmetrical Gangrene of the Auricles; and (3) a case of Elephantiasis —Mr. George Pernet showed: (1) A case of Secondary Hirsuties on the site of a cleared-up lichen patch; and (2) a case of Lupus Erythematosus Disseminatus.—Dr. G. Norman Meachen showed a case of Persistent Purpura.—The President showed: (1) A water-colour drawing of a case of Peliosis Rheumatica; (2) two cases of Tertiary Syphilis; (3) a case of Rodent Ulcer which had been recently operated upon; and (4) a case of Lupus Erythematosus.—Dr. V. H. Rutherford showed a case of Lichen Planus.—Dr. T. D. Savill showed a case of Hypertrophic Scarring after Variola —Mr. Arthur Shillitoe showed: (1) a case for Diagnosis; and (2) two cases of Syphiloderma.—Dr. Wilfrid B. Warde showed a case of Extensive Hypertrophic Scarring after Typhoid Fever.—Dr. Alfred Eddowes showed a photograph and microscopical sections of a case of Cyst-adenoma of the Sebaceous Glands.

EDINBURGH ROYAL MEDICAL SOCIETY —A meeting of this society was held on Nov. 7th, Dr. Fitzwilliams being in the chair.—Dr. Shaw, Senior President, gave from the chair his presidential address, his subject being the Relation of Medical Men to the Community with Special Reference to the Improvement of National Physique.—Dr. Fletcher showed a case of Pseudo-hypertrophic Paralysis occurring in a man, aged 23 years. The calf muscles, the biceps, and the triceps were especially enlarged; while the gluteal muscles and the trapezius and the latissimus dorsi were atrophied. The patient showed the characteristic attitude when standing and also "climbed up his knees" in rising from the floor He had so far improved under treatment —Dr. Fletcher also showed a case of Senile Chorea in a male patient, aged 36 years. The symptoms had been present, gradually increasing, for six years. Some points in the case suggested an element of malingering or that it might be an unusual case of general paralysis of the insane.—Dr. Morton read notes of a case of Acute Bright's Disease with uræmic convulsions. The prognosis and treatment were complicated by the presence, in addition to the kidney disease, of alcholic cirrhosis of the liver, acute apical pneumonia, and ichthyosis. The kidney showed evidence of an acute nephritis superadded to old-standing disease.

GLASGOW SOUTHERN MEDICAL SOCIETY.—This society met for the first meeting of the session on Oct. 29th, Mr. Thomas Richmond, the President, being in the chair. There was a good attendance of members to hear the President's address on *Reminiscences of my Student Days* and of Thirty-six Years of Practice. A reference was made to the days when darkness became light at the dawn of Listerism. After paying a warm tribute to Lord Lister the President reverted to the old Andersonian College as it was when situated in George-street. Of his old teachers, giants in the medical school of Glasgow 40 years ago, he spoke with deepest reverence, and tracing proudly the careers of those still surviving he alluded to the high positions which they now occupied in the medical world. The great advances which had been made in medical science within the last 40 years were next touched upon and an earnest appeal for a thorough review of the present treatment of inebriety was made —On the motion of Dr. D. Macgilvray, Mr. Richmond was thanked for his address.

ABERDEEN UNIVERSITY MEDICAL SOCIETY.—At a meeting of this society held on Nov. 6th Mr. A. N. Ross read a paper on Renal Surgery, its Rise and Progress. He rapidly sketched the various operations, discussing the indications for the use of each and ably criticising recent developments —Mr. J. Robertson followed with a paper on the Therapeutics of Light in which he traced the use of light in medicine from Finsen's time up to the present day. The structure and the use of the Finsen lamp and its modifications were well demonstrated.—Interesting discussions were held on both papers and votes of thanks to the lecturers, which were heartily accorded, brought the meeting to a close.

GLASGOW NORTHERN MEDICAL SOCIETY.—The second meeting of the session of this society was held on Nov. 3rd, Dr. A T. Campbell, the President, being in the chair.—Dr. J Lindsay Steven read a very interesting and instructive paper entitled "The Surgical Treatment of Gastric Disease from the Physician's Point of View."—A discussion followed in which several members took part.

WEST OF ENGLAND EYE INFIRMARY, EXETER.—The annual meeting of the subscribers to the West of England Eye Infirmary, Exeter, was held on Oct 30th, under the presidency of Mr. F. Hamlyn. The medical report stated that 3318 patients had been treated during the 12 months ended Sept. 30th last, the daily number of in-patients being 45. The financial statement showed that the ordinary expenditure had exceeded the income by £185. Dr. L. H. Tosswill who had resigned the post of honorary surgeon to the institution was appointed honorary consulting surgeon. The high sheriff of the county (Sir Thomas Acland) was elected president for the ensuing year.

Reviews and Notices of Books.

The Principles of "Open Air" Treatment of Phthisis and of Sanatorium Construction By ARTHUR RANSOME, M.D., M.A. Cantab., F.R.C.P. Lond., F.R.S., Consulting Physician to the Manchester Hospital for Consumption and Diseases of the Chest and Throat London: Smith, Elder, and Co. 1903. Pp. 104. Price 5*s.*

THIS volume consists of four essays dealing with various aspects of the "open-air" treatment of pulmonary tuberculosis. The first essay is entitled the "Principles of Sanatorium and Open-Air Treatment of Phthisis." A good and explicit account is given of the various factors which take part in systematic sanatorium treatment and of the advantages and possible disadvantages of this therapeutic measure. Dr. Ransome's remarks on "Diet and Full Feeding" are well worthy of attention. There is a tendency on the part of some physicians when directing a course of "open-air" treatment to follow slavishly certain general rules in the way of diet. This is an error; success consists in the individualisation of patients; each case must be carefully considered with regard to its own peculiarities. As Dr. Ransome expresses it: "We must beware of a mere mechanical adherence to fixed rules; our aim, on the contrary, should be true physiological feeding." To compel patients to eat three heavy meals daily, in spite of frequent vomiting, can hardly be altogether beneficial and we believe Dr. Ransome to be perfectly correct when he says, "The after-histories of some of the best examples of cures turned out by this or that sanatorium conducted on this system frequently show dilated stomachs or even damaged kidneys." Dr. Ransome also refers to the importance of gain in body-weight. Doubtless this circumstance is of no small importance; it conduces to ultimate cure, encouraging patients when they need all the perseverance they can command. Stress, however, might have been advantageously laid on the fallacious character of increase in weight. It is frequently found that although a patient may gain a stone or more in weight, nevertheless the physical signs and temperature chart indicate that very little substantial progress has been made. Gain in weight therefore is only of value when taken in conjunction with other marks of improvement.

The second essay is headed "On Certain Bodily Conditions resisting Phthisis." Careful consideration is given to points concerning the natural immunity of man to tuberculosis, but the most interesting part of this essay, to our minds, is the account of the condition of the blood in pulmonary tuberculosis and in those diseases which are usually considered to be antagonistic to that malady. The increase in the number of the red blood corpuscles in those patients under going the open-air treatment is remarkable; in one case 7,600,000 were found per cubic millimetre. Dr. Ransome believes that the success of sanatorium treatment may to some extent be explained by its blood-making power—"a power which may even have to be pushed beyond the limits of perfect health." This theory is not out of accord with the explanation usually given of the *rationale* of open-air treatment—namely, that by it the resisting powers of the tissues are greatly increased.

The third essay is concerned with the "Principles of Sanatorium Construction," and a diagram of the plans of a sanatorium has been prepared by Mr. G. A. Bligh Livesay, F.R.I.B.A. The general scheme is a good one but we have not space to criticise it thoroughly.

The last essay is on the "Pure-air Treatment of Phthisis at Home." We agree with Dr. Ransome that the open-air treatment can be carried out more perfectly in sanatoriums than in most private houses but there are many persons who will not leave their homes; and also there are those who, having been educated as to the manner of life they should lead in a sanatorium, appreciate the advisability of continuing it on their return to domestic life. Dr. Ransome details the precautions which have to be observed and the steps which must be taken to carry them out.

This little volume will be found a most interesting one and we can cordially recommend it to our readers.

Nothnagel's Encyclopædia: Diseases of the Stomach. By FRANZ RIEGEL Edited with additions by CHARLES G. STOCKTON, M.D. Authorised translation from the German under the editorial supervision of ALFRED STENGEL, M.D. London, Philadelphia, and New York: W. B. Saunders and Co. 1903 Pp. 835 Price 25*s.*

IT has recently been very forcibly urged that facilities for original and scientific research in clinical medicine are most inadequately provided for at our centres of medical education. Laboratory research proceeding hand-in-hand with clinical observations in the wards is an essential combination for the progress of medical science and for the solution of many problems in pathology which are of vital importance. In no field of medicine does a combined experience in laboratory and clinical methods constitute a more desirable qualification for practice or more richly repay the student who has availed himself of this dual method of research than in that branch of medicine which is concerned with diseases of the stomach and disorders of digestion. At many of the universities in Germany, France, Russia, and America the chairs of clinical medicine are occupied by professors who devote themselves to some particular branch of medicine and who attract to their clinics a large following of young qualified practitioners who give their time exclusively to research work in the laboratories and in the wards along the special lines of inquiry pursued by their chiefs, and in this way by the collective industry of a large number of workers a clinic such as that of Professor Riegel becomes a recognised centre for the acquisition and distribution of special knowledge. The clinics on the continent concerned with the study of the diseases of the stomach and of disorders of digestion include among others those of Riegel, Kussmaul, Ewald, Bouchard, and Pawlow; of these that presided over by Riegel is, perhaps, the most famous and has produced not only the largest harvest of practical results but the largest number also of distinguished investigators in the same field of research. Professor Riegel is a writer of no ordinary attainments: his powers of literary expression and of philosophic and logical reasoning place him in the front rank of medical authors of to-day, so that when we come to consider his unrivalled resources for the acquisition of knowledge on his special subject and his remarkable gift of literary exposition it is scarcely surprising that the great volume on the diseases of the stomach which he has contributed to Nothnagel's Encyclopædia is of the superlative degree of excellence which is universally admitted. It is greatly to be regretted that the failures and shortcomings of our own system of medical education make it impossible to produce teachers of the stamp and attainments of Professor Riegel and that our students and practitioners have to depend on the translation of foreign works for their sources of information. It was only recently that we reviewed in these columns a second edition of Professor Hemmeter's work on the same subject, a work which heretofore has occupied among us the position of the leading textbook on diseases of the stomach.

The duty of editing the translation of Professor Riegel's book has been entrusted to Professor Charles G. Stockton of the University of Buffalo and very excellently has the work been done. The literary brilliance of the original loses little of its polish in the English rendering and the few hiatuses in our knowledge which recent work has filled in and which the far-sightedness of the author did not anticipate have been dealt with by the translator in adequate notes and additions, all of which can be readily distinguished from the original text by the use of brackets. The subjects which have been thus amplified include a description of the following conditions: periodic vomiting in children, acute dilatation of the stomach, achylia gastrica, and congenital stenosis of the pylorus, to mention only the more important. The contents of the volume have been arranged in the following order: in the first part, which comprises the general diagnosis and treatment of gastric disease, the methods of examination both physical and chemical are described separately and systematically and at the expense of some 150 pages. Then follow the treatment of the diseases of the stomach in general and the treatment by drugs, by physical methods, and by surgery in particular. The second part, which occupies rather more than two-thirds of the pages of the entire volume, is devoted to the consideration of the special diseases of the stomach. Each group of symptoms which is to be regarded as a type or as a special disorder is arranged in an independent section; the order of arrangement as regards pathology, etiology, treatment, and other details is the same in each section. Each unitary section is completed by a very comprehensive bibliography.

Professor Riegel's book may be contrasted with Professor Hemmeter's work on the same subject in two respects. In the first place the latter author, as perhaps the leading authority on the physical methods of examination of the stomach, attaches more importance both for the purposes of diagnosis and of treatment to these expedients than does Professor Riegel who as a pioneer in the methods of chemical examination is naturally biased in their favour and loses no opportunity of infecting his readers with the same enthusiasm. In a second respect it may not perhaps be impertinent to contrast the two authors. While Professor Riegel's attitude of mind towards disease is one directed towards a process that of Professor Hemmeter is more of one which looks upon disease as a specific entity. Professor Riegel is not content with giving the disease a name: so far as possible he attempts to draw an accurate picture of the process which underlies it. This philosophic conception does not lend itself to a cut-and-dried method of classification and in the multiplication of possible pictures there is apt to be obscuration from the overlapping or superposition of images. The dangers which might arise from such a method of regarding disease might clearly prove fatal to a less skilful and brilliant exponent than Professor Riegel. However, by the occasional sacrifice of conventional classification he has emerged triumphant and by bringing his pictures into proper line and perspective he has produced a kaleidoscopic effect which shows clearly how one disease may merge insensibly into another without obscuring the central features which other authors accept as the *distinguishing* characteristic of specific entities.

It is, perhaps, open to question whether the author credits the nervous system with so important a rôle in the determination of gastric disease as indirect evidence and analogy warrant; for instance, in the pathogenesis of round ulcer of the stomach, the neurotrophic theory of Stockton hardly, in *our opinion, deserves to be dismissed summarily as* a theory which "throws no light on the subject." This theory suggests "that by the influence of some process analogous to herpes, to idiopathic hæmatoma auris, to Raynaud's disease, or to herpetic gangrene—some distinct and persevering nerve perturbation—we may best explain the recognised and unaccounted-for features of the clinical history" Professor Riegel was, we believe, the first observer to indicate the association of hyperchlorhydria and gastric ulcer, an association which is now almost universally admitted; in combination with Stockton's theory of gastric ulcer it certainly elucidates some obscure points in the etiology, such, for instance, as those of age and sex, which Professor Riegel seems unable to explain on his own hypothesis alone.

The weakest part, perhaps the only weak part, of this book is that which deals with dietetic treatment. This, especially when details of *menu* are entered into, is colourless and monotonous in the extreme. We could imagine that in many instances the dyspeptic patient would almost as soon submit to the inconvenience of his complaint as follow out the dietetic *régime* prescribed for him.

A Text-book of Chemistry for Students of Medicine, Pharmacy, and Dentistry. By EDWARD CURTIS HILL, M.S., M.D. Philadelphia: F. A. Davis and Co. 1903. Pp. 523. Price $3.

THIS work is evidently written by a writer of considerable teaching experience who is alive to the importance of a sound knowledge of theoretical and practical chemistry to the medical student. It is not often that teachers are able to recommend to the medical student a book which covers the many sections of chemistry which bear directly upon medical science. Usually any attempt to make a book so wide in scope produces far too bulky a volume and one altogether outside the limitations of a handbook. Dr. Curtis Hill has succeeded in this task and as far as possible without sacrifice of details, though the plan of the work necessarily involves brevity. He gains space, for example, by the use of symbols instead of writing out the names of the elements. This method leads to some curious writing at times. Thus under the heading of iodine occur such sentences as "I was discovered in 1811 by Courtois, a Parisian soap boiler." Throughout the work the spelling is according to the American method which leads to further abbreviation. As illustrating the comprehensiveness of treatment and the way in which the author has adapted the book to the needs of the student of medicine it may be stated that the work is divided into the following chapters: Medical Physics, Chemic Philosophy, Inorganic Chemistry, the Carbon Compounds, Analysis, Incompatibility, Sanitary Chemistry, Toxicology, Physiologic and Pathologic Chemistry, and Clinic Chemistry. That all these departments of chemical science have been dealt with in the limits of this volume without serious omissions is an achievement upon which the author may be congratulated. The student of medical and chemical science will find this book very helpful.

The [illegible] Teeth and Associated P[illegible] [illegible] C.S. L D.S. Eng., L.R.C.P. [illegible] London: Dental Manufacturing Company. Pp. 633. Price 25*s.* net.

IN many respects this book is unique inasmuch as it is the first time that a complete account of the histology and patho-histology of the teeth has been dealt with in one volume and in such an exhaustive manner. The contents are included under three headings, the first being the Histology of the Teeth and Associated Parts. In the initial chapter of this part Mr. Hopewell-Smith draws attention to what is a most important essential in the study of tissues under the microscope—namely, "careful preparation"—and he instances the discovery of the real nature and characteristics of Nasmyth's membrane as following on the employment of proper methods of preparation. A good idea of the character of the book may be gained from the chapter on enamel. The subject is considered under the following headings: General Characteristics, Enamel Rods and *Interprismatic Substances*, Curvatures of Rods, Supplemental Columns, Brown Striæ of Retzius, Lines of Schreger, and Enamel "Spindles." Each section is clearly described and well illustrated and the writings of different histologists are alluded to and their views are placed in a clear, straightforward way before the reader. In the chapter on the pulp we perhaps see the author at his best and we are treated to a most complete account of the histology of this tissue. There is evidence here of considerable original research into the structure of the odontoblasts at the different stages of life and also into the innervation of the pulp. The ultimate termination of the sensory nerves, as the author remarks, "constitutes one of those histological puzzles which yet remain unsolved." Considerable space is devoted to discussing the question and the views of different writers are marshalled in review, the author himself expressing the belief that the nerve fibres "terminate in a basket-work of varicose fibres, embracing and often closely attached to the cell walls of the individual odontoblasts."

Part II. is devoted to the Histogenesis of the Teeth of Mammals, Fishes, and Reptiles, and Part III. to the Pathohistology of the Teeth and Associated Parts. The opening chapters of the latter are devoted to the pathology of the enamel, and reference is made to a condition not hitherto described in text-books—namely, nanoid or dwarfed enamel. In this condition the crowns of the teeth may be fully developed but present rough lustreless surfaces of a somewhat light yellow colour. In the cases investigated enamel was always present but greatly attenuated and stunted in growth. We are hardly in agreement with the author on the histology of syphilitic teeth. He remarks: "The surface is not absolutely smooth but contains pits which are filled with micro-organisms of a reddish-brown colour, thus indicating that caries is not in progress." In many cases of congenital syphilis seen in practice with typical-shaped teeth the enamel is devoid of pits and is good in structure. The description of syphilitic teeth in text-books is frequently incorrect and misleading. In the chapter on pathological conditions of the dentine the description of dilaceration as a developmental disease is open to criticism. "Dilaceration" at the outset is a bad term and the condition is the result of injury to the growing tooth and is in no way due to a developmental defect of the dentine papilla. The illustration, too, given of a "dilaceration" of the radicular region of a human canine we are inclined to consider as simply showing a tortuous root the result of crowding and in no respect a developmental error. By these criticisms and others which might be offered we wish in no way to depreciate the value of a book which is a most excellent contribution to the literature of medical knowledge. The printing of the book is good but is it not possible for expensive books of this character to be better bound?

LIBRARY TABLE.

Gynæcological Nursing. By NETTA STEWART. Edinburgh: Oliver and Boyd. 1903. Pp. 174. Price 2*s.* 6*d.*—This little book contains an excellent account of all that a gynæcological nurse ought to know. There are many points in which such nursing differs from that met with in surgical wards, and on these due emphasis is laid in this work. The author has been fortunate in her efforts to give sufficient prominence to those facts which are of special importance and yet not to leave out anything of value. In a future edition we would suggest that Miss Stewart should avoid the use of such terms as Henry's lotion and she should be a little less dogmatic in regard to some methods of treatment such as the administration of vaginal douches after perineorrhaphy and the use of the catheter in similar cases, points upon which surgeons are by no means in entire agreement. An index would considerably increase the value of the book. It is, however, a manual which we can strongly recommend to those nurses who wish to know something of this special class of work.

A Simple Method of Water Analysis. By JOHN C. THRESH, M.D. Vict., D.Sc. Lond. Fourth edition. London: J. and A. Churchill. Pp. 62 Price 2*s.* 6*d.*—The demand for a fourth edition of this little manual is evidence of its usefulness. The method described is especially designed for the use of medical officers of health and is based, of course, upon laboratory methods which are usually carried out with some detail. The author has in response to the request of several medical officers of health added a description of a simple form of distillatory apparatus for the estimation of the free and organic ammonia Practically the same methods as are applied to the examination of a drinking water are applied also to the examination of sewage. Dr. Thresh's remarks on the significance of the results of analysis are admirable.

Matriculation Directory. September, 1903. London: University Tutorial Press, Limited.—This is a volume of the University Tutorial Series and will be found an excellent guide to anyone who intends to study for the examinations of the University of London. In addition to a University of London Calendar for 1903-04 directions are given as to the best course of study according to the nature of the degree which the student intends to take, suggestions are made with regard to suitable text-books, and the examination papers set for the last matriculation examination are printed, together with specimen solutions.

JOURNALS AND MAGAZINES.

Edinburgh Medical Journal.—The opening article in the November number is Professor D. J. Cunningham's introductory address delivered to the class of anatomy in the University of Edinburgh on Oct. 13th. It consists essentially of an interesting historical account of the growth of anatomical knowledge. Dr. A. Logan Turner of Edinburgh publishes a further instalment of his memoir on the Patho logy of "Bone Cysts" in the Accessory Sinuses of the Nose. Dr. Henry Barnes of Carlisle writes on the celebrated Boerhaave of Leyden. Dr. Thomas D. Luke of Edinburgh discusses the action, administration, and effects of ethyl chloride used as a general anæsthetic. His opinion is strongly in its favour.

Scottish Medical and Surgical Journal.—Insanity and Alcoholic Excess is the subject of the first article in the November number. The author, Mr. John Carswell of Glasgow, considers that "it is tolerably clear that inebriety as it has been revealed by the operation of the Inebriates Acts is a type of mental disorder as definite in its origin, course, and general characteristics as any other form of disease." Habitual inebriety, according to him, is not a stage in the causation of insanity but is a form of mental disorder which as the law at present stands rarely presents symptoms of certifiable insanity. There are also articles on the Occurrence of Epistaxis at the Onset of Acute Rheumatism, by Dr. H. G. Langwill of Leith; on Protargol in Ophthalmic Practice, by Dr. Angus McGillivray of Dundee; and on Abdominal Sections, by Dr. J. M. Munro Kerr of Glasgow. In a short note on the Abdominal Muscles in Relation to Hernia Mr. J. W. Dowden of Edinburgh remarks that in cases of lax and protuberant abdomen much improvement may be effected by systematically exercising the abdominal muscles.

Mercy and Truth.—In one of the articles contained in the November number Dr. D. W. Carr of Julfa in Persia mentions that at the mission hospital in that place local anæsthesia produced by cocaine was resorted to in 61 operations performed in 1902; the operations included 39 for the radical cure of hernia and one abdominal section.

Journal of the Royal Army Medical Corps.—The November issue of this journal contains a useful article from the pen of Colonel J. Edward Squire, R.A.M.C. (Volunteers), on the work of a Volunteer Unit of the Royal Army Medical Corps in Camp. This is a matter which, as the author points out, is beset with considerable difficulties and the plan detailed will be read with interest by all medical officers. The article is illustrated with a photoprint and plan of the Royal Army Medical Corps (Volunteers) Camp, London Companies, at Aldershot, 1903. Major C. E. Freeman, R.A.M.C., discusses for the benefit of officers and others proceeding on duty to Bermuda the geographical and other features of that colony. Hints on the kind of kit required are given and as many officers are married some points which may be useful to ladies are included in the article. The population of Bermuda consists, apart from the naval and military element, of 17,535 persons, of whom 6383 are white. Major Freeman concludes his interesting description of Bermuda by remarking that "there is much to attract anyone who is a lover of nature and the sea." Major W. H. Horrocks, R.A.M.C., has a long paper on the Bacillus Coli Communis as an Indication of Sewage Contamination of Water Supplies, and Lieutenant-Colonel S. F. Lougheed, C.M.G., R.A.M.C., some notes entitled "Further Cases of Perforating Gunshot Wound of the Skull."

South African Medical Record.—This colonial monthly journal is one of the most recent additions to the list of our contemporaries, having reached its eighth number in October. The original articles in this issue are on the Medical, Social, and Legal Aspects of Insanity, by Dr. T. D. Greenlees of Grahamstown Asylum; on Student Life 50 Years Ago, by Mr. F. Ensor of Port Elizabeth; and on Camp Fever, by Dr. J. E. Mackenzie of Kimberley. The leading article is on Hospital Scandals and their Lessons It seems that "at the present moment a very bitter disagreement between the matron and the nurses under her control is agitating the Johannesburg Hospital." The new Somerset Hospital appears also to have established a reputation for internal discord. The *Record* is edited by Dr. W. Darley-Hartley and published at Lloyd's Chambers, Long-street, Cape Town. The London agents are Messrs. Baillière, Tindall, and Cox, Henrietta-street, Strand, W.C.

The Journal of Physiology. Edited by Sir Michael Foster, K.C.B., F.R.S., and J. N. Langley, Sc.D., F.R.S. Vol. XXX., No. 2. London: C. J. Clay and Sons. Nov. 2nd, 1903. Price 8*s.*—The contents of this number are as follows: 1. The Paralysis of Nerve Cells and Nerve Endings with Special Reference to the Alkaloid Apocodeine, by W. E. Dixon, M.D. This alkaloid is shown to lower blood pressure, produces vaso-dilatation, causes the heart to beat more rapidly, increases the automatic movements of plain muscle, increases reflexes, paralyses the motor nerve endings in voluntary muscle, and very readily paralyses nerve cells in the same way as does nicotine. 2. A Method to Demonstrate the Changes in the Vascularity of the Submaxillary Gland on Stimulation of the Secretory Nerves, by R. Burton-Opitz, with two figures in the text. It is shown that stimulation of the chorda tympani incited a blood flow which was from 1·7 to 5·6 times greater than the normal. Stimulation of the sympathetic fibres, on the other hand, led to almost a complete stoppage of the blood flow. 3. The Nature of the Physiologically Active Substances in Extracts of Nervous Tissues and Blood, with some remarks on the Methods of Testing for Choline, by Swale Vincent, M.B., and W. Cramer, Ph.D. The experiments of these observers show that there are two groups of substances in watery extracts of nervous tissue which when injected into the veins lower the blood pressure. One group is easily soluble in absolute alcohol and the other is nearly insoluble. The alcoholic solution contains two depressor substances: one of them has its effect abolished by atropine and the other has not. They have not found any choline in brain substance. 4. Investigations on the Proteolytic Enzymes of the Spleen of the Ox, by S. G. Hedin. In this article two proteolytic enzymes are stated to be present in the spleen of the ox; both have been found in two forms—combined with nuclein substances and *not combined with nuclein substances.* The enzymes are probably contained in the leucocytes of the spleen. 5. Atropine and the Hyoscyamines—a Study of the Action of Optical Isomers, by Arthur R Cushny, M.D., with two figures in the text. The two substances are stated to act when pure in the same way and with equal potency on the central nervous system of the frog. Atropine possesses a more powerful stimulant action on the reflexes of the spinal cord in the frog than does hyoscyamine, but hyoscyamine is almost twice as powerful as atropine in its action on the nerve ends in the salivary glands, the heart, and the pupil 6. On the Presence of a Proteolytic Enzyme in the Normal Serum of the Ox, by S. G. Hedin. 7. Contributions to Our Knowledge of the Action of Enzymes, Part I., the Influence of Electrolytes on the Action of Amylolytic Ferments, by Sydney W. Cole. The number also contains the Proceedings of the Physiological Society.

Looking Back.

FROM

THE LANCET, *SATURDAY,* NOV. 12, 1825.

LECTURES ON THE ANATOMY, PHYSIOLOGY, AND DISEASES OF THE EYE.

By Mr. LAWRENCE.

London Ophthalmic Infirmary, Moorfields.

LECTURE III.[1]

Physiology of the Eye-ball.

A question here arises, how these changes[2] take place. They are not produced by the immediate influence of light upon the iris; for if we direct a strong light upon that part, taking care that it shall not enter the pupil, no contraction of the aperture takes place. The iris does not move; the pupil is not altered, unless the retina be influenced.

If then, the motions of the iris depend on the retina, when the latter becomes insensible to light the pupil ought no longer to exhibit any change from variation in the quantity of light, and any degree of insensibility in the retina ought to be accompanied with a corresponding deficiency of motion in the iris. In general this is the case; but the phenomena of disease present some circumstances which are not reconcileable with this view of the question. In the first place, we must distinguish between the independent motion of the iris, and its associated or sympathetic action. The latter often continues, when the former is at an end. Sometimes the optic nerve is completely insensible in one eye, and light produces no effect whatever upon the iris of the diseased eye, if the sound eye be kept carefully closed; but if you produce motion in the iris of the sound eye, by varying the quantity of light, corresponding motion will be observed in the diseased eye.

Another circumstance is quite irreconcileable with the opinion which regards the action of light upon the retina as necessary to the motions of the iris. In some instances, not merely of partial, but complete amaurosis, the iris not only retains a degree of motion, but occasionally its movements are perfect. In amaurosis caused by hydrocephalus, when the retina is completely insensible, so that the patient cannot distinguish light from dark, I have not unfrequently seen, and pointed out to pupils in this Infirmary, a perfect state of the motions of the iris. The phenomenon in question is not confined to instances of that description.

These facts throw considerable doubt upon the received notions respecting the physiology of the motions of the iris, and on the usual explanation of that familiar phenomenon, the changes in the dimensions of the pupil.

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[1] An excerpt only is transcribed.

[2] *Contraction and dilatation of the pupil.*

DR. OTTO SCHMIDT'S SPECIFIC TREATMENT OF CANCER.

AN ADDRESS DELIVERED BEFORE THE ABERNETHIAN SOCIETY AT ST. BARTHOLOMEW'S HOSPITAL ON NOV. 5TH BY H. JOSSÉ JOHNSON, M.B. LOND., D P.H. CANTAB, FOLLOWED BY A DISCUSSION.

MR. PRESIDENT AND GENTLEMEN, — When less than three weeks ago I asked to be allowed to lay before the members of this society the notes of my observations on Dr. Otto Schmidt's specific treatment of cancer I hardly expected to have so early a date granted me as the present. This is, as you know, the evening set aside for your President, Mr. H. E. G. Boyle, to address you. He, however, most generously decided to postpone his paper in favour of the subject on which I am about to speak. I now at once beg to thank him for his most self-sacrificing action and to express the hope that my handling of the subject will not make him regret his generosity. I should also like to express the gratification I feel at being allowed in the first place to make my communication in my old hospital to St. Bartholomew's men. The Abernethian Society is an old friend. The first paper I ever perpetrated was read to its members many years ago. The subject then was the value of a knowledge of the German language for medical studies. My most recent experience has made me more sure than ever of the views I then held. It is just that knowledge and training which have enabled me in a comparatively short time to form a definite and settled opinion upon that question which is certainly the burning one in the medical world, the question which deals with the cause and successful treatment of cancer, or rather of the cancerous process. When it was proposed to me that I should go to Cologne and study under Dr. Schmidt and report upon the treatment which he was then initiating on the strength of a discovery he had made, you may easily understand I was most willing to go and considered myself very fortunate. My stay in Cologne was prolonged and as Dr. Schmidt put all facilities at my disposal as well as a great deal of his valuable time—he is in large practice as a consulting and operative surgeon —I think I may say I got a very thorough insight into the method and *rationale* of his treatment. What I saw and learnt I propose shortly to lay before you this evening.

There can be no useful purpose in discussing the various theories as to the causation of cancer here or now. The one most generally held amongst clinicians is the parasitic theory. It is upon this theory and the discovery by him of a parasite that Dr. Schmidt's treatment is based. It alone, therefore, need shortly be outlined. According to this theory the occurrence and growth of carcinoma and sarcoma are due to a living parasite, that is to say, a living parasite enters the body and there finds an anaplastic abnormal cell. Under suitable conditions the parasite irritates this cell to division and to produce new cells of its own kind. Into these new cells the progeny of the parasite enters and so the vicious circle is formed. The aggregations of cells, all of the same kind, form malignant growths, and wandering cells of the same kind carrying the parasite form metastatic deposits wherever they come to rest. The growths and metastatic deposits press upon, and destroy, the normal tissue of the organ in which they grow, but the prime cause of the growth, of the destruction of the normal tissue and of the eventual death of the sufferer is the parasite. The parasite is what we have first and foremost to combat and if possible to remove from or destroy in the body of the patient, for without the irritation, and this irritation constantly renewed, the anaplastic cell will not divide and increase. Unlimited growth of the tumour is only due to unlimited growth and multiplication of the parasite. That is, shortly, the parasitic theory. You will see that, according to this theory, any treatment to be successful must be anti-parasitic and not antitoxic, and therefore by some means anti-bodies must be introduced into the blood of the patient, that is, he must be actively immunised or else we must passively immunise him by injecting a serum containing anti-bodies ready formed, the serum of the immunised animal. This is the view held by Dr. Schmidt. He considered that the direction in which successful treatment must be sought was clearly marked out—namely, that a specific treatment was the only one. About the middle of last year (1902) after many years—nine or ten—of research, Dr. Schmidt succeeded in cultivating artificially a parasite hitherto unknown and at least more or less undescribed. It fulfilled most of the conditions necessary to prove its specificity. It was found in every malignant growth examined; it was capable of artificial cultivation in pure culture. In two cases—and I shall come to that point again —tumours were produced in white mice by injections of pure culture. Fourth, the same parasite was found in these tumours and from them was again cultivated in pure culture. Fifth, the parasite does not occur in benign tumours. As to point three, the difficulty of producing malignant growths in any animal is enormous if only pure cultures of the parasite are used. First, who can say which animals have the necessary anaplastic cells? And granting that such an animal were found we know that the parasite and the cell alone are not enough to cause the disease. In all these cases there is a third factor, which we may call environment. Yeast and sugar want the environment of warmth and moisture before the yeast can grow and the alcohol be formed. We all have lungs and we all have tubercle bacilli and pneumococci; but we do not all have phthisis and we do not all have pneumonia every day. It wants a certain environment besides. Given the anaplastic cells and the parasite, who can say what the environment of the animal must be in order that they may react and produce a malignant growth? Jensen's experiments quoted in the *Hospital* of Oct. 3rd by Mr. D'Arcy Power were not inoculations in the pure sense of the term, they were not inoculations of pure culture; they were implantations of growth—cells and parasite—and therefore they do not compare at all with the little white mice which were infected by the pure culture. Having settled these points to his satisfaction Dr. Schmidt felt compelled to commence the treatment of patients. I give it in his own words. He said to himself, "The most notable task of the physician is to cure If I have found something which promises to be of therapeutic value to patients suffering from a horrible disease and being convinced as to the correctness of my observations it becomes incumbent upon me to put my knowledge to practical use, even before science has allowed that it fulfils all her strictest requirements. No cancerous person was ever cured even by the most beautiful theory and if I wait till all authorities have given their opinions much time will be lost and much suffering left unrelieved."

It is not my intention now to enter minutely into the appearances of the parasite, its mode of growth, or the parts where it is most abundant. Such descriptions without diagrams and photographs are useless and I have none to show you. Suffice it to say that both in appearance and character the parasite is very varied Those who have studied the work of Russell in the *British Medical Journal* in 1890, or of Gaylord in the *American Journal of the Medical Sciences*, or the work of Schüller (1901) will know the various forms which the cancer parasite is capable of assuming. I have had the privilege of seeing all the forms which those authors describe and which are various forms of the parasite produced in pure culture. Plimmer found them in 1138 out of 1278 fresh malignant tumours which he examined. That by artificial cultivation it is possible by varying the conditions under which they are grown to produce these forms proves to my mind the correctness of Gaylord's observations. At what point he was led astray by a false analogy need not detain us now. That these are different forms or phases of the same parasite has been proved beyond question. Dr. Schmidt isolated one single parasitic cell and by artificial cultivation under varying conditions of light, air, moisture, and warmth, produced all the other forms from it. The *rationale* of treatment is twofold. Firstly, active immunisation—that is, by the injection of cultures, 14 to 21 days old, which have been first killed by the application of heat (65° C.); and, secondly, passive immunisation, by the injection of the serum of immunised animals, sheep and horses, into the subcutaneous tissues of the patient. I shall bring to your notice accounts of cases which have been treated by these methods, by each of them alone and by both in conjunction. The potency of the serum of the immunised animals has not yet been brought to its highest point. It is a procedure which takes time and is expensive The height of the grade of a serum depends largely upon the amount in bulk of the virulent culture which the animal can absorb. Ordinary injections contain a quantity of bacterial envelopes which are simply unnecessary ballast and retain much of the toxin. To overcome this difficulty attempts have been made to produce an extract of the cultures and so to lessen the bulk of the injection by increasing its concentration. Buchner's method was to rub the mixture to a fine paste with Kieselguhr and to pass it through a dense filtrating material under a pressure of 500 atmospheres. Professor Allen Macfayden on Sept. 23rd last at Cassel showed that the toxins can equally well be extracted from bacterial and other cells by first subjecting them to a very low temperature, —190° C., by means of fluid air. This renders the bacterial envelopes friable and their contents are set free. It will now be possible by using this extract to bring animals up to a higher grade of immunity and also more quickly than before he made his most interesting experiments.

Treatment.—It is usual to commence the treatment of the cancer patient in a very mild form. On the first day $\frac{1}{15}$th of a milligramme of the sterilised culture is given and on the second day one tenth, on the third day two-tenths, and on the fourth day one milligramme. But no hard-and-fast rule can be laid down. These doses are usually large enough to produce the characteristic reaction. The sterilised culture is used suspended in ½ per cent. solution of carbolic acid. The serum has to be used in quantities of *20 centigrammes but as the potency is increased the quantity* will be diminished. It is immaterial in what part of the body the injection is made so long as there is sufficient loose connective tissue. It is not adviseable to inject into or near the tumour itself.

Results of active immunisation—The most constant and most striking result of the injections into the body of the cancerous patient is a specific reaction in the tumour and infected parts. This specific reaction which I have observed and watched in a large number of cases I shall describe more minutely presently. Injections of the cultures into a healthy subject or into one suffering from any other disease produced no symptoms whatever beyond the pin-prick of the hypodermic needle. But if the cancerous process is in the body then the specific reaction is produced whenever there is any recuperative power in the blood of the patient. After the second or third injections and generally eight or ten hours afterwards there is a general sense of malaise. The temperature rises more or less; most often the evening temperature alone is raised but sometimes the morning temperature is also affected In a few cases the highest temperature is found in the early morning hours. The rise may occur suddenly or it may go up by daily increments to 102° F., then it falls to the normal in two or three days. The primary rise of reaction may go on in spite of the discontinuance of injections as soon as the temperature rises at all. Patients whose blood is already poisoned by toxins—cachectic patients—often do not react at all. Their blood, owing to the amount of toxins already present, is incapable of being roused to the manufacture of anti-bodies; should there be a reaction it is a sharp rise to 103° or 104°, ushered in with rigors. Local signs and symptoms are noticed about the same time as the first rise of temperature. The constant symptoms are, firstly, swelling of the tumour and of any metastatic deposits or infected glands; secondly, pain in the parts or increase of pain if such were previously present; and thirdly, tenderness of all affected parts. As you will see from this description the specific reaction is, in fact, an inflammatory process with all the attributes of such a process—redness, swelling heat, and pain. One or other of the attributes may be masked or wanting, according to the site of the trouble. Thus redness does not show itself where the skin is not involved but local rise of temperature is often demonstrable where deep-lying structures are affected. In enclosed primary tumours and metastatic growths pain or an increase of pain is noticed eight to 12 hours after the second or third injection. It is generally of an aching or boring character, or if the growth is on, or near, a large nerve trunk it is described as shooting or lancinating. The examining hand is often led by the pain indications to find metastatic glands and deposits where the most careful examination failed to detect them previously. All affected parts at the height of the reaction are so tender that we may speak of a high grade of local hyperæsthesia. If the skin is affected the pressure of the clothes is described as unbearable. The objective symptoms closely follow the commencement of pain. The deposits swell, both to feeling and to mensuration. The consistence becomes firmly elastic, especially in small and medium-sized tumours. Those with more or less of a capsule give almost a sense of fluctuation. Infiltrating forms feel softer than previously but not elastic. If the skin is infiltrated there is inflammatory œdema. All parts of the tumour do not show these changes equally. The younger the growth the more marked is the reaction. The oldest parts show least change, often none at all in the earlier stages. The limits which clinical examination had marked out as the confines of the growth are exceeded in all directions. There is frequently a zone of redness two or three centimetres broad ending in a sharply defined border all round. Sometimes these reactive changes run out in tongue-like processes or bring to notice a band of infiltration leading to infected glands. If the skin is involved in the process the latest attacked parts show reddening and œdematous infiltration. Sometimes redness extends into the neighbouring tissues when the reaction is very violent.

The activity *of the reaction varies very much in individuals* and diminishes as the patient becomes immune. As far as can be told at present closed carcinomata react more violently than do those which are free or consist of breaking-down cells. Cachectic patients react hardly at all, and when I say cachectic patients I mean those who are suffering from the cancerous cachexia properly so-called, not those who on account of œsophageal or gastric cancer are suffering from starvation cachexia. These last react freely and well. 29 *cases have been treated sufficiently completely for* conclusions to be drawn from them. Nine of these were of the uterus, eight of the breast, three of the ovary, two of the stomach, three of the tongue, two of the intestines, one of the mucous membrane of the cheek, and one of the thigh—a sarcoma of the femur. For diagnostic and other purposes over 140 single observations have been made and in all the 140 the reaction was positive. It was also positive in 28 out of the 29 that I have just mentioned. The exception often proves the rule and this one offers a most striking proof of the specificity of the reaction and the value of injection for diagnostic purposes. It was that of a lady, aged 73 years, who had been ill for 15 months. There was a history of a hard tumour in the abdomen and ascites. The diagnosis of inoperable carcinoma had been made. Paracentesis was performed for the first time in August, 1902, the second was performed in January, 1903, and the third in April. A few weeks after the third paracentesis and when the fluid had again begun to accumulate in the abdomen the patient came under Dr. Schmidt's treatment The state then found was in the abdomen: above the inguinal region there was a slightly moveable tumour of the size of a goose's egg. The abdomen exhibited a coarse wave of fluctuation. The limit of dulness showed this to be free fluid. The general state was bad: pain in the gastric region and great emaciation. On this finding the previous diagnosis of inoperable carcinoma was confirmed and injections of sterilised culture were commenced. Contrary to expectation there was no reaction, not even the faintest, although inside 14 days the quantity was raised to six centigrammes or six times the maximal dose Therefore Dr. Schmidt altered his diagnosis and gave his opinion that it was an innocent and not a malignant growth. He did not hesitate to operate and at the operation a large cyst of the right ovary was found which was everywhere adherent to the anterior abdominal wall from the sternum to the hypochondrium. On the inner side of this was a group of small and medium-sized daughter cysts. This group remaining tense when the main cyst collapsed on paracentesis formed the small fixed tumour. The adherent cyst walls—not the mother cyst shrunk on itself—gave, when partially filled, as found on examination, every sign of free fluid. It was possible to remove the tumour completely. It was innocent in character in every part and the patient left 16 days afterwards cured. She is now well and has put on one and a quarter stones in weight This was the exception. The remainder of the cases were, according to all clinical and frequently also microscopical evidence, undoubtedly malignant in character. The greater part were recurrences after one or more operations. Only one of the cases was sarcoma; the rest of the cases were carcinomata. I may say that this evening I shall only mention such cases as occurred externally. Carcinoma of the uterus, of the œsophagus, of the stomach, and so on react in exactly the same way but any *descriptions one gave of* them might easily be looked upon as pious self-deceptions. Therefore I have chosen cases only which I have seen and where the external signs were easily observed. To illustrate the similarity of reaction in the two main classes of malignant growths I shall quote first a case of carcinoma and then one of sarcoma for comparison with it merely for the sake of pointing out the reaction. Mrs. H., aged 52 years, declared that immediately after a blow on the right breast in November, 1897, she noticed a small lump which grew until Feb. 7th, 1898. It was diagnosed as carcinoma in von Bergmann's clinic, in Berlin, and the breast and axillary glands were removed. In July, 1898, a further operation for removal of the supra- and infra-clavicular glands was undertaken. In March, 1898, the patient got a blow on the right forehead and "a boil" formed, as it was called by the patient, which on healing left a knot of the size of a bean. This was held to be a sebaceous cyst when the operation in July was performed as well as in further operations in November, 1902, and February, 1903, for the removal of recurrences of original growth *in situ*. It had now grown to the size of a walnut and in June, 1903, when a sixth operation for removal of recurrence of original growth was performed it had attained the size of an orange. Bergmann himself now pronounced it to be a metastatic deposit and gave a very unfavourable prognosis if he should operate. The husband was informed that two months would see the end. The operation was declined and she came almost directly afterwards to Cologne. On July 1st the last operation wound was not yet closed; there was no local recurrence and no glandular affections were to be found. On the upper right forehead there was a smooth, hard, evenly-rounded swelling three and a half inches long sagitally, two and a half inches broad, and rising to a height of five centimetres—that is to say, two inches, above the surrounding scalp, measured vertically. The consistence was everywhere equally hard, like a fibroid. The colour of the skin over the tumour was natural. Further behind and to the left was another knot of the size of a broad-bean. The injections were commenced on July 30th. Although the temperature rose directly after the first injection the local reaction showed itself first on the fourth day. This is the temperature chart.

Date.	Amount of injection (gramme).	Mouth temperatures.		
		Morning.	Midday.	Evening.
June 29th, 1903.	—	—	—	98·4°
,, 30th, ,,	0·00002	—	—	98·9°
July 1st, ,,	0·00004	98·7°	—	99·2°
,, 2nd, ,,	0·0001	98·7°	99·1°	99·5°
,, 3rd, ,,	0·00015	98·2°	100·2°	100·0°
,, 4th, ,,	0·0002	98·4°	99·3°	99·2°
,, 5th, ,,	—	98·3°	98·4°	99·3°
,, 6th, ,,	—	97·6°	98·0°	98·6°

You will see the temperature was taken before the injections were made and it was perfectly normal. $\frac{2}{100}$ths of a milligramme were injected on the first day, $\frac{4}{100}$ths ot a milligramme were used on the second day, and on the evening of that day there was a slight rise of temperature and that rise continued gradually as the injections were raised. When they were discontinued the temperature fell again to the normal in two days. But the patient, who previously had little or no pain, had on this fourth day not a moment's peace. In the region of the breast and under the arm the pains were aching and drawing in character, and in the tumour itself and in the right side of the neck shooting and lancinating. On July 4th, when the height of the reaction was present, the measurements were about one centimetre larger in every dimension; the consistence of the tumour was sub-elastic, the lightest touch was extremely painful, and the skin over it was tense and very red, so that it looked like a red polished ball. The redness extended two fingers' breadth into the surrounding skin of the scalp and forehead in all directions. The smaller tumour was enlarged, red, and tender. The part of the scalp between the two was not altered in the least. In the supraclavicular region and lying on the nerve plexus was a soft flat gland of the size of a hazel-nut, very tender, and touching it produced lancinating pains in the arms. There was a second enlarged gland in the infraclavicular fossa. On the sixth day the reaction was finished and the pain had gone and the tumour began to decrease in size. Later, at the beginning of last month, Oct. 6th, the glands had become perfectly hard and the pain from their contraction, especially the one on the brachial plexus, became bad and constant and the patient begged that they should be removed by operation. This Dr. Schmidt undertook to do and I assisted him. It was done on Oct. 10th. Two of them were found to be only small, but very hard, masses of connective tissue bound firmly to the surrounding part by strong fibrous adhesions. The other was undergoing degeneration. I shall refer to this again later. When I saw the forehead tumour for the first time it was about one-third bigger than when I saw it for the last time on Friday, Oct. 30th. It had steadily decreased the whole time and the patient herself was perfectly well except for the pain in the arm. She was cheerful and putting on flesh and was going on as well as any patient could wish to. She has attained such a degree of immunity that seven centigrammes of the culture can be injected without any reaction taking place at all. Now, by contrasting the reaction in the two cases—that is to say, that case with the sarcoma—you will see practically no difference. She had been treated with the Roentgen rays, and disarticulation of the thigh had been proposed and refused. The tumour was on the front and inner side of the thigh extending longitudinally over the whole middle third of it. The circumference of the affected leg, taken over the tumour, was—above, 24 inches; middle, 22½ inches; and below, 19¾ inches. To make sure that future measurements should be taken at the same place lines were drawn by means of a tape on the skin with a stick of nitrate of silver. The treatment began on July 22nd, when $\frac{1}{100}$th of a milligramme of culture was injected. On account of the increased pain the dose could only be gradually increased and consequently only the very slight rise of temperature in this case must be probably ascribed to that cause. Her temperature never rose above 99·1° F., but nevertheless the curve of evening temperature showed very clearly how the temperature did rise during the injections, and then when they were discontinued it again fell to normal two days afterwards. The pain in the tumour was much increased and the local rise in temperature was very marked. Measurements were taken at the height of the reaction and they showed an increase of two centimetres in all three measurements. At the end of the sixth week of treatment they had gone back three centimetres, so that the sarcoma had decreased in six weeks instead of increasing. The local processes of reaction are not confined within the limits of examination. These limits frequently are over-stepped and you find glands and metastatic deposits which previously defied the most careful search. This can only be explained by supposing that every tissue reacts to the specific irritation. There is, further, a zone of inflammatory œdema which is referable to an immigration of quantities of leucocytes into the surrounding tissues. This is only an exaggeration of the process found in the parts around every cancerous growth. In the case of one gland which was excised—in the carcinoma case—this immigration was well marked in microscopical sections which were cut. The other two showed no cancer cells. This one showed in the centre a few remains of infiltrated cells undergoing fatty degeneration and pressed upon by the surrounding fibrous tissue. But all round the gland there was a zone of leucocytes showing that reaction was still going on. Complete certainty as to the process can only be obtained by microscopical examination of strips of tissue removed from the parts during the height of the reaction. We obtained such material whilst I was there; it is being hardened and will be cut shortly. I hope to make a further report upon this point. In open growths the local processes of reaction run a different course; the most striking points are the drying up of the secretion and the diminution of the purulent discharge. When on the surface and so exposed to the drying influence of the air a crust can be noted on the third or fourth day of injection. This scab is not only dried secretion but includes a superficial dead layer of tissue. An accumulation of fluid is formed beneath this and is cast off. A new scab forms, this is cast off like the other; and so the process continues until the healthy tissue is reached on which the scarring proper can take place. In body cavities and moist parts, such as the mouth, the corresponding tissue is cast off in gangrenous pieces. This was illustrated in a case of cancer of the tongue which was in a very advanced stage. Early in the disease no definite diagnosis was made and it was so far advanced when recognised that operation was impossible. The anterior part of the tongue and the frænum were largely infiltrated. The growth was covered with a whitish stinking secretion. The mouth was swabbed out with hydrogen peroxide and anæsthetising powders were given to allay the pain. On account of the swelling of the tongue the minute dose of $\frac{1}{200}$th part of a milligramme of culture was used and only very gradually raised to $\frac{1}{10}$th of a milligramme, which was the highest dose she has had up to now. There was a decided reaction and an undoubted healing tendency was observed. After a few days the slimy coating disappeared and pieces the size of a pea were cast off. A line of demarcation was visible between the healthy and the inflamed parts. The pieces were first blue-black and then greyish and then fell off. After 14 days' treatment there was no suspicion of foul odour in the breath or from the tongue and that without using any disinfectants. This casting-off of parts was only at the edges where the tissue was already profoundly affected. The compact parts of the tongue showed only redness and swelling. Having now described the reaction which takes place in cancerous growths when sterilised cultures of the parasite are injected I wish to draw your attention to the value of the reaction as a fresh proof. I have mentioned that this parasite is the primary cause of malignant growths. It is the interchangeable relationship between the two which, to my mind, furnishes this proof. If the injection of minimal doses of a culture into subcutaneous tissues of the cancerous patient, far from the seat of the tumour, causes an inflammatory reaction in the growth which extends to its remotest parts and in which every nodule and metastatic deposit and every infected gland take part, and if only malignant tissue answers to it (and malignant tissue always does and healthy tissue never does) then the injected material is specific for the cancerous process. Unless we deny the facts which lie at the foundation of all serum therapy we must accept the relationship between the parasite and the growth, and this interchangeable relationship can only be one of cause and effect; the injection and reaction of the parasite on the growth must be cause and effect.

The healing process.—The reaction, then, is of an inflammatory nature, confined to the cancerous parts, more or less acute according to the newness of the growth and the condition of the patient. It is of short duration, a few days only. A chronic state of inflammation can be induced by setting up reactions at short intervals or by raising the injections gradually but without pause. In this last procedure the local effects and the pain are less but the final result is the same. The inflammatory process is not enough in itself to cause retrogressive change in the growth or to check proliferation of the cancer cells. The immigration of leucocytes is necessary for the destruction of the parasite. The anti-bodies can only weaken the parasites. For their complete destruction alexins are necessary *in vitro* and the leucocytes *in vivo*. To be able to produce the inflammatory process in the very part we wish to attack is therefore most important. Dr. Lovell Drage pointed out the importance of leucocytosis in such cases when speaking at the British Medical Association meeting in Swansea last July, and he had previously published his experiences in trying the effect of injections of cinnamate of sodium in producing leucocytosis. In the treatment I am describing this leucocytosis is produced and exactly in the parts where it is wanted. The leucocytes finish what the anti-bodies have begun. By the injection of serum from immunised animals the anti-bodies are introduced ready formed. If used by itself there is no reaction of the same local kind as there is with the cultures. A few cases where the serum has been injected into the tumour itself while in a state of inflammatory reaction have yielded very good results.

Retrogressive changes.—Such tumours as have been arrested in growth very soon begin to degenerate. If the growth of the cancer at its edge be very sluggish it may, without any treatment at all, show cicatricial changes near the centre and we may sometimes speak of partial cicatrisation in its oldest parts. The specific treatment greatly hastens these changes by reactive inflammation. In contradistinction to the natural cicatrisation it is not the central parts which show change but the youngest parts at the periphery of the tumour and often in several places at the [illegible] an[illegible] of [illegible] is the process which nature uses when she acts for the removal of the foreign or dead tissues in our bodies. As the result of any inflammatory process for repair, scar tissue is formed and it is the same in this treatment—a mass of cancer cells is absorbed and scar tissue adequate to the tumour is formed in its place. These strands of connective tissue often give rise to displacement of neighbouring organs or tissues. They may press upon anything they are near and do produce at times unpleasant consequences. The following two cases exemplify this healing process and also the effects of scarring. I have taken two because they are specimens of another point. The first was treated by active immunisation (cultures) and the other by passive immunisation (serum) only. A woman, aged 52 years, noticed that in July, 1902, her left breast began to get larger and heavier. In October it began to get firmer also. In February, 1903, it was pronounced to be inoperable cancer. The state in April, 1903, was as follows: in the left breast was one large firm tumour, in which six or eight lumps could be distinguished. The skin was adherent to the tumour all over; the tumour was immoveable on the ribs. You will perceive that it was an encephaloid carcinoma and not a scirrhus—a soft and not a hard growth. I draw attention to this distinction because in some cases scirrhus has been known to undergo change into fibrous tissue, especially after ovariotomy; but such a change as that is not met with in an encephaloid tumour. But the same change was produced in the soft growth as is described as occurring in rare cases in the hard one. The circumference of the breast was 44 centimetres from above downwards and from left to right 24 centimetres. Reaction came after the eighth injection of two and a half milligrammes. It was only of a slight intensity. Later during the progress of the treatment very considerable reactions took place and were produced for observation purposes by raising the dose of injection. During the remaining time the chronic inflammatory state of the whole mass has been kept up. The whole skin was red, in parts patchy, and considerably œdematous. As far as the redness extended there was local rise of temperature. The pain in the breast in the first months was rather bad but never so violent that anything beyond cold compresses had to be used. In the third week changes took place which could be looked upon as healing processes. The gland decreased to a small nodule of connective tissue; the breast tumour lost its knobby look and was smaller. The breast was softening but not so much as to give a sense of fluctuation. The part of the breast which was hard was about four and a half inches broad; it became harder and smaller and at its lower part a deep sulcus was formed above the nipple. And now after six months the case looks as follows. Round the nipple is a small ring of hardness, certainly not more than the width of my finger. The nipple is retracted and drawn in by the connective tissue. I wished last Friday, Oct. 30th, which was the last time I saw her, [illegible] dimensions for comparison with those I gave pr[illegible] that the [illegible] breast was as flat with the surface of the rest of the skin as it was possible to be. The skin over it was deeply wrinkled and below was a strong band of connective tissue which extends from the sternum to the angle of the scapula. This fixes the wrinkled skin firmly to the chest wall. It has drawn the right breast across the middle line and hinders the movements of the left arm and movements of respiration. Bodily and mentally the condition of the patient is good; she has gained 17 pounds in weight and she resumed her occupation four months ago. The case was shown several times during the period of treatment at the meetings of the Cologne Gynæcological Society; for the last time on Oct. 21st, when I was present, and a large number of medical men were able to control and to observe the changes which took place. The second case is another example of the ill-effects of this scarring which takes place. It was a case of cancer of the uterus which had been removed. It was undoubtedly a case of epithelioma and there was recurrence along the left broad ligament. After the mass of the cancer had disappeared constipation set in and colotomy had to be performed in the left inguinal region. And although the patient did very well from the colotomy she suddenly developed uræmic symptoms a week ago. A post-mortem examination by an independent authority has been promised. The case shows the ill-effects of connective tissue contractions. This case, unlike the last, was treated by serum and not by cultures. But there is one point which is of comfort in these inconvenient cicatrisations and that is that when you have nothing but fibrous tissue to deal with surgical interference is comparatively easy, and very often a slight operation will relieve what could never have been touched if it had been cancer.

What can be considered as the relative value of active and passive immunisation processes? At present it is uncertain. The impression gained is that the injections of serum alone, if energetically carried out, are enough to inhibit the growth of the primary tumour and to prevent the formation of metastatic deposits only temporarily. The serum has the effect of improving the sufferer's general state, but it has the drawbacks of all serum injections, erythema, pain in the back, in the kidney region, although as yet albuminuria has not been noticed, such as occurs for instance after the injection of tetanus serum. The unit value of the serum will have to be much raised from what it is at present but this is merely a matter of time and the treatment is young. It is possible that more suitable animals than those used—sheep and horses—may be found The more nearly the animal is related in the animal kingdom to man the more perfect the serum will be, so perhaps later we shall use apes. Nor is the unit of potency of the serum settled because animals are not killed by the culture. They only have a rise of temperature, so the unit cannot be measured as in the case of diphtheria and other antitoxins. The excessive formation of fibrous tissue in the place of the growth gave rise to the idea in Dr. Schmidt's mind that it might be lessened by the injection together with the serum of the cytotoxin related to the growth. It would thus accelerate the retrogression of the tumour. For this purpose growths of various kinds had to be obtained, mashed up, and injected in suspension into animals. But here a difficulty arose. Dr. Schmidt's colleagues refused to let him have the growths removed by the knife and when I had feed the attendant to have a growth the operator threw it into the fire rather than that the attendant should have it and hand it to me. It was not until I applied to my friend Mr. D'Arcy Power that we could get any material at all. But he took great trouble to procure and to send it to Cologne and now I hope experiments will be possible. That cytotoxins unaided should have any effect upon the malignant process is very doubtful indeed but some such claim has been made. We must remember that all cytotoxins which have been active have been produced by fresh, living, functioning cells—spermotoxin, nephrolysin, and so on, will recall this to your minds. The cells of a malignant tumour which we are able to incorporate are for the most part more or less degenerate; only an infinitesimal number of the outposts or newer cell growth can be said to possess the amount of activity required. But as the specific cytotoxin induced by a cell depends upon its contents and not upon its form the best serum we could expect to produce would be one dissolving fat and colloid material. This might possibly be used for hastening the dissolution of the old and played-out cells, but it would have no effect on proliferating cells; at least, it is highly improbable. If any effect has been brought about I think it is due to the anti-bodies produced in the intermediate animal by some of the parasites being incorporated unintentionally with the suspended cells when they were introduced. There is one fundamental point which is not nearly sufficiently insisted upon when considering the treatment of cancer but which should always be kept steadily in mind and it is this, that two factors are necessary for the complete removal of any malignant growth; firstly, the arrest of the malignant process and, secondly, the removal of its effects—the tumour. Suppose the outward and visible signs are removed by the knife, by caustics, or what not, is it not our sad experience that some proliferating cells are left behind and that recurrence is the rule? We can never speak confidently of the cure, but if by any means the cancerous process can be stayed and its cause removed we can begin to talk of cure, and the tumour is no more a foreign body or an innocent growth. Nature alone will probably deal with it efficiently. These retrogressive changes take place as soon as the stimulus to fresh growth is withdrawn. Even the youngest and most active cells on the border lose their power of proliferation and cannot implant themselves elsewhere. We may say, then, that the arrest of the cancerous process plus the removal of the growth would be a cure of cancer. But it is by no means the cure of the individual case. This will depend upon the extent to which important or vital organs have been destroyed or infiltrated. When considering individual cases we have three factors. Probably the most practical use of this treatment will be as an immediate sequence to operation to destroy the remaining parasites and cells and to immunise the patients from further attacks. Its value for diagnostic purposes I have referred to. For the preventive immunisation of those predisposed by hereditary taint or those who are nervous it might also be used with advantage. Most cases of cancer partake of a chronic ailment and the period over which treatment must extend is necessarily protracted. The patient has much to bear and at times the patience of attendants is heavily taxed. The practitioner's best help is good nursing and in this respect we in England, and especially at St. Bartholomew's Hospital, are far before other countries. It is impossible that such changes as I have described should take place in the body of the patient without his general system and feelings being profoundly affected, but when the sufferer sees friendly, willing, and, above all, confident faces around him his trust and hope are strengthened and he gathers courage to bear the pains which are necessary for his successful treatment.

You will have noticed that I have been very careful to speak always of the treatment of the cancerous process and that I have never in connexion with Dr. Schmidt's name, or what I have described, referred to this treatment as a cure of cancer. That or any talk of cure must be left to the lapse of time which proves all things. Nevertheless, it does not seem too much to assume a favourable attitude when in most cases treated up to the present, and in every case where the reaction was satisfactory, it can be demonstrated after five or six months' treatment that the original growth and metastatic deposits which were clearly present have, to say the least, not increased; that no further deposits have formed; and that the general body-weight has increased and the general subjective state of the patient has improved. That the treatment has something to do with this arrest will, I think, be granted. To argue coincidence for an unbroken series of cases such as I have seen would be straying beyond the limits of probability. One thing is certain, the surgeon should remove every malignant growth and every metastatic deposit so long as the danger of the operation is not too great. On the other hand, Dr. Schmidt's experience when treating absolutely inoperable cases—and he has had no others—is so favourable that he would not hesitate to use it in all these seemingly hopeless cases. But you will agree that such are not ideal or even, so to speak, thankful cases for treatment. In the future I am convinced that the treatment will be employed as a prophylactic immunisation immediately after surgical operations for the removal of malignant growths and it is when it has stood the test of time that we shall be able to speak, confidently I hope, of a cure for cancer.

Mr. BOYLE, the President, said that the society should feel proud indeed that the discovery of that form of treatment for cancer, should it eventually prove successful, was made known for the first time in England before its members. In the name of the members he extended to Dr. Johnson the cordial thanks of the meeting. There were so many of the teaching and visiting staff present that it would be an impertinence of him to discuss the paper; he would leave it in more competent hands.

Mr. A. WILLETT said: When I received the courteous invitation of the society to be present to-night my sole intention was to come as a silent visitor and to learn. And even now I rise only because it seems essential that someone should just set the ball rolling. Your President has said justly that the bringing of this subject before the society is a historical fact and it is remarkable that this society should have had two historical events in its existence. It probably is known to but very few here that, I suppose some 50 years ago, perhaps longer, the late Sir James Paget came here and for the first time in the world demonstrated the presence of the parasite of trichinosis. I should not venture, of course, to come here to speak upon what I may call the merits of this most instructive paper. I am, as it were, an old hulk. You, gentlemen, I may liken to the torpedo catchers; you are keen and anxious to take advantage of anything and everything that may help you in the pursuit of your professional careers. If I had any feeling on the matter I might almost say it is one of jealousy. I happen to be President this year of the Royal Medical and Chirurgical Society, and therefore I should have been justly proud if this paper had been read before that society. But whilst I say that I yet say that Dr. Johnson would have had a very much smaller audience. There were one or two points that occurred to me in the course of this paper which made a very deep impression. The first was the statement that this serum will only react upon the cancerous patient. It may be injected, we are told, and it has been tested over and over again, upon healthy subjects without producing the least reaction. That, I venture to think, is perhaps the most notable feature of the whole subject. We therefore now have a test of whether or not a patient is suffering from malignant disease. One other point, which was only just incidentally mentioned at the close of the address, also occurred to me—namely, why should not the surgeon as soon as he has removed a growth and found it to be cancerous proceed at once with this treatment? Another point is—and I would like to ask Dr. Johnson his views upon it—namely, why this serum should not be introduced before the patient is operated upon. All surgeons know how almost impossible it is to be sure of the extent and limits of any cancer. As Dr. Johnson himself said, one of the peculiar features of this serum injection is that all tissues which are infected at once [illegible] Well, we often [illegible] o whether in [illegible] ie disease; if [illegible] before the operation where and to what extent the tissues have become *either locally infiltrated or the disease has become disseminated* I think it would be of immense surgical and clinical importance. It was only that others who are much more capable of speaking on the subject should not delay that I ventured to say a few words in opening the discussion.

Dr. LOVELL DRAGE said: I was very much interested in one of the last remarks which Mr. Willett made. I have not been treating cancer on the lines of Dr. Schmidt but I have been working on the treatment of cancer by trying to determine the different therapeutic values of the compounds connected with cinnamic acid and cinnamate of sodium. A patient operated upon nearly three years ago was kept under treatment one month before the operation and for two months afterwards. Of course, it is yet early days to talk about recurrence but I may say I did no Halstead's operation. I simply removed the breast after the manner I had been taught by Sir Thomas Smith many years ago—simple removal. I could feel no glands certainly. The patient remains at the present moment absolutely well. She has put on flesh and she is able, and has been able, to carry out her duties ever since I operated upon her three years ago. She was laid up for three weeks. I have progressed materially since those days. As the gentleman who read the paper stated, I have been at work lately during the last eight months injecting solutions of cinnamate of sodium and I have obtained results very similar to those which you have heard to-night, only I have no German clinic and no help such as Germany provides for its workers. I have to trust to the more natural methods of observation and what I can do in a casual way. I have been very much interested, naturally, by the paper, and it is very curious how very much the reaction of this serum corresponds with the reactions of the latest solution I have been using. It is a weird chemical production, but I may say roughly that it is cinnamic acid with an alteration in the arrangement of the molecules of the substance. Organic chemists know very well that you may have exactly the same number of molecules in an organic substance and that by altering the arrangement of the molecules you get different therapeutic reactions. Since the meeting of the British Medical Association at Swansea I have elicited the sympathy and coöperation of our friend Dr. Lewis Jones and we have obtained some very remarkable reactions. We have had two patients whom he has kept under the x rays for five months and I have since been treating them. The reactions produced by my solution have been practically the same as those produced by the serum of Dr. Otto Schmidt. In fact, I should say that in one case—and I think Dr. Lewis Jones will support me—the reactions were even more violent and the inhibition of the growth was more rapid. I only mention these facts to stimulate, if possible, a little wholesome spirit of inquiry amongst the members here present. It is impossible for me to carry out the work quickly with the means at my command. Chemists working at the strictly chemical part of the business can work more quickly than I can; it is impossible for me to get the pharmacology worked out quickly, and I cannot experiment upon human subjects with bodies the dose of which I have to find out. The serum is a very definite thing; you cannot vary it very much; but these organic compounds, so far as my observation goes, we can vary to a very great extent, if not to an unlimited one, and with each variation in the composition of the body used we get a different therapeutic value. And if the cure of cancer is to be with this country as an honour I am sure it will depend upon getting the whole of the series of compounds connected with cinnamic acid thoroughly worked out from a pharmacological point of view. I am sure Dr. Lewis Jones will support and amply justify the truth of what I have said. I have always been firmly convinced from the results I have obtained that the early primary growths are most amenable. A great many growths if not actually removed are very much circumscribed in their activity. The question is, how you gentlemen are going to promote the inquiry. I believe anyone with any spirit of scientific enthusiasm can work at the subject in one way or another. The chemist can examine his compounds and the gentleman who has any cancers to treat can test the substance which the chemists and pharmacologists put into his hands. I am sure that in addressing a multitude of young minds there will be no practical opposition to anything new. One thing I have always felt in referring to this subject is that there is a wall of opposition, based upon a hopeless feeling of tradition, that because a thing is new therefore it *cannot be tried until it is certain it will do some good.* I can assure you, gentlemen, that even if the treatment of these growths does not add to the cure the relief in the symptoms which you can get for the patients will well repay your attention to its study.

Dr. F. W. ANDREWES (pathologist to St. Bartholomew's Hospital) said: I should like to express my own thanks for the paper which Dr Johnson has read. I have known him a good many years and I know him too well to doubt his own complete *bona fides* in the matter. *He is naturally in a* very much better position to judge of the effect of this serum upon the cases which he has seen and followed than we can be. At the same time I think it is only right we should sound a note of caution when we remember how often cancer parasites have been found. When one remembers Koch's tuberculin one cannot help [illegible] so very cautiously indeed in these [illegible] points which seem to me to be [illegible] views which Dr. Johnson has put forward and I would ask one or two questions about points which he passed over too lightly in my judgment. First of all he has not told us enough about this parasite; he has not told us of the class of organism it is; he has not told us how it is cultivated or what it looks like in culture. All these are points I should have been glad to have had information about. Neither has he told us the precise mode of inoculation of the horses or sheep—at least, if he did I did not catch it. Is it intraperitoneal or intravenous? So there are several points I should wish information about. But I agree with what fell from Mr. Willett, that if there is anything in this the most striking proof of it is the apparently specific reaction that arises when the cancerous patient is injected with these particular cultures I feel that one is not in a position to discuss this paper at all; the thing must stand or fall entirely on the ultimate fate of these cases, and that cannot be known for a long while yet. I feel it is rather early in the day to have said quite so much about it as Dr. Johnson has said.

Dr. JOHNSON, in reply, said: I will begin with Dr. Andrewes. There must be beginners somewhere. I want to begin; Dr. Drage wants to begin. We are trying to arouse a certain amount of enthusiasm. I came to St. Bartholomew's with my paper and not to the Royal Medical and Chirurgical Society because I wished if possible to interest the members of the staff here, to allow me to demonstrate that very reaction in the wards and in suitable cases of which I have sketched the theories here *this evening. As Dr. Andrewes* very properly says, the reaction of the injection of these minute doses into the subcutaneous tissues of patients far away from the tumour is exceedingly important and it is one of the great proofs, one of the earliest proofs, one of the only proofs that one can bring to bear without the lapse of time. With regard to the inoculation of the animals, I worked amongst Dr. Schmidt's animals, I saw his patients with him, and did everything with him from beginning *to end. The inoculation of animals is* subcutaneous always and not intraperitoneal or intravenous. Some intravenous inoculations have been made and probably that will be the way in which it will be carried out in future. For the reason I have mentioned before, that the parasite does not kill, we are able to inject fairly large quantities directly into the veins. It has been complained that I have not said more about the parasite. Well, I am not good at word-pictures and I have no real pictures to show you. I have seen them but I have no drawings. But if you wish to know what they look like you have them set forth in pictures in Schüller's book, and by Russell in his toxin bodies, and they are described beautifully in the *American Journal of the Medical Sciences* which I quoted. Then there is the organism that Plimmer described—that is to say, the cancer parasite in a certain form. The only difference in these cases is the one which I noted previously. Dr. Andrewes said he must sound a note of caution when we remember the number of cancer parasites which have been found. It is perfectly true many have been found and described, but may they not be all one? I do not know that there is anything to answer in what Dr. Lovell Drage said, except that he said he had not that State help which Dr. Schmidt had.

Dr. LOVELL DRAGE: Not State help, but that I had not a clinic and such help as the Germans have.

Dr. JOHNSON (resuming): Dr. Schmidt is in private practice and has to support his investigations out of his own pocket and he has done it. Mr. Willett asked as to injections before operation. Certainly they can be carried out, but the injection would introduce a form of inflammation which would render the operation much more difficult. Where the cancer process has made strides it would be far better that surgical interference should be called in than that nature should be allowed to contract and to leave a scar in surrounding tissues.

Gentlemen, I have to thank you very much for your kind attention and I hope I shall have the chance of showing you practically what I have sketched in theory this evening.

MEDICINE AND THE LAW.

The Diagnosis and Notification of Small-pox.

ON Nov. 3rd Mr. J. M. Wheler, a medical man in practice at Battersea, appeared at the South-Western police-court in answer to a summons for failing to notify a case of small-pox. There was no doubt as to the fact that a case of small-pox had been treated by Mr. Wheler as chicken-pox and that in consequence of this mistake other persons had become infected, but considerable question arose as to whether the defendant was aware of the nature of the disease to such an extent as to render him liable to conviction. It was suggested by the Battersea Borough Council, acting as the prosecutors, that as Mr. Wheler apparently felt some doubt in the matter he should have "taken advantage of the expert provided"—namely, the medical officer of health of the district—and that by failing to exercise all reasonable skill he was guilty of negligence. Mr. Garrett, the magistrate who heard the case, differed from this view and refused to accept the contention that Mr. Wheler, because he might have felt a doubt, should have therefore notified the case as one of small-pox, pointing out that if a medical man acting upon suspicion caused the removal of a man suffering from chicken-pox to a small-pox hospital the consequences would be very serious. He held that a medical man could not be expected to do more than to act to the best of his judgment and, acquitting the defendant of all negligence, he dismissed the case. The suggestion that the medical officer of health is provided as an expert whom medical men can consult in cases of doubt where dangerous infectious disease is suspected is clearly wrong. This is not the legal position of the medical officer of health and so long as his duties remain what they now are any assistance that he may afford in this way must be purely voluntary. To compel his attention and to obtain his opinion by notifying a case which may turn out not to be one of the disease suspected is a course which any medical man would properly hesitate to take. The question of how far a medical officer of health should render assistance upon such occasions was gone into at some length in THE LANCET of Oct. 12th, 1901, p. 987, the occasion being the publication of some correspondence which had taken place between a medical man and a medical officer of health upon this very subject. In the course of that correspondence the latter wrote: "I am always pleased to assist my medical *confrères*, but you must understand that the diagnosis of cases is no part of the duty of a medical officer of health. The responsibility of diagnosis rests with the medical attendant entirely." This, we think, is a correct statement of the position. Whether some method should be devised to enable a medical practitioner to obtain the opinion of one more experienced than himself in the case of such a disease as small-pox is another matter. The power to do this would be a source of protection both to him and to the public. At present with regard to his poorer patients who cannot afford to pay for a second opinion the medical man has to bear the responsibility himself, being only able to strengthen his own opinion by invoking the assistance of a friend, should he be able to do so. Mr. Wheler was successfully defended in this case by the London and Counties Medical Protection Society, Limited.

The Evidence of Medical Witnesses: Scene between Judge and Counsel.

A sharp difference of opinion occurred at the Lancaster Assizes at a late hour on Friday evening, Nov. 6th, between Mr. Justice Ridley and Mr. Sharp, counsel for a prisoner named Joseph Fleming, charged with a rape on a married woman at Barrow. Dr. W. A. Holmes of Barrow, who was called for the prosecution, stated in answer to the prisoner's counsel that he examined the prisoner and his clothing some hours after the alleged offence but that he found no marks whatever corroborative of the prosecutrix's story (who had stated that she was menstruating when the assault took place). Dr. Holmes added that he expected that a man in the prisoner's position would have removed any marks and have cleaned himself in the interval. Mr. Sharp made no remark as to this addendum by the witness during his examination, but when he commenced his address to the jury he animadverted upon it in a severe way. "No more scandalous remark was ever made by a doctor," he said. "Instead of answering the question put to him in the affirmative or negative, he made an addition he should not have done." Mr. Justice Ridley (sharply): "I do not agree with you, Mr. Sharp, that it was a scandalous remark on the part of the doctor." Mr. Sharp: "And I respectfully beg to disagree with you, my lord. I have heard the medical profession belauded, and rightly so, in this court, because of the way in which members of the profession give their evidence and I have generally found in my experience that they give their evidence fairly, but in this case I hold to my opinion that it was a scandalous remark for Dr. Holmes to make." Subsequently, when his lordship was summing up the case to the jury, he observed: "Now, I must say a word about the doctor. I disagree with the learned counsel for the defence in the observation he made. I think what the doctor did was not scandalous. He gave his evidence very fairly. Most members of the medical profession do give evidence fairly and properly, and I hope it will be made known that I think so, because if such an attack is made upon a gentleman in Dr. Holmes's position it is well he should be defended from such an uncalled-for attack. I never heard a more uncalled-for attack upon a professional witness. At any rate, if Dr. Holmes is to be attacked by one person in the court he shall be defended by another." The jury found the prisoner guilty of an indecent assault "under extenuating circumstances" and he was sentenced to four months' imprsionment. Counsel for the defence in a criminal trial sometimes resorts to an attack upon a witness for the prosecution in the endeavour to secure the acquittal of his client by diverting the jury's attention from the true issue. In the case above quoted the learned judge took care, as a judge should do, that the issue should not be so obscured.

MEDICAL MAYORS.—The following members of the medical profession have been elected mayors of their respective boroughs: Mr. S. J. Allden, M.D. Durh., L.R.C.P. Lond., M.R.C.S. Eng. (Bridport); Mr. E. C. Andrews, M.D. Cantab., M.R.C.S. Eng. (Hampstead); Mr. W. Banks, M.B. Lond., M.R.C.S. Eng. (Falmouth); Mr. J. Campbell-Macaulay, M.R.C.S. Eng., L.S.A. (Honiton); Mr. J. H. C. Dalton, M.D., D.P.H. Cantab. (Cambridge); Mr. E. W. Kerr, M.D., M.Ch. Dubl. (Dorchester); Mr. David Lloyd, M.B., M.S. Glasg. (Denbigh); Mr. R. B. Searle, L.R.C.P. Lond., M.R.C.S. Eng. (Dartmouth); Mr. J. Soutter, L.R.C.P. Lond., M.R.C.S. Eng. (Hedon); Mr. H. Stear, M.R.C.S. Eng., L.S.A. (Saffron Walden).

THE LANCET.

LONDON: SATURDAY, NOVEMBER 14, 1903.

A New Serum for the Treatment of Cancer.

BECAUSE of the importance of carefully considering every method which may appear to afford the least possibility of success in the treatment of malignant disease and because of the somewhat loud advertisement which has been given by the daily press to the latest "cancer cure," we have thought well to publish in THE LANCET a full report of the Address on Dr. OTTO SCHMIDT'S Specific Treatment of Cancer which was delivered by Dr. H. JOSSE JOHNSON before the Abernethian Society of St. Bartholomew's Hospital, together with an abstract of the discussion which followed thereon. In his address Dr. JOHNSON deals with two aspects of the matter under consideration; first he refers to Dr. SCHMIDT'S view as to the causation of carcinoma and sarcoma, and next he describes a method of treatment which was suggested to Dr. SCHMIDT by the alleged discovery of a parasite which, it is claimed, can be found in every case of carcinoma and sarcoma and which has been isolated in pure culture from cases of both forms of malignant disease. And we may say at once that before Dr. SCHMIDT'S theory as to the exact causation of malignant disease can be accepted by the medical profession it will be necessary for very much more evidence to be produced. It is stated that Dr. SCHMIDT has isolated the parasite in pure culture and that he has produced tumours in two white mice by the injection of such cultures. But as to the exact nature of the parasite, or as to the kind of tumour which was produced by the injection, nothing which is in any way relevant is said. It is stated that Dr. SCHMIDT has isolated a parasite which, in one or other phase of its existence, corresponds with the various "cancer parasites" which have been described by writers on the subject from the date of RUSSELL'S "Address on a Characteristic Organism of Cancer" in 1890 down to the publication of SCHULLER'S Monograph in 1901. Dr. SCHMIDT'S description of a parasite may be, in a sense, comprehensive, but it is wanting in many details of proof which will be required by the pathologist before the validity of any claim to be the discoverer of the cause of cancer can be seriously considered. On one important point in connexion with this aspect of the matter Dr. JOHNSON is, we think, under a misapprehension; he stated in his reply to the discussion which followed on his address: "Dr. ANDREWES said he must sound a note of caution when we remember the number of cancer parasites which have been found. It is perfectly true that they have been found, but they are all one. No one has ever cultivated them before; that is the point. This man has cultivated them for the first time." The actual fact of the matter, of course, is that a considerable number of writers claim to have isolated and cultivated the *several* "cancer parasites" which they have described, and as examples we might mention SANFELICE, RONCALI, MONSERRAT, PLIMMER, LEOPOLD, AIEVOLI, KAHANE, WLAEFF, GAYLORD, SCHULLER, and VON LEYDEN.

However, it may be conceded that exact proof as to causation is immaterial if only Dr. SCHMIDT can show that he has in truth discovered the long-sought for cure for one of the most distressing of all diseases. His treatment must at the present moment be judged by its empirical results irrespectively of any scientific foundation which it may have in the alleged discovery of the specific parasite. Dr. JOHNSON gives us to understand that the new treatment for cancer comprises two methods, first, the production of an active immunity against the disease by the inoculation of the patient with a "vaccine" which is obtained by sterilising a culture of the parasite; and, second, the production of a passive immunity by inoculating the patient with the serum of a horse or a sheep which has been rendered actively immune by the first method. The injection of the "vaccine" into a patient with cancer is stated to be followed by a specific reaction which includes a rise of the body temperature and a local reaction in the primary new growth and in any metastatic formations in the glands or elsewhere; and in addition there are curative effects described. The treatment by serum injection is spoken of in perhaps rather less favourable terms It will be seen that, quite apart from any curative use, a most important value in diagnosis is claimed for the "vaccine," for we are told that although patients with the "cancerous cachexia" very often will not react to the "vaccine" we have now a method by means of which innocent growths can be with certainty diagnosed from malignant ones and by means of which the existence of metastatic deposits can be detected. In hesitating to accept without more definite evidence the claims which are put forward on behalf of this new treatment of cancer one thing justifies all precaution apart from other and grave sources of uncertainty. It is impossible to forget that quite similar claims have been urged on behalf of other "cancer cures" and have, on being tested, proved fallacious. Thus, WLAEFF obtained a "cancer serum" by inoculating asses with yeast parasites which had been obtained from cases of carcinoma and which were stated to produce malignant growth when inoculated into experimental animals. WLAEFF'S serum, it was stated, was used for the treatment of 40 patients with malignant disease, and in nearly every case a local reaction both at the site of injection and in the tumour itself was observed. But, in spite of this, WLAEFF has not been able to convince other pathologists of the value of his discovery. Dr. LOVELL DRAGE, who took part in the discussion at the Abernethian Society, was also struck by the similarity of the reactions which follow the injection of the cinnamic acid compounds, which he has been using for the treatment of cancer, with the reactions which Dr. SCHMIDT has obtained. Dr. DRAGE'S observations have appeared in our columns.

At the conclusion of his Address Dr. JOHNSON very properly indicated that he had been speaking of a "method of treatment" and not of a "cure." Before the word "cure" can be used much that is at present uncertain will have to be established clearly, and we understand that

Dr. SCHMIDT is pledged to give full details of the discovery which he claims to have made at a meeting of the Comitié für Krebsforschung before the end of the year. It is also understood that at the present time there is no supply of either "vaccine" or serum available for use in this country, and that consequently patients who may wish to undergo the treatment must proceed to Cologne and place themselves under Dr. SCHMIDT'S care. This course under present conditions, and until considerably more detailed information has been given, is not one which we feel justified in advising our readers to recommend. Further, we cannot but regret the premature publicity which has been given to the treatment as a "cure" in the pages of the daily press. Almost monthly the discovery of new "cancer cures" is made known to the public when the announcement has too frequently no better foundation than the elaborate ingenuity of a newspaper man in search of a sensational heading for the next day's issue. The inevitable result of these announcements is that patients with inoperable cancer turn with eager hope to that which they are assured will relieve their pain and suffering, only to meet with disappointment and to suffer, if possible, a deepening of their despair. Surely the most elementary ideas of humanity would suggest that the sale of a few extra copies of a journal is but a poor set-off to the aggregate of sorrow and disappointment caused to those who have already sufficient evil to endure. Every observation bearing on the cause or on the treatment of malignant disease is keenly watched for by the medical profession, not only in this country but throughout the civilised world, and every rational theory propounded on the subject is carefully weighed and examined; no good service therefore can possibly be rendered by the sensational publication in popular journals of the details of "cures" which have, so far as can be judged, no claim whatever to be regarded as such. That Dr. SCHMIDT'S treatment may prove to be the long expected cure for cancer is hoped for by none more sincerely than by ourselves. But until fuller information is afforded we are not able to express any favourable opinion on the subject

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Private Nursing Homes.

IN a recent issue[1] a correspondent urged the need of organisation of the medical and surgical nursing homes in this country and to point the moral he drew an unfavourable picture of the difference between the arrangements in English health resorts and in those of a small Swiss bathing town. One of the chief sources of complaint lay in the preposterous charges of English nursing homes which would seem to show that in England only the wealthy must be sick. That there is a large degree of truth in this complaint is evident to all practitioners who have endeavoured to arrange for the needs of middle-class or comparatively poor patients who are scarcely fit subjects for treatment in general hospitals and yet cannot cope with the expense of a nursing home without unduly crippling their resources. The fees in nursing homes are necessarily a matter of private arrangement. Those who cannot pay them need not enter, since broadly the cost is fairly set forth when the preliminary inquiries are made. There may be extras for operation fee, for medicines, for dressings, for washing, and for stimulants if required and these may amount to more than was anticipated, but the terms generally are dependent upon the nature of the nursing required and upon the room occupied. These in turn vary to some extent with the locality of the nursing home and in one sense it is to be deplored that nursing homes must almost inevitably be in the immediate neighbourhood of the medical quarter, where rents and rates are extremely high and where it is not always possible to insure quiet.

With few exceptions the nursing homes in London are commercial undertakings which must pay their way, and owing to the uncertainty of work the fees charged must be calculated so as to give a fair return for the original outlay, for the current expenses, and for the risk of many of the rooms remaining unoccupied during a large part of the year. It is often assumed that a large staff of trained nurses must continually be kept upon the premises, either actively engaged or ready for any sudden rush of work, and this furnishes further excuse for keeping up the high cost to the patients To those with intimate knowledge of the working of nursing homes this plea scarcely seems justifiable. In most homes the matron is herself a trained nurse who is able to undertake a certain share of nursing duties, and whether she assists at an operation or not she is generally present, directing, supervising, and receiving instructions, complaints, or other remarks with the urbanity acquired by long habit and holding herself responsible for any shortcomings. The number of nurses attached to the home varies with the number of patients and with the size of the home. Some are permanently engaged, others come and go as the rooms fill and empty, and this fluctuation, of which the medical men visiting the house may scarcely be conscious since they always see the familiar faces, is often necessitated by the value of space being so great that many of the nurses must sleep out and may therefore come from one of the neighbouring institutions for nurses. In this way the expenses of the nursing home are legitimately decreased, since there is no advantage in attempting to keep on the permanent staff greater numbers than are actually required for the average service of the home and there is a distinct objection to a large unemployed staff, since it must sometimes be difficult to maintain the discipline and quiet required equally whether patients are many or few.

Apart from these expenses it is often urged that the dietary ordered involves a large outlay, but expensive delicacies are surely very rarely demanded and, as our correspondent points out, the directions are not always implicitly followed. *Freshly* minced meat may not make its appearance with sufficient frequency and recooked mutton may sometimes be served instead of fresh mutton Although these difficulties are obviously of frequent occurrence in every household, in a nursing home where urgent cases demand excessive care some means should surely be found to overcome them. The question is whether greater organisation would produce more satisfactory results.

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[1] THE LANCET, Oct. 31st, p. 1253.

At present we believe that in spite of what our correspondent terms the "preposterous prices charged" there are comparatively few nursing homes which yield preposterous profits; in many there is a constant struggle to meet expenses owing to the serious fluctuations of work, and in this struggle many well-trained ladies have lost their capital and have become hopelessly burdened with debt. Greater organisation might provide a few larger institutions in place of many small private nursing homes, but unless these could be established in the immediate vicinity of the medical quarter resident medical officers would be required in addition to the large staff of nurses and the cost of maintenance would be proportionately increased. Admirable equipment will not fill the wards or private rooms and it is possible that long periods of comparative inactivity would have to be faced, as in the fever hospitals where so often there seems to be no middle course between the strain of an epidemic and the intervening torpor. This uncertainty of work is felt greatly by all nursing homes, but the dependence upon the goodwill or caprice of a few supporters probably tends towards efficiency, though it cannot safely reduce the charges which must be based upon broad calculations of the average expenses.

There are already many semi-charitable institutions where patients are received upon what may be regarded as nominal payments, but in most of these there are regulations which, though well intentioned, serve to hinder many from claiming the benefits they offer. A comparatively poor patient may prefer to pay a comparatively small fee to his medical attendant and to retain his services rather than to be forced to employ a stranger attached to the institution who is, under the regulations, ready to offer gratuitous assistance; and it scarcely seems reasonable that there should be close scrutiny of the extent of the charitable reduction made by any member of the profession in any particular case, still less that it should be assumed that if there is any payment to the medical attendant the scale of charges in the home must be increased. Patients often shrink from the full disclosure of their means involved in the application form of some semi-charitable nursing homes, and the sad fact remains that for a very large number of patients there is in this great city no adequate provision in time of sickness. Admission to a general hospital proves unsatisfactory on many grounds; there is the question of hospital abuse, while, even if it were desirable to organise any regular systems of payment, there would still remain the difficulty of deciding what sum would be an adequate payment. Services which the majority receive gratuitously and for which the charge in most nursing homes is so costly as to be prohibitive would have to receive a price.

The foregoing remarks apply purely to medical and surgical homes and do not touch those receiving maternity and chronic cases, in which the conditions are so widely different that they merit separate consideration. We are not suggesting that the arrangements in vogue for establishments of either of these classes should be altered; they exist to meet well-defined wants and, in our opinion, justify their existence. This, we believe, is the opinion also of the whole medical profession.

The Operation upon the German Emperor.

THE following authorised announcement has appeared in the English and continental press :—

> His Majesty the EMPEROR to-day underwent an operation for a polypus on the vocal cord (*Stimmlippe*). The operation was performed by Geheimrath Professor Dr. MORITZ SCHMIDT, and passed off quite smoothly. His Majesty has to refrain from using his voice until the wound resulting from the operation is healed.
>
> VON LEUTHOLD.
> MORITZ SCHMIDT.
> Potsdam, Nov. 7th, 1903 ILBERG.

The result of a microscopic examination carried out by Professor J ORTH is officially given in the following terms —

> The polypus consists of a very soft connective tissue containing only a few cells This tissue is covered by an epithelium of the pavement variety (*Plattenepithelium*), which is in regular layers and is everywhere sharply distinct from the connective tissue. Some of the cells in the connective tissue contain fine brown minute grains of pigment, which are evidently the result of previous small hæmorrhages. The polypus contains a considerable number of thin-walled blood vessels. It is therefore a case of an entirely benign polypus consisting of connective tissue.
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> Berlin, Nov. 7th, 1903. Professor J. ORTH.

The feeling of every medical man on reading that in a man 45 years of age, whose father died from cancer of the larynx and whose mother succumbed to cancer of the breast, a laryngeal polypus had been discovered and removed was naturally one of uneasiness. We are certain that all our readers shared the public apprehension when first the news of the operation upon the German EMPEROR reached them. The report of the EMPEROR'S advisers, however, so far as it goes, is so very plainly expressed as to leave no doubt that in the piece removed, at any rate, there was nothing that justified a suspicion of malignancy. In that connexion the statement made by Professor ORTH—viz., that the epithelium everywhere was quite distinct from the connective tissue—is, of course, of the highest importance. Both Professor MORITZ SCHMIDT and Professor ORTH are authorities in their respective fields. The former is the learned surgeon who did not hesitate to pronounce the dreaded word cancer when he examined the then Crown Prince at San Remo exactly 16 years ago, and he would certainly not have undertaken an intra-laryngeal operation upon the EMPEROR, save merely for exploratory purposes, without previous consultation with other authorities if he had the least doubt in his mind as to the nature of the growth. Professor ORTH, moreover, would certainly have expressed himself much more guardedly and would not have spoken of the growth removed as "entirely benign" had the microscopic examination of the latter left any uncertainty as to its true nature. All these circumstances, as well as further reassuring statements as to the illustrious patient's condition, make it right for us to insist upon anticipation of a speedy recovery. The condition of the EMPEROR'S larynx will be carefully watched by his medical advisers and fuller clinical details will probably be given if it appears that any useful purpose would be served by so doing. The courage and good sense of the EMPEROR in taking the world into his confidence are to be commended. He has doubtless by so doing prevented the dissemination of much sinister rumour and much idle gossip.

Annotations.

"Ne quid nimis."

THE LATE LORD ROWTON.

THE rich and the poor, the masses and the ruling classes, will alike feel heartfelt regret at hearing of the death of Lord Rowton, which took place at his residence in London on Monday last, Nov. 9th. Lord Rowton was born in 1838, a grandson of the Earl of Belmore and nephew of the great Lord Shaftesbury. He received his education at Harrow and Cambridge, and after taking his degree was called to the Bar. It is said, and we believe with truth, that Lord Rowton, then Mr. Lowry Corry, first attracted Lord Beaconsfield's attention at a country house party by his cleverness in saving the situation from becoming dull. The story is told of different houses and with different details, but after some such introduction he became private secretary to the great statesman in 1866, a post which he continued to hold until in 1881 the association was dissolved by the death of his great friend. From that time the Lord Rowton of high social and diplomatic circles disappeared, to reappear as the founder of a remarkable and practical philanthropic movement. While engaged in the work of the Guinness Trust Lord Rowton conceived the idea of what he loved to call "poor men's hotels"—buildings which he intended to take the place of the wretched habitations known as common lodging-houses and to accommodate the deserving poor in a respectable manner at a reasonable expense. By many his plan at first was opposed as being almost impracticable, but he succeeded in getting Sir Richard Farrant, the then deputy chairman and managing director of the Artisans, Labourers, and General Dwellings Company, to build for him the first Rowton House. A site was secured in Vauxhall and the building was erected by Sir Richard Farrant at the net cost of the work, 5 per cent. only being added for the directors of the Artisans, Labourers, and General Dwellings Company. So important did we consider Lord Rowton's movement at the time as a practical contribution to the question of the housing of the poor that we made the first Rowton House the subject of a Special Commission, as we did also the second Rowton House which was built at King's Cross.[1] Since that time three other houses have been erected and a sixth is now in contemplation. Both in the provinces and abroad other companies have imitated the Rowton houses and the movement initiated by Lord Rowton is likely to spread widely inasmuch as he has shown the way to make philanthropy pay. The Rowton houses yield a 5 per cent. dividend, while catering in the kindest spirit for the poor. The great success of these institutions was due from the beginning to the personal interest taken in them by their originator. No detail was too insignificant for Lord Rowton to consider. He himself slept in the lodging-house beds to test their comfort and experimented with the angle which the backs of the seats should take in order that his lodgers might sit with ease. Nor did he omit to minister to the mental wants of his lodgers, as the pictures and panels on the walls of the houses and the books there provided amply testify. He knew the wants of his fellows; he had the sound sense to see that the rich and the poor, the well-born and the proletariat alike, need certain things to make their domestic environment a cheerful one as well as a sanitary one and he acted upon his views with the broadest sympathy. To the medical man it is a truism that "the colonel's lady and Mrs. O'Grady are just alike under their skin," but this knowledge is apt to be hidden from gentlemen born in the peerage and spending half a lifetime in exclusive political circles. Lord Rowton's intuition served him instead of education; he grasped the wants of the poor and setting out to relieve certain of them with courage and shrewdness he had the good fortune to see his efforts crowned with acknowledged success during his lifetime.

MALARIA IN INDIA AND THE COLONIES.

THE opening meeting of the session of the Royal Colonial Institute was held at the Whitehall Rooms, Hôtel Métropole, on Nov. 10th, the Right Hon. Sir George T. Goldie, K.C.M.G., being in the chair. After a brief address by the chairman on the necessity of the mother country waking up to the value of her Imperial possessions, Major Ronald Ross, professor of tropical medicine in the University of Liverpool, read a paper on Malaria in India and the Colonies. After showing the extent to which malaria prevails in the tropics to the detriment of the pioneer, the traveller, the planter, the engineer, and the soldier, the lecturer urged that the question how best to contend against the scourge is one of the greatest economical importance for an empire like the British He claimed that science had fully established three great laws concerning malaria: first, that it is caused by numbers of microscopical parasites which live and propagate themselves in the blood; secondly, that these parasites are carried from sick persons to healthy ones by the agency of a genus of mosquitoes called anopheles; and thirdly, that these kinds of mosquitoes breed principally in shallow and stagnant terrestrial waters. These laws, he pointed out, were now held by experts to satisfy nearly all the known facts about the disease. Passing to the question of prophylaxis, the value of mosquito nets, punkahs, and wire screens was dwelt upon, while quinine was stigmatised as no preventive, inasmuch as it does not exclude the parasite. But Major Ross pointed out that it was a great mistake to suppose that the whole subject of the prevention of malaria is contained within the formulæ of personal prophylaxis. "These will," he said, "enable individuals to protect themselves to a large extent, and if strenuous efforts are made to instil them into the general population it is to be supposed that a certain percentage of the public will take the trouble to adopt them. But every practical sanitarian knows by this time that if we depend solely upon personal prophylaxis for prevention of any disease we rely upon a broken reed. The fact is that the vast mass of the people will never believe in, or even seek to know, the principles of personal hygiene and will certainly not adopt them in spite of all our efforts. ...... For immediate results, at least in tropical and barbarous countries, we must look chiefly to State action." He then detailed the State measures for the repression of malaria which have already been tried in Sierra Leone, Havana, Lagos, Ismailia, the German colonies, Hong-Kong, and many other places, and with which our readers are familiar, and concluded by quoting and advocating a series of resolutions recently passed by the Chamber of Commerce in Liverpool, associated with members of the chambers of Manchester and London and of the Congress of the Royal Institute of Public Health. This joint meeting recommended, with special reference to West Africa, (1) that a fully qualified medical officer of health should be appointed to each of the principal West African towns; (2) that this officer should be supervised by a sanitary commissioner working on the Indian model of organisation; and (3) that an annual sanitary report regarding the West African colonies should be regularly published. Major Ross admitted that there were difficulties in the way of organising the definite and centralised sanitary scheme thus indicated. Of course, it might be found advisable after discussion to modify the details while retaining the principles. But he maintained that, if we wish for a continuous policy against malaria and the other grave diseases in the tropical colonies we must reorganise our sanitary system. A short discussion and a vote of thanks to Major Ross for his lecture brought the proceedings to a close.

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[1] Report of THE LANCET Special Sanitary Commission on Private Action in Respect of Common Lodging-houses, THE LANCET, April 29th, 1893, p. 1017, and March 28th, 1896, p. 867.

A REMARKABLE CASE OF MULTIPLE PERSONALITY.

RECENT clinical investigations by physicians, especially of the school of Charcot, in regard to the subject of "double consciousness" have brought to light many facts of professional and medico legal interest. In the *Journal of Mental Science* for October Dr. Albert Wilson reports a remarkable case of multiple consciousness in the person of a young girl who at different times of her life exhibited the varying and different characters of one or other of a dozen "personalities." At the age of 12½ years the girl was attacked with influenza and cerebral meningitis lasting about six weeks. The multiplicity of personalities which she exhibited during her life began during this illness and in the following circumstances. In the third week of the illness she was delirious and maniacal and showed intense fear of imaginary snakes (visual hallucinations). She was mentally blind in that she could not recognise people, "yet a hand or any crease in the counterpane became to her a snake." Choreiform fits and opisthotonos occurred in the fourth week, the attacks being terminated by temporary coma. In the fifth week recovery set in and intelligence returned. In the sixth week there developed catalepsy and paraplegia and quite suddenly one day she developed into a different personality. Whilst in bed reading and playing with her dolls she "commenced to shake and clear a space around. Then she said, 'It is coming,' turned a somersault, and sat up in bed in this new personality." Her manner was now childish and her words were clipped as in baby talk, she also used words wrongly, calling white, black; black, white; and red, green. In this state she had some conception of her normal self whom she called "that person." She always says she is "very cross with that person for going and leaving her." She has frequent cataleptic attacks while in this state and is noisy and forward in manners, whereas in her normal state she is a modest and well-behaved child. Other personalities succeeded from time to time in the patient and as a rule she gave herself a different name in each case. Thus her next personality (No. 3) was called by her "Old Nick." This new personality made its appearance on July 24th, 1895, stayed till August 8th, and then disappeared for a year, returning on July 12th, 1896, when it continued for ten weeks. When in this personality the patient was able to read and to write and enjoyed good health but displayed a very bad temper. When she returned to a normal state she had no memory of events which had occurred to her in the "Old Nick" stage. In the character of a fourth personality she was both deaf and dumb. The deaf-mute condition recurred five times, its last appearance being in August, 1895. It lasted a few days only. Other personalities were of varying character and duration; one of these was named by her "good thing" or "good creature" or "pretty dear." This was the most intelligent of the numerous personalities and while in this stage she learnt French. Another personality was characterised by imbecility, blindness, and paraplegia. "The striking feature in this case was that when blind she could draw, while at no other period of her life, either normal or abnormal, had she any ability in drawing." Moral delinquency was exhibited in another of her personalities. She was then violent and cruel, bullied her little sister, and on one occasion she would have pushed the latter into the fire if help had not arrived. When she grew up to be about 16 years of age her normal personality had practically entirely vanished. She was sometimes the individual which she called a "thing" but more usually she was another—viz., "good creature." In some of her personalities, adds Dr. Wilson, habits of baby-talk and a forward unmaidenly manner existed and when menstruation was established no difference was produced in her mental condition. When 17 years of age she developed another personality in which she was self-willed, disobedient to her parents, subject to strong erotic impulses, and inclined to wantonness. In all, says Dr. Wilson, about a dozen different personalities, alternating or occurring at irregular intervals, constituted the total of her psychical life. "This opens the very serious question which constantly confronts us, that of responsibility" for acts done in such states of abnormal consciousness.

THE DANGERS OF SCHOOL ATTENDANCE.

MR. C. O. TREW, writing in the *Times* of Nov. 9th, points out that the great and proper desire of educational authorities to stimulate a high average attendance may lead to danger to the community. Where a cent. per cent. attendance is aimed at children are sure to be sent to school when they are physically unfit. To use Mr. Trew's words, though "absolutely incapable of receiving instruction through temporary or incipient malaise they are sent that they may not miss. Thus attendance is too often the seed of an epidemic." We feel that there is great force in this remark. The connexion of school attendance with epidemics of measles and diphtheria, for example, is so close that no efforts should be spared on the part of school authorities to weed out from among their flock children coming back to school before they have properly recovered, or attending school while in the early stages of disease or from an infected house. It is hard on the children and hard on the teachers that the prestige and the salary dependent on high average attendance should suffer because of the incidence of sickness, but all the world over illness is attended with inconvenience to others than the sick and so far as possible risks of infection through school attendance must be removed. The parents who despatch a sick child to school do not act in the interests of the child, or of his teacher, or of his fellow pupils and this fact requires recognition.

PRIMARY DIPHTHERITIC BRONCHITIS.

AT the meeting of the Société Médicale des Hôpitaux of Paris on Oct. 16th M. Emile Sergent and M. Henri Lemaire described a case of the rare condition of primary diphtheritic bronchitis. A woman, aged 21 years, was admitted to hospital on Sept. 23rd suffering from intense dyspnœa. The history was that she had had bronchitis for eight days and that on the last two days the dyspnœa had been severe. The respirations were 40. Inspiration was stridulous and was accompanied by supra- and infra-sternal retraction. The voice was hoarse and almost inaudible. The face was slightly cyanosed. The throat was normal and the cervical glands were not affected. The pulse was 110 and the temperature was 101·5° F. On auscultating the chest the only abnormal sound heard was slight stridor; the vesicular murmur was almost absent. Dyspnœa of laryngeal or tracheal origin was suspected. As the thyroid was enlarged, the pupils were slightly unequal, and there was a well-marked collateral venous circulation in the sterno-clavicular region, this view was thought to be confirmed and dyspnœa from compression was suggested. Laryngoscopic examination revealed no lesion of the mucous membrane of the larynx but the vocal cords were in the paralytic position. Tracheotomy was performed and a mass of membrane escaped. The dyspnœa almost completely disappeared. The membrane yielded the diphtheria bacillus on culture. Antitoxin was given. On the following day membrane and bloody discharge issued from the tracheotomy tube and bronchitic râles were heard in the chest. Signs of broncho-pneumonia developed at the left base. On Sept. 26th a cast of the trachea and bronchi six inches long was discharged through the tube. The dyspnœa increased and death occurred on Sept. 29th. The necropsy explained the symptoms of compression. Below the right lobe of the enlarged thyroid was a large lymphatic gland four centimetres in diameter which covered the innominate veins. The mucous membrane of the trachea and main bronchi was red and covered with a greyish granular coating. The smaller bronchi were filled with a purulent fluid. At the bases of the lungs were patches of broncho-pneumonia. The bronchial and pulmonary lesions contained the diphtheria bacillus. Before tracheotomy the diagnosis of diphtheria was impossible.

PROFESSIONAL MEN AND MILITARY SERVICE.

MR. W. M. ANDERSON, house physician at Charing Cross Hospital, had recently to appear at Bow-street police-court charged with being an absentee from the training of the County of London Imperial Yeomanry (King's Colonials). For this offence he was fined £5 but as mention was made of a "case" to be stated there may remain a question of law to be argued with regard to his guilt. This cannot affect the facts given in evidence at the police-court as to the steps which led up to the charge against Mr. Anderson. The story told is hardly one likely to increase the popularity of the corps in question among would-be recruits of the class to which Mr. Anderson belongs, a class which may be competent and willing to perform its duty towards its country when able but which must at times be obliged to claim release from its obligations as a matter of necessity. Mr. Anderson had been for some time in the London Scottish, had served in the late war, and had joined the King's Colonials on his return from South Africa, being then a medical student, and not house physician at a general hospital. Finding after his appointment that his duties were incompatible with his attendance at the requisite number of drills and at the annual training in camp he applied five or six weeks before the last training took place for his discharge. In order to obtain this certain requirements had to be fulfilled with regard to the return of clothing and equipment and the settlement of a small sum of money due to the regiment, the precise amount of which in Mr. Anderson's case appears to have been, and still to be, in dispute. The mere civilian would think that a reply stating these conditions would have been promptly sent and that on their being complied with the discharge would have been granted. This, however, was not done, as Mr. Anderson was apparently deemed to be informed of the terms upon which discharge could be obtained owing to these being displayed at the orderly room. Mr. Anderson further wrote on the subject to his commanding officer, but a trooper may not write to a colonel, not even if he is a busy professional man, ignorant or oblivious of the disciplinary regulations of the army, so the next occasion on which Mr. Anderson heard of the matter was when a police constable took him into custody at the hospital and escorted him through the streets to answer for his delinquencies. He mentioned also in his evidence an occasion previously to his arrest when a visit to the orderly room did not produce the information and facilities which he required. This, however, and other matters will no doubt be considered by those responsible for the regiment to which he belonged, or belongs, and it is to be hoped that they will realise that while the citizen soldier is willing to put himself to considerable inconvenience and to some expense in order to make himself as efficient a fighting man as he reasonably can, he must be allowed a certain amount of latitude and consideration when not actually standing in the ranks. The employment of a little tact and the relaxation of red tape whenever possible are alike essential so long as the present system of voluntary service in the auxiliary forces is retained. If this were not generally recognised cases like that of Mr. Anderson would frequently arise in other corps than that from which he sought to be discharged.

THE STATUS THYMICUS AND SUDDEN DEATH.

THERE is probably no form of sudden death which has received so much attention from the medical profession in recent years as that form associated with hyperplasia of the thymus gland and of the lymphatic apparatus in general known as the status thymicus. An account of this abnormal constitutional condition was given in an annotation in THE LANCET some time ago.[1] In the *Johns Hopkins Hospital Bulletin* for October Dr. G. Blumer, professor of pathology at Albany Medical College, gives a detailed account of his studies of this interesting affection. Attention is called to the fact that a similarity between the lesions observed post mortem in cases of status thymicus and many cases of death under anæsthetics has been traced by several observers. These facts are important from a professional and a medico-legal point of view, for it is necessary that we should recognise "the existence of a class of individuals, the subjects of a peculiar constitution which renders them extremely susceptible to shocks of various kinds, physical, psychical, and toxic, and which may lead to sudden death from accidents which to the ordinary individual would be trivial." Instances are on record, adds Dr. Blumer, where individuals of thymic constitution have died from the shock of a plunge into cold water and the case of the child mentioned by Professor Langerhans, who died a few minutes after the administration of diphtheria antitoxin, is familiar to medical men. A number of cases are also on record where nursemaids and women in charge of infants have been accused of suffocating them when the true cause of death has been shown by post-mortem examination to be asphyxia or syncope occurring in the status thymicus. This morbid condition frequently co-exists with other constitutional affections or diatheses, such as rickets, epilepsy, and ophthalmic goitre, but these are to be regarded as coincidences or accidental associations. Dr. Blumer's own investigations included nine cases of status thymicus with sudden death occurring in infants and children and a study of all the cases recorded in medical literature. The reported pathological anatomy and histology are essentially the same, adds Dr. Blumer, in all the cases recorded but the bacteriology of the affection is unknown. The recognition that the enlarged thymus gland is essentially part of a general hyperplasia of the lymphatic system is due especially to Paltauf of Vienna. In some cases, and particularly in adults, the lymphatic hyperplasia is associated with a hypoplasia of the heart and aorta similar to that described by Virchow in chlorotic subjects. Escherich, who has specially studied the features of the thymic constitution, refers to the following valuable diagnostic features of the affection, with which Dr. Blumer concurs. The patients have a pale thin skin, a pasty complexion, and a good pad of subcutaneous fat. Frequently signs of rickets or of scrofula are present and the superficial lymphatic glands of the neck and the axilla are enlarged. There is hypertrophy of the tonsils and circumvallate papillæ, and naso-pharyngeal adenoids are often present. The spleen is frequently palpable. "Many of these patients seem to enjoy perfect health up to the time of their unsuspected death." Referring to the large number of cases personally observed or recorded in literature of infants suspected of being the victims of "overlying" Dr. Blumer states his belief that some of these must be regarded as the victims of the status thymicus. "In one case the child had no appetite on the evening of its death, in another slight convulsions ('moving and struggling' of the child) were noticed by the mother who was looking through a window a few yards off. On her coming to the child a few minutes later it was found to be dead." A second class of cases is mentioned by Dr. Blumer and Dr. Nordmann where a child has died almost instantly from collapse when immersed in cold water. A third class of cases includes deaths from so-called thymic asthma, an attack of asphyxia of obscure nature not to be confounded with laryngismus stridulus. Lange states that in thymic asthma there is throughout the attack a regular "sighing" respiration which does not occur in laryngismus stridulus. Some cases of death in the status thymicus show accelerated respiration, cyanosis, dilatation of the pupils, and swelling of the veins in the neck, and death follows in a few minutes (Gerhardt, Somma, and Blumer). Laub has described a cerebral form of death from the status thymicus occurring in young adults. The onset is marked by epileptiform convulsions and coma. Albuminuria is present and vomiting occurs. Post-mortem examination shows the presence of the status thymicus and cerebral œdema. Subjects of the status thymicus have been noted to be specially prone to death under surgical anæsthesia (Bayer, von Kundrat, Hinkel, and Blake). Blake, who has specially studied cases in the United States of America, has found that ether is as dangerous as chloroform in such cases. "It would seem," adds Dr. Blumer, "as though two classes of patients were especially liable to this [fatal] accident, patients with simple or exophthalmic goitre and patients with adenoid vegetations." The gross lesions found post mortem in cases of the status thymicus include hyperplasia of the thymus, the spleen, and the lymphatic glands generally, a hypoplasia of the heart and the great vessels, especially marked in pubescent and adolescent subjects, and focal lesions in the spleen and the tonsils (hypertrophy of lymph nodules and foci of degeneration in the same). Cultures from the lymphatic glands and the fluids of the body in several cases (Lartigan and Blumer) gave negative bacteriological results. As to the cause of death Dr. Blumer agrees with Escherich that a toxæmia due to the abnormal disorder of the *lymphatic system occurs intermittently in the subjects of* the status thymicus. "We would suggest," concludes Dr. Blumer, "that individuals born with the thymic constitution have an instability of the lymphatic mechanism, so that intermittent lympho-toxæmia is produced. During such attacks the patients are especially susceptible to the action of bacteria and chemical poisons and to all physical and psychical shocks which at these times may cause death under circumstances which would be trivial to the normal individual."

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[1] THE LANCET, March 24th, 1900, p. 869.

THE NATIONAL ANTI-VACCINATION LEAGUE.

THE annual conference of the National Anti-Vaccination League was held at Glasgow on Nov. 7th. Lieutenant-General Phelps was in the chair and the meeting proceeded to consider the eminently sensible recommendations of the Imperial Vaccination League. The letter by Mrs. E. Garrett Anderson, M.D., entitled "Vaccination and the Rates," which appeared in the *Times* of Sept. 15th, 1903, and in which that lady suggested that all employers should insist upon their employés being able to prove that they had recently been efficiently revaccinated, seems to have greatly exercised the anti-vaccination mind. Dr. W. R. Hadwen of Gloucester stigmatised Mrs. Garrett Anderson's methods as "subtle, disgusting, and contemptible." The President read a paper in which he contended that vaccination, especially that performed with calf lymph, was capable of producing cancer. We should much like to see Dr. Hadwen, Lieutenant-General Phelps, and other prominent anti-vaccinationists offer themselves as nurses or attendants in a small-pox hospital. Unfortunately, however, the brutal and overbearing authorities have so little regard for the liberty of the subject that they will not allow anyone to serve in a small-pox hospital until he or she has been vaccinated, so that this test is impossible of attainment. The conference passed various motions, one of which stigmatised pressure used by employers on the advice of Mrs. Garrett Anderson and the Imperial Vaccination League to force employés to submit to revaccination as a condition of employment as unwarranted, tyrannous, and calculated to undermine the independence of the working classes. We can only hope that the Imperial Vaccination League will continue its good work and will be amply provided with funds for the purpose. Subscriptions (10*s.* 6*d.* for members and not less than 2*s.* 6*d.* for associates annually) may be sent to the secretary, Imperial Vaccination League, 53, Berners-street, London, W.

TUBERCULIN IN THE TREATMENT OF LUPUS.

THE employment of Koch's tuberculin in the treatment of lupus is at the present time somewhat rare and therefore a paper published in the present issue of THE LANCET is of great interest. In that article Mr. C. Stanser Bowker of Newport describes seven cases of lupus which he treated by excision and the subcutaneous injection of Koch's lymph. Fowler's solution of arsenic was also injected. In some of the cases the injections were continued for several months, until, in fact, no reaction followed. The results show the success which can be obtained by this method. It will be seen that the chief point in the treatment adopted is the combination of the tuberculin injection with the excision. The cosmetic results appear to have been very good and altogether the treatment seems to have been satisfactory. It is well, of course, to remember at the present day that other methods than light and x-ray treatment can produce successful results in lupus, but we must confess that we think that the employment of the x rays would have materially shortened the duration of treatment in some at least of these cases.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE next quarterly or general meeting of the above society will take place at 11, Chandos-street, Cavendish-square, London, W., under the presidency of Dr. Ernest W. White, immediately after the extraordinary general meeting which is summoned for 3 o'clock in the afternoon of Wednesday, Nov. 18th. Dr. Nathan Raw will read a paper on the Relation of Mental Symptoms to Bodily Disease with special reference to the Treatment of Temporary Forms of Insanity *outside* Lunatic Asylums. Dr. R. S. Stewart will read a paper entitled "The Mental and Moral Effects of the South African War, 1899–1902, on the British People." These papers will be preceded by a short lantern demonstration of microscopical slides illustrating Fragilitas Ossium in the Insane by Dr. W. Maule Smith. The members will afterwards dine at the Café Monico, Piccadilly Circus, W., at 7 o'clock, the price of the dinner ticket being 7*s.* 6*d.* Names of those intending to dine should be sent to Dr. T. Outterson Wood, 40, Margaret-street, Cavendish-square, London, W.

RADIUM IN CANCER.

A QUANTITY of pure radium has been generously placed at the disposal of a member of the staff of the Cancer Hospital, Fulham-road, London, S.W., and the staff are making arrangements for an extensive trial of this new method of treatment. With the number of inoperable cases at their disposal the staff will be able to give the treatment a fair and exhaustive trial.

RESIGNATION OF THE VIENNA MEDICAL CHAMBER.

THE members of this chamber, to which is confided the professional control of the medical men in Vienna, resigned in a body on Nov. 7th. This is one result of a struggle which has been continued for some time between the anti-Semites who are members of the Landtag with the Governor of Lower Austria on the one side and the Viennese medical men and university professors, who are mostly Jews, on the other. The quarrel is stated to have begun in connexion with the question of vivisection, a number of members of the Diet having accused the medical men of making experiments on animals in contravention of the vivisection law, of performing illegal operations on poor people, and of surreptitiously obtaining parts of dead bodies. Our Vienna correspondent's report shows that the whole movement is anti-Semitic rather than sentimental.

A POPULAR EXPOSITION OF ANKYLOSTOMIASIS.

THE principal journals connected with the technical trades and industries follow the sound policy of very seldom admitting medical questions into their columns, but it is an old maxim that circumstances justify occasional departures from general rules and the *Colliery Guardian*, recognising this, has appointed a special commissioner to write for it a series of articles on ankylostomiasis. Our readers are familiar with the fact that this intestinal parasite, so common in the tropics, many years ago attracted attention on account of the havoc which it caused among the men engaged in railway tunnelling in Switzerland, and we have also had to record that the parasite has now made its appearance amongst miners both in Germany and more recently in Cornwall.[1] The first article, described as "introductory," appeared in the *Colliery Guardian* of Nov. 6th and is evidently the work of a very competent writer. It deals with the natural history and appearance of the parasite, the treatment of the disease, and the prophylactic measures required. This latter is, of course, by far the most important part of the subject and resolves itself into inducing the men not to defecate on the ground in the mines. Our contemporary gives copious illustrations, not only of the parasite and its eggs in various stages of development, but also of the arrangements of water-closets, dry-earth closets, and baths provided above ground by Westphalian and Belgian mine owners for the use of the men. Of more consequence still, however, is the system of pails provided for defecation underground. It is hardly to be expected that the average pitman will welcome these innovations rapturously, and one effect which may be expected from the treating of this subject in a non-medical journal will be that persons occupying positions of some authority in mines will gradually become convinced of the advantage of carefully attending to the measures of prevention which helminthologists and medical men have long ago defined. It will be useless to leave the matter in the hands of the men; supervision will be required. In forthcoming articles the history of the outbreak at Brennberg in Austria will be described and a detailed account given of the regulations issued by the German Government for the purpose of combating the disease.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THREE lectures on the Development and Morphology of the Sternum have just been delivered in the Royal College of Surgeons of England by Professor Andrew Melville Paterson (Hunterian Professor). The concluding lecture, which was delivered yesterday (Friday), dealt with (1) variations in the form of the sternum; (2) its comparative anatomy and morphology; and (3) its teratology. Three lectures on the Early Stages in the Development of Mammalian Ova and the Formation of the Placenta in different Groups of Mammals will be delivered in the theatre of the College by Professor Arthur Robinson (Hunterian Professor) on Nov. 16th, 18th, and 20th, at 5 P.M. each day. The first lecture will deal with the structure of the ovum, its coverings, maturation, fertilisation, and segmentation. The second and third lectures will describe the formation and the structure of the placenta in a variety of animals and in the human subject.

SPONGES IN MILITARY SURGERY.

THE *Deutsche Militärärztliche Zeitschrift* for July, 1903, contains an article, written in collaboration by Dr. Deeleman and Dr. Varges, on the employment of sponges for surgical purposes on active service. Of late years bacteriology has demonstrated the fact that in spite of attempts at disinfection and sterilisation sponges that have been used for hospital work are liable to convey contagion. The practice amongst surgeons at present is to dispense as far as possible with the use of sponges and after an initial exposure to contamination to discard them altogether. In the opinion of Dr. Deeleman and Dr. Varges there is in reality no need for this extravagance, especially on active service where bulk and weight are most important considerations with regard to surgical material. Disinfection by steam under pressure or by boiling in plain water, or in soda solutions, or in antiseptic solutions of any description is inadvisable, because the sponges are made hard during the process and lose, moreover, their elasticity. According to the regulations in force in the German army the process of sterilisation for sponges should be carried out in the following manner. In the first place as much of the foreign matter as possible should be got rid of by repeated washings in hot water. The sponges are then to be immersed during 12 hours in an aqueous solution of corrosive sublimate (5 per 1000), to which glycerine in the proportion of 20 per cent. has been added. Dr. Deeleman and Dr. Varges believe that this procedure occupies more time than could usually be spared on active service. No doubt corrosive sublimate is the best of all disinfectants, but on a campaign it is necessary that its antiseptic action should be facilitated by the preliminary removal of coarse impurities such as blood and pus in some quicker way than by washing in hot water. In their opinion sponges that have been used should first be placed for 15 or 30 minutes in hot water containing 5 per cent. of ammonia (density 0·960). Having been removed and squeezed they should next be washed in a 5 per cent. carbolic solution until they part with their viscosity and become once more soft and elastic. The sterilisation is then to be completed by immersion during two hours in the ½ per cent. solution of corrosive sublimate. Should time press the duration of the steeping may be shortened to one hour provided that the temperature of the sublimate solution be at least 50° C. Dr. Deeleman and Dr. Varges have verified this process by bacteriological experiment. Thanks to it complete sterilisation of moderate-sized sponges can be effected in three, or at most four, hours, whereas according to the official method the time occupied is 12 hours. Sponges for use on active service should not be packed in canvas but should be compressed and placed in bags made of sterilised parchment.

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[1] THE LANCET, Nov. 22nd (p. 1391), 1902; March 14th (p. 765), ay 2nd (p. 1276), and June 27th (p. 1833), 1903.

THE SOCIETY OF ARTS.

THE Society for the Encouragement of Arts, Manufactures, and Commerce, to give that well-known body its full title, is now entering on its 150th session and the opening meeting will be held on Nov. 18th at the society's rooms, John-street, Adelphi, W.C., when an address will be delivered by Sir William Abney, vice-president and chairman of the council. The Wednesday evening meetings will commence on Nov. 25th, when Mr. G. F. Parker will give an address on the Universal Exposition to be held at St. Louis, U.S.A., in 1904. The Cantor Lectures, delivered weekly on a variety of technical subjects of interest, will commence on Nov. 23rd and will continue up to the month of May.

THE TESTING OF THE EYES OF SCHOOL BOARD CHILDREN.

SOME correspondence has recently taken place between the secretary of the London Hospital and the authorities of the School Board for London dealing with a question of considerable importance—namely, upon whom devolves the duty of testing the eyesight of the School Board children? The circumstances of the case are these. On Oct. 6th last a letter was addressed by the secretary of the London Hospital to the School Board for London complaining that so large a number of children had been sent from the Board to have their eyesight tested as seriously to interfere with the ordinary work of the surgeon in charge of the ophthalmic department and that this gentleman, Mr. A. B Roxburgh, found himself unable to examine them in a manner satisfactory to himself or advantageous to the children; that, as a matter of fact, there were no less than 180 cases waiting to be tested and that 50 had presented themselves on a single day. The secretary added that Mr. Roxburgh had stated that he did not feel himself able to attend on any one day to more than ten School Board cases in addition to his ordinary work, and the committee of the hospital had given instructions that for the present, pending the action of the School Board, no more eye-testing should be done for the Board at the hospital. The reply of the School Board, founded on its own medical officer's report, was to the effect that no instructions were given to the parents the eyesight of whose children was defective to apply to any particular hospital, but that they *were simply recommended to procure medical advice and* that in the opinion of the Board it was the duty of the officer in charge of the ophthalmic department of the hospital to attend to all cases that presented themselves. It was broadly hinted that if the ophthalmic surgeon and his assistants were unable to cope with the increase of the patients it would be well for the hospital to augment the staff. The School Board took the opportunity of bringing under the notice of the committee of the London Hospital two cases, both of which, it would appear, were particularly hard. In one the child, though wet, poorly clad, badly shod, and hungry, was stated to have been refused attention simply on the ground that she had come from the London School Board; in the other it was alleged that the patient, after waiting for two hours, was dismissed without being attended to because the surgeons were sick and tired of the London School Board cases. We do not take for granted the accuracy of this account of the demeanour of the hospital officials, but any how they could plead that they were only acting in accordance with their instructions. We desire to consider the real gist of the matter. The time at the disposal of a surgeon in active practice to spend on gratuitous patients is not unlimited. Most of the cases sent by the School Board to procure medical advice were probably cases of asthenopia arising from hyperopia, and in some more or less astigmatism would *certainly be present. If from ten minutes to* a quarter of an hour be allowed for the determination of an uncomplicated case of hyperopia, and half an hour for a case of hyperopia complicated with astigmatism, a much longer time and two or three visits being sometimes required, it is clear that the demand on the time of even half a dozen assistants is immense and that allowance must be made for the best-tempered man when in addition to all his other work, including operations, he is suddenly confronted with 50 new cases in which the refraction has to be ascertained with an approach to accuracy. It hardly seems fair that the duty of attending and prescribing appropriate glasses for so many cases should rest with the hard-worked surgeon of a special department of a general hospital, whose time is necessarily to a large extent otherwise occupied.

IN the list of Birthday Honours are included the names of Mr. J. G. Craggs, honorary secretary of King Edward's Hospital Fund, and Mr. A. R. Manby, M.V.O., M.D. Durh., surgeon-apothecary to the King and the Prince of Wales. Both these gentlemen well deserve the knighthood which has been conferred upon them. Captain T. H. M. Clarke, D.S.O., R.A.M.C., has received a Companionship of the Order of St Michael and St. George for services in Crete, and Mr. Robert Bell, M.D., F.R.S., acting director of the Department of Geological Survey, Canada, has been appointed a Companion of the Imperial Service Order.

THE annual dinner of the British Gynæcological Society will take place at the Café Monico, Piccadilly Circus, London, W., on Friday, Nov. 27th, at 7.30 P.M. Communications on the subject should be addressed to the honorary secretaries, Dr. J. H. Swanton, 40, Harley-street, Cavendish-square, W., and Dr. S. J. Aarons, 14, Stratford-place, W.

THE fifth annual dinner of the Medical Graduates' College and Polyclinic will be held at the Trocadéro Restaurant, Piccadilly Circus, London, W., on Thursday, Dec. 3rd, at 7 30 P.M. Mr. James Cantlie will preside. Those wishing to be present should communicate with Mr. A. E. Hayward Pinch, 22, Chenies street, W.C.

THE next session of the General Council of Medical Education and Registration of the United Kingdom will commence on Tuesday, Nov. 24th, at 2 P.M. at 299, Oxford-street, London, W, the President, Sir William Turner, K.C.B., in the chair.

ON Nov. 6th Mr. John Newport Langley, D.Sc., F.R.S., Fellow of Trinity College, was elected to fill the professorial chair in physiology in the University of Cambridge, vacant by the resignation of Sir Michael Foster, M.P.

Dr. Charles J. Martin, F.R.S., has now entered upon his duties as director of the Lister Institute of Preventive Medicine and in future the administrative work of the institute will be under his control.

Her Majesty the Queen has graciously consented to become the first Lady Governor of St. Bartholomew's Hospital.

ST. BARTHOLOMEW'S HOSPITAL.

AT a general court of governors held on Nov. 5th, about 70 governors being present, the following motions, which were proposed by Mr. CHARLES ALFRED CRIPPS, K.C., M.P., and seconded by Sir WILLIAM S CHURCH, Bart., K.C.B., President of the Royal College of Physicians of London, were carried with only one dissentient, viz. :—

1. That this court desires to record its unqualified satisfaction that the Mansion House Committee, after impartial and exhaustive inquiry, have come to the following conclusions, viz : (*a*) That it is impossible, in the public interest, to remove the hospital from its present site; (*b*) that the additions to, and re arrangement and improvement of, the existing buildings, as proposed by the governors, are absolutely necessary for continued efficiency in the treatment of patients and for bringing the hospital in all departments up to the standard of modern sanitary and scientific requirements; (*c*) that an appeal to the public to supply the cost of the requisite new buildings and improvements is fully justified, it having been shown to be impossible for the hospital to provide the same out of its own resources; (*d*) that the reputation and character of the hospital have been fully vindicated and that its administration has been conducted in a wise and enlightened spirit with due regard to economy and to the best interests of the patients.

2. That the court begs to offer to the gentlemen who served on the Mansion House Committee its cordial thanks for the large amount of time and the great attention bestowed by them on all matters connected with their inquiry.

3. That in the general scheme of rebuilding provision be made for: (*a*) additional operating theatres; (*b*) new casualty and out-patient departments; (*c*) new nurses' home; (*d*) new quarters for the resident medical and surgical staff; (*e*) an isolation block and other new ward blocks to supply the place of those to be demolished; (*f*) new mortuary, post-mortem rooms, and pathological department; (*g*) internal structural re-arrangement of the east, west, and south wings of the hospital.

4. That the house committee with power to add to their number be requested to determine, after consultation with the medical staff, by which of the several plans submitted by the architects, subject to such modifications a from time to time appear desirable, provision for the foregoing purposes can best be secured; but that it be an instruction to the house committee to carry out the recommendation of the Mansion House Committee as regards the out-patient department as shown on Plan No. 6 laid before that committee.

5. That the first block to be built be the new casualty and out-patient departments, dispensary, &c., and the new operating theatres; that the nurses' home be next built; and that the remaining blocks be built in such order as, having regard to their relative urgency, may be considered most expedient and convenient for the general work of the hospital.

6. That the medical staff be consulted from time to time on all details that affect the sanitary arrangements, the treatment of the patients, or the interests of the medical school.

7. That the treasurer and almoners be authorised to make arrangements from time to time for the temporary use of such of the Christ's Hospital buildings as may be necessary for carrying on the work of the hospital. Also that they be given authority to make any provision they may think proper for officers and servants whose present quarters are destroyed or interfered with thereby.

8. That application be made to Parliament in the ensuing session for power to the governors to use for the purposes of the hospital in connexion with the proposed new buildings and improvements the site of the church of St. Bartholomew-the-Less and the burial ground adjoining within the hospital precincts, and for the union for ecclesiastical purposes of the parish of St. Bartholomew-the-Less with the adjacent parish of St. Bartholomew-the-Great.

9. That after the Lord Mayor elect has entered upon office the treasurer and almoners do wait upon him with a request from this general court of governors that at some convenient date he will convene a meeting of the citizens for the purpose of raising the requisite funds for the new buildings and improvements needed.

ASYLUM REPORTS.

Cork District Asylum (Annual Report for 1902).—The average number of patients resident during the year was 1613, comprising 867 males and 746 females. The admissions during the year amounted to 308—viz , 160 males and 148 females. Of these 267 were first admissions. Dr. Oscar T. Woods, the medical superintendent, states in his report that the admissions during the year are 15 over the average of the last ten years. "Many of these were caused by attacks of insanity coming on at the age of puberty, in almost all of whom there was an hereditary predisposition." The recovery-rate is greater among the married than among the single, so that "there are at present in the asylum 1053 single and only 393 married patients." "In many of my annual reports," says Dr. Woods, "I have recorded my opinion that until a definite effort is made to check its hereditary transmission insanity will go on increasing; intoxications, ill-health, &c., act as exciting causes to bring on insanity; but in nearly all these cases there is the predisposing cause of heredity lying dormant to be lit up at the critical epochs of life by any exciting cause." Reviewing the type of patients admitted into the asylum, says Dr. Woods, "I have formed a strong opinion that there is much unregistered insanity still in the country and much neurotic disease existing to be turned into active insanity by the slightest exciting cause." The number of patients discharged as recovered during the year amounted to 122—viz., 53 males and 69 females, or 7·6 per cent. of the average number resident. The deaths during the year amounted to 106, or 6·6 per cent. as calculated on the same basis. Of the deaths one was due to general paralysis of the insane, four were due to cerebral hæmorrhage, five to senile decay, nine each to bronchitis and cardiac disease, 16 to cerebral atrophy, 34 to pulmonary and other forms of tuberculosis, and the rest to other causes. The inspector of lunatics states in his report that while the condition of the asylum "is in many respects satisfactory and the time and care which the medical superintendent devotes to his duties are beyond all praise, it cannot be pretended that an institution for the insane fulfils its primary object when it does not afford sufficient accommodation for the number of patients needing its shelter." It is pointed out that the overcrowding which exists at present should be relieved. The nursing and care of the patients are stated to be excellent. It is also pointed out that the provision of increased accommodation is a question which can no longer be postponed but should be practically met and settled by the committee of management which seems to have been hitherto rather lax in discharging this obligation.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8743 births and 4691 deaths were registered during the week ending Nov. 7th. The annual rate of mortality in these towns, which had been 15·8, 15·9, and 16·3 per 1000 in the three preceding weeks, declined again last week to 16·2 per 1000. In London the death-rate was 16·1 per 1000, while it averaged 16·3 in the 75 other large towns. The lowest death-rates in these towns were 5·7 in King's Norton, 6·4 in Walthamstow, 7·4 in Newport (Mon.), 8·0 in Hornsey and in Smethwick, 8·3 in Bournemouth, 8·7 in Hastings, and 8·8 in Leyton and in Portsmouth; the highest rates were 20·8 in Gateshead and in Tynemouth, 21·0 in Oldham, 22·0 in Burnley, 22·3 in Salford, 22·4 in Swansea, 22·6 in Wigan, 22·8 in Warrington, and 23·4 in Stockport. The 4691 deaths in these towns last week included 419 which were referred to the principal infectious diseases, against 635, 532, and 523 in the three preceding weeks; of these 419 deaths, 158 resulted from diarrhœa, 56 from "fever" (principally enteric), 55 from measles, 55 from diphtheria, 54 from whooping-cough, and 41 from scarlet fever, but not one from small-pox. No death from any of these principal infectious diseases was registered last week in Croydon, Willesden, Hornsey, Hastings, Brighton, Devonport, Smethwick, Derby, or Wallasey, while they caused the highest death-rates in Ipswich, Hanley, Warrington, Rotherham, York, Sunderland, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Ipswich, Warrington, Rotherham, and Sunderland; from scarlet fever in Northampton and Merthyr Tydfil; from diphtheria in Hanley; from whooping-cough in Rochdale and Halifax; and from diarrhœa in Hanley, King's Norton, Gateshead, and Newcastle-on-Tyne. The mortality from "fever" showed no marked excess in any of the large towns. No death from small-pox was registered last week in any of the 76 large towns. The Metropolitan Asylums hospitals contained 43 small-pox patients at the end of last week, against 11, 34, and 42 at the end of the three preceding weeks; five new cases were admitted during the week, against one, 26, and 12 in the three preceding weeks. The number of scarlet fever cases under treatment in these hospitals and in the London Fever Hospital, which had been 1861, 1858, and 1828 on the three preceding Saturdays, had risen again to 1854 on Saturday last, Nov. 7th; 224 new cases were admitted during the week, against 208, 209, and 199 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 175, 194, and 260 in the three preceding weeks, further rose last week to 271, but were 27 below the number in the corresponding period of last year. The causes of 54, or 1·2 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Salford, Leeds, Newcastle-on-Tyne, and in 45 other smaller towns; the largest proportions of uncertified deaths were registered in Northampton, Liverpool, St. Helen's, Preston, Gateshead, and Rhondda.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 16·1, 16·7, and 17·0 per 1000 in the three preceding weeks, declined again to 15·8 per 1000 during the week ending Nov. 7th, and was 0·4 per 1000 below the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 12·8 in Dundee and in Greenock and 13·8 in Paisley, to 16·9 in Glasgow and 23·2 in Perth. The 516 deaths in these towns last week included 19 which were referred to measles, 15 to diarrhœa, six to diphtheria, six to whooping-cough, five to scarlet fever, one to small-pox, and one to "fever." In all, 53 deaths resulted from these principal infectious diseases last week, against 72, 77, and 62 in the three preceding weeks. These 53 deaths were equal to an annual rate of 1·6 per 1000, which was 0·2 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been 14, 16, and 11 in the three preceding weeks, rose again last week to 19, of which 18 occurred in Glasgow. The deaths from diarrhœa, which had been 35, 39, and 33 in the three preceding weeks, further declined to 15 last week, and included six in Glasgow, four in Dundee, and three in Aberdeen. The fatal cases of diphtheria, which had been four and five in the two preceding weeks, further rose last week to six, of which four were registered in Glasgow and two in Edinburgh. The deaths from whooping-cough, which had been eight and seven in the two preceding weeks, further declined to six last week and included two in Glasgow and two in Edinburgh. The fatal cases of scarlet fever, which had been four in each of the two preceding weeks, increased last week to five, of which two occurred in Glasgow and two in Edinburgh. The death from small-pox was registered in Glasgow where the fatal case of "fever" also occurred. The deaths referred to diseases of the respiratory organs in these towns, which had been 82, 92, and 108 in the three preceding weeks, declined to 107 last week and were 43 below the number in the corresponding period of last year. The causes of 18, or nearly 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 18·6, 21·5, and 21·2 per 1000 in the three preceding weeks, rose again to 21·7 per 1000 during the week ending Nov. 7th. During the past four weeks the death-rate has averaged 20·8 per 1000, the rates during the same period being 15·6 in London and 14·7 in Edinburgh. The 158 deaths of persons belonging to Dublin registered during the week under notice were four in excess of the number in the preceding week and included two which were referred to the principal infectious diseases, against nine, 13, and seven in the three preceding weeks; of these two deaths, one resulted from "fever" and one from diarrhœa. The death-rate from these diseases was 0·3 per 1000; the death-rate from the principal infectious diseases last week was 1·4 per 1000 in London and 1·1 in Edinburgh. The 158 deaths in Dublin last week included 32 of children under one year of age and 39 of persons aged 60 years and upwards; the deaths of infants showed a slight decline from the number in the preceding week, while those of elderly persons were somewhat in excess. Three inquest cases and two deaths from violence were registered, and 61, or more than a third, of the deaths occurred in public institutions. The causes of nine, or nearly 6 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE undermentioned have been appointed Surgeons:—Arthur Robertson Brailey and Frank Wybourn Smith.

The following appointments are notified:—Surgeons: E. Cooper to the *President* for three months' hospital study and P. H. Bannister to the *Northampton* (dated Nov. 11th); and W. R. Center to the *Pembroke* (dated Nov. 7th).

ARMY MEDICAL STAFF.

Colonel W. L. Gubbins, M.V.O., Royal Army Medical Corps, to be Surgeon-General, vice Sir W. D. Wilson, K.C.M.G., retained on the Active List as a Supernumerary to the Establishment (dated August 27th, 1903).

ROYAL ARMY MEDICAL CORPS.

Colonel G. D. N. Leake, Principal Medical Officer at Woolwich, will shortly embark for duty in India. Captain A. E. C. Keble is appointed to the medical charge of the Hospital for Soldiers' Wives and Children, officers of the staff, and their families, Chatham, vice Lieutenant-Colonel R. Jennings.

ARMY MEDICAL RESERVE OF OFFICERS.

The undermentioned Surgeon-Majors to be Surgeon-Lieutenant Colonels (dated Nov. 11th, 1903):—R. R. Brown, A. D. MacDonald, C. Arrol, W. J. Naismith, D.S.O., E. W. Symes, R. De La P. Beresford, C. W. Thorp, T. J. Aubin, R. B. Smith, R. T. Cæsar, E. B. Reckitt, R. A. S. Daly, A. Chawner, E. J. Lawless, F. E. Fenton, F. L. Stevenson, R. L. Sparrow, F. J. Walker, W. C. Cowan, A. T. Wear, J. H. Maclean, W. Fergusson, W. L. Stewart, J. W. Hodgson, and A. Lingard.

The undermentioned Surgeon-Captains to be Surgeon-Majors (dated Nov. 11th, 1903):—C. N. Lee, R. T. Meadows, J. G. Saville, G. M. Lowe, F. V. Adams, D. T. Key, E. H. Moore, R. J. M. Coffin, S. S. Hoyland, J. Adam, W. Kinnear, H. R. Bramwell, J. A. Rigby, J. T. Thomas, W. L. Edwards, and H. J. Mackay.

The undermentioned Surgeon-Lieutenants to be Surgeon-Captains (dated Nov. 11th, 1903):—C. Boyd, J. Taylor, E. M. Callender, H. G. O. Collett, E. W. Livesey, J. P. S. Ward, J. S. Mackay, L. W. Pockett, R. T. Ferguson, C. G. Maclagan, J. M. Moir, W. A. Griffiths, R. H. Luce, A. H. Vernon, J. C. Wright, G. Melville, J. McMullen, D. R. Doble, E. W. F. MacW. Bourke, A. Henderson, E. E. Dyer, A. Y. Pringle, J. S. Swain, H. M. Brownfield, H. N. A. Taylor, T. F. Devane, A. Ehrmann, H. Fox, L. L. Hanham, and A. Hilton.

Surgeon-Lieutenant-Colonel C. M. MacKnibban having attained the prescribed limit of age is removed from the Army Medical Reserve of Officers.

Surgeon Captain C. A. Corke, 2nd Volunteer Battalion Worcestershire Regiment, to be Surgeon-Captain (dated Nov. 7th, 1903).

Lieutenant A. E. L. Wear, Royal Army Medical Corps Volunteers, to be Surgeon-Lieutenant (dated Nov. 7th, 1903).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 2nd Middlesex: Surgeon-Lieutenant E. A. Snape to be Surgeon-Captain (dated Nov. 7th, 1903).

Royal Engineers (Volunteers): 1st West Riding of Yorkshire (Sheffield): Alan Charles Turner to be Surgeon-Lieutenant (dated Nov. 7th, 1903).

Rifle: 3rd Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Captain J. McMullen is retired under paragraph 118 Volunteer Regulations (dated Nov. 7th, 1903). 2nd (Westmoreland) Volunteer Battalion the Border Regiment: Surgeon-Captain W. B. Cockill is borne as Supernumerary whilst commanding the Lancaster and Border Volunteer Infantry Brigade Bearer Company (dated Nov. 7th, 1903). 1st (Hallamshire) Volunteer Battalion the York and Lancaster Regiment: Surgeon-Lieutenant-Colonel J. W. Martin resigns his commission with permission to retain his rank and to wear the uniform of the battalion on retirement (dated Nov. 7th, 1903); William Smith Kerr to be Surgeon-Lieutenant (dated Nov. 7th, 1903).

DEATHS IN THE SERVICES.

Surgeon-Major-General James Davis, Army Medical Staff (retired), at his residence at Southsea on Nov. 8th, aged 68 years. He entered the army as assistant surgeon in 1858, served with the 57th Regiment in the New Zealand war in 1861, and was present at the repulse of the attack on Camp Nukumaru and in the engagement at Kakaramea. He became surgeon-major in 1873, surgeon-major general in 1894, and retired in the following year.

Correspondence.

"Audi alteram partem."

THE FUTURE OF ST. BARTHOLOMEW'S HOSPITAL.

To the Editors of THE LANCET.

SIRS,—The present position of the controversy regarding the provision of an adequate scheme for the reconstruction of St. Bartholomew's Hospital is well calculated to cause widespread anxiety and disgust. The official proposals include an appeal to the public for a sum of £350,000—an appeal which obviously must fail unless the public judgment is first convinced. At the same time experts who speak with authority denounce the official scheme as seriously defective in respect both to present demands and future development. It is pointed out, for example, that the received plans include such a highly objectionable feature as the retention for the reception and treatment of in-patients of buildings which have been used for this purpose for at least 150 years and in which it is impossible to obtain a proper supply of sunlight and fresh air. Further, the hygienic condition of the hospital will be made dangerous by adding an additional storey to the north wing and by crowding an already crowded site with many additional buildings. The scheme, in short, instead of representing the highest level of hospital construction and sanitary efficiency, will merely put a modern gloss on old faults and will provide a hospital having grave and essential defects. The corollary is inevitable—that the future St. Bartholomew's Hospital will be promptly recognised as an exhibition of the folly of half measures and that its decline in public and professional estimation is certain. This, in essence, is the criticism passed by responsible voices on the plan of the Mansion House Committee now before the public for the reconstruction of a hospital the premier position of which in relation both to historical associations and practical achievement is recognised in all parts of the empire. This fact alone is sufficient to show that the scheme is foredoomed to failure. For efficiency the public sympathy may readily be enlisted, but it has no voice or help for a policy of shreds and patches.

Criticism in the present instance, however, has not merely a destructive aspect. On the contrary, it propounds an alternative scheme which, if adopted, will secure for the hospital everything that modern experts advise and will at the same time guarantee the opportunity for such developments as are probable in the future, the estimated outlay here being a sum of £600,000. These, in brief, are the rival policies presented to the public and it needs no special gift of discernment to anticipate that the more radical proposal is the more likely to attract interest and support. St. Bartholomew's Hospital has a wide and well-deserved fame. Its traditions of efficiency and success may be traced through the medical history of 800 years. From its walls have issued for generations countless numbers who in all parts of the world have practised the art of healing. Its physicians and surgeons include the many names which are the cherished heritage of the profession. Enthusiasm on behalf of such an institution only waits to be aroused. There now exists an opportunity to add to the noble history of the past the developed efficiency which the modern spirit requires. Is it reasonable to believe that energy will awake on behalf of a proposal to meet this opportunity with half-hearted and temporising measures? Certainly it may be taken for granted that the controversies of the last 12 months have developed in the public a feeling of hesitation and doubt and that the more recent criticisms command a degree of confidence which official silence will altogether fail to disturb. Before they offer their support the public will insist on knowing all the facts.

In this respect one of the most remarkable features in this prolonged controversy has been the absence of any expression of opinion by the medical staff of the hospital. Doubtless the views of the staff were officially submitted to the Mansion House Committee but they have never reached either the governors of the hospital or the general public. The responsibility of the staff in this matter is a considerable one. They are in a very special sense aware of the existing defects in the hospital. They are also aware of the changes necessary to remedy these defects. Further, it rests with them to estimate the probable future demands both of hospital treatment and medical education. Their judgment and decision on these points must necessarily carry substantial weight and in the essential interests of the hospital it is imperative that their opinions should be publicly pronounced. With them in a large measure rests the decision whether "Bart.'s" shall continue and enlarge its noble history or shall dwindle into a second- or third-rate position among the medical institutions of the metropolis.

Public opinion will certainly demand that London shall have at least one modern hospital and medical school replete in every respect. The inclination of the City and, indeed, of all parts of the country, is to support the position and claim of St. Bartholomew's Hospital. But there are other candidates and their virtues will not be neglected on merely sentimental considerations. It is only an efficient programme which will secure public support. There are rumours afloat that the silence of the hospital staff is due to a fear of offending one or more august patrons of the hospital. Considering that the most distinguished personage in the realm and his royal son have both identified themselves with a policy of hospital thoroughness and efficiency these rumours may be neglected. In any event the claim for a clear statement is imposed by the sanction of duty. It rests with the staff to satisfy public opinion and in the absence of this the financial success of any scheme is more than doubtful. They have still another opportunity. "Bart.'s" men, proud of their *alma mater*, are to be found in influential positions all over the world. A courageous appeal from the present staff, accompanied by the assurance that the future of the hospital and school is at stake, would go a long way to raise the money necessary for a complete reconstruction. The precedent of "Guy's" is a full justification for this statement. But so long as the medical staff stand silent so long will there be doubt and mistrust and the public will remain aloof. The opportunity for a large and worthy success now exists. Is it to be lost through a faint-hearted and short-sighted policy backed by the supineness of the medical staff and old "Bart.'s" men all over the country? I cannot believe it.

I am organising a definite, purposeful, and sustained opposition to the scheme of the Mansion House Committee, which, if persisted in, must ultimately ruin St. Bartholomew's Hospital. I am a governor of St. Bartholomew's Hospital and although the fight will be earnestly maintained by us laymen the continued silence of the medical staff must render a difficult task doubly difficult. If it be true that the medical council made representations to the treasurer before the meeting of the governors on Nov. 5th to the effect that the site must be larger and that the wards for the reception of patients must be entirely modern and up to date that report has been kept back from the governors. We ought, however, to know the facts.

I am, Sirs, yours obediently,

ANDREW MOTION,

Chairman of the Cannon Brewery Co., Clerkenwell, E.C.

Banbury, Nov. 10th, 1903.

*** Mr. Motion is evidently not aware of the action which the medical staff has taken in this matter for some years. Being a governor of the hospital he surely could obtain access to the various reports on the subject which the medical staff has sent to the authorities. The views of the staff were published substantially in the columns of THE LANCET a fortnight ago.—ED. L.

THE UNIVERSITY OF LONDON AND THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—There seems to occur a primary sense of perplexity about introducing the new final State's examination or Doctorate in Medicine in the proposed Medical Acts Amendment Bill, but clearly the rights of the older corporate examining bodies cannot be annulled without negotiations which have not taken place, and, besides, there are the difficulties of authority where we, unfortunately perhaps, have not got State control of, nor a State Minister of, education. Meanwhile the worried London student of medicine is still left ding-donging at the final Hall, then the final Colleges, then the final M.B., then the final Fellowship examinations, and even then will not obtain the expected or desired *University* M D, a unique and silly arrangement compared with any other part of the civilised world This shows the necessity of reform With regard to any complete proposal, before endeavouring to bring the great medical bodies and the standard medical teaching interests in London together, it is essential to bear in mind that all the commissions and schemes dealing with this question, and including the Jenner suggestions in 1885, were absolutely discarded in favour of *the reform of the University of London So, evidently*, the University of London Act 1898, alone shows at the crest of practical politics Now, it happens that the present petition of the London Licentiates and Members' Society to the University of London is entirely founded on the Jenner proposals, yet it goes, not again to the Royal Colleges where the same petition has been rejected, but to the University, and it claims simply an immediate entrance to a retrospective degree for all old London Conjoint men There is ample reason, even if it were hoped otherwise, for the University to object to such an intrusion, it would at least expect the Royal Colleges to make the first move

What is much more important for the welfare and medical interests of London, and what most people wish to see accomplished, is the joining on mutual terms of advantage of the ancient Royal Colleges of Physicians of London and Surgeons of England with the new and, perhaps, more intellectual University of London or at least as far as its examinations go This can perfectly easily be done under the Charter Act of 1898 Section 4 and Statutes 119 and 123. The same courses of lectures could be arranged and slight adjustments made in the closely similar examinations, which would end in giving London medical students a proper standing for the actual work to be done What is wanted is one compact, and representative medical faculty in the University, appealing to London and popular support.

It is most impolitic to debar capacity for the higher positions in the medical profession to the holders of the diplomas The diplomates cannot do better than their training or their opportunity allows them, and the fact that they have started for the "*licence*" standard spoils their whole career down to the grave If all started in the University the grossly unfair handicapping would be done away with *The disabilities of the Licentiates and Members of the Royal* Colleges are well known and they need not be recapitulated, it is little short of a scandal to continue a state of affairs which precludes diplomates from D P H work and house appointments simply because their title is not the current title of the day The London position is behind that of other nations, in America and in Paris they have long since consolidated their colleges with the universities, and that is what the proposed union between the University of London and the Royal Colleges should insist on

It may be interesting to note how nearly this reform took shape in the first part of last century Before and after the foundation of the examining University of London in 1836—the University of London was founded in 1825—the medical students of the Royal Colleges flocked to the University doubtless on the understanding that a "*degree*" course was intended, but in 1866 the numbers quite characteristically dwindled to 163—from 494 in 1839—when it became clear that both bodies had set up a selfish fiscal policy of their own and so stopped this imminent advance and progress From the first the notion to amalgamate with all the medical interests in the metropolis was probably the best and most conspicuous object *in the promotion of London University, that policy* at the first meetings was subscribed to by Lord Dudley, Lord Lansdowne, Lord Brougham, Lord John Russell, the Duke of Norfolk, and Campbell, Grote, James Stuart Mill and John Stuart Mill, which, it must be said indicated powerful support We have the same obligations to our own generation still before us The diplomates of the Colleges ought to act, either with or without the aid of a society, so as to help the councils of their Colleges to initiate and to bring about the movement for unity which has exercised for long some of the highest thinkers in the University as well as in the College Councils In that way the occupation of the Royal Colleges of Physicians of London and Surgeons of England from gradually but inevitably vanishing may be stopped If there be no action for unity taken and the arena of the annual College meetings be alone left for discussion of such matters our precious opportunities will somnolently and smoothly drift from one decade into another and the result will be inevitable

I am, Sirs, yours faithfully,

Bognor Oct 31st 1903 H ELLIOT BLAKE

RECURRENT OVARIAN CYSTOMA AND ABERRANT ACCESSORY OVARIAN STRUCTURES

To the Editors of THE LANCET

SIRS,—The explanation given by Mr J D Malcolm[1] of recurrent ovarian cystoma of pregnancy after the surgical removal of both ovaries or their destruction by disease, and of other kindred conditions, seems to me to leave something to be desired I am prepared to admit that some instances of this kind may be ascribed to the retention of fragments of healthy or diseased ovarian tissue detached at the first operation, but I believe that the majority of such incidents cannot be accounted for in this way Cases of this kind are known to have occurred even after the most radical operations, involving the extirpation *en masse* of the uterus, ovaries, and adnexa when it is highly improbable that any fragments of the ovaries could possibly have been left behind Even if the presence of aberrant accessory ovarian structures in the pelvic connective tissue and its vicinity had never been actually demonstrated, I maintain that it would nevertheless be possible for one who had made himself thoroughly acquainted with the *ensemble* of facts relating to conditions of this kind, to predicate that such aberrant structures do exist and that their presence is the cause of most of these curious phenomena

When Cohnheim first announced his celebrated theory of the origin of tumours from sequestrated fragments of the germinating tissues, very few facts could be adduced in support of it No one then believed in the possibility of such an amount of developmental irregularity as it presupposed The light of modern science has, however, effectually dissipated this misconception, and our eyes have been opened to the hidden defects of normality Sequestrated fragments of the various tissues and organs have now been found to exist in every part of the body that has been specially examined for them The ovary is no exception *to this rule, although gynæcologists* have hitherto hardly realised this important fact and its significance

Although a thorough search, with the best modern appliances, for accessory ovarian structures in the pelvis and its vicinity has not yet been made yet enough is already known to justify me in stating that these structures like tuberculous foci in the lungs are nearly always present Even as long ago as 1878 Beigel, with only the crudest methods found accessory ovarian structures in 23 out of 500 necropsies, and since then numerous instances of this kind have been reported (Thumin Seitz, and others) These structures are commonest in the immediate vicinity of the ovary, to which they are sometimes attached by a fine stalk As many as six have been demonstrated close to a single ovary De Sinéty has met with the condition in a newly born infant Probably most sessile so called ovarian cysts arise from these structures But accessory ovarian structures have also been found in situations much more remote from the ovary Beigel long ago demonstrated their presence in the broad ligament and many other instances have since been reported It is to this source that the various ovarian like tumours that have from time to time been met with in the broad ligament and its vicinity may be ascribed (Vautrin, Terraillon Brigidi, and others) Many so called "migrated ovarian tumours no doubt belong to this category Lefas discovered an aberrant ovarian structure which comprised a fully developed corpus luteum, connected with one of the fimbriæ of the Fallopian tube and Thumin has described an ovarian cyst which arose from a structure of this kind. Seitz and others have shown that these aberrant structures may occupy an intra or extra peritoneal position Many instances have been recorded of ovarian like cystomata arising primarily in para uterine, paravaginal and paravesical regions in the round ligaments, and even in the lower part of the abdomen quite outside the *peritoneum (Fergusson Meredith,* Olshausen Kaltenbach, Winternitz, Hartz, Krönig, Coblenz and others), which could hardly have had any other origin than aberrant ovarian structures. Dermoid elements and traces of Wolffian rests may be associated with these tumours. The presence of aberrant structures of this kind in various parts of the pelvis and its vicinity, enable us to understand the occurrence of recurrent ovarian cystomata and of the other curious phenomena above mentioned. What is the condition of such structures after the removal of both ovaries? We know that they are then exposed to the stress of enormous formative activity—the so-called compensatory hypertrophy. In these circumstances the limits of physiological activity may easily be overpassed, and when the process becomes pathological it eventuates in the formation either of non-malignant cystoma or of a malignant tumour. Thus may be explained the extraordinary frequency of malignant disease after the removal of both ovaries, to which I have elsewhere called special attention.—I am, Sirs, yours faithfully,

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[1] THE LANCET, Oct 31st, 1903, p 1227

Clifton, Bristol, Nov. 2nd, 1903. W. ROGER WILLIAMS.

EROSIVE GASTRIC ULCERATION.

To the Editors of THE LANCET.

SIRS,—In April, 1902, I exhibited at the Kidderminster Medical Society a girl upon whom I had successfully operated for gastric erosion. The notes of the case were given in your report of the meeting in THE LANCET of April 26th, 1902, p. 1185. I was very much interested to read the case published by my friends Sir Dyce Duckworth and Mr. H. T. Butlin and also your annotation thereon in your issue of Oct. 17th. I thought that it might be interesting to your readers to know that I am able to state that the patient has had no return of her symptoms.

I am, Sirs, yours faithfully,
J. LIONEL STRETTON,
Senior Surgeon, Kidderminster Infirmary and Children's Hospital.
Oct. 20th, 1903.

THE *DE NOVO* ORIGIN OF BACTERIA.

To the Editors of THE LANCET.

SIRS,—In the course of his paper on the *De Novo* Origin of Bacteria in THE LANCET of Oct. 31st, p. 1220, Dr. H. Charlton Bastian refers to a signed article of mine on Leprosy which appeared in the *Quarterly Review* for April, 1903, and from which he quotes. He contends that the verdict given by the Leprosy Commissioners in their report (Calcutta, 1893) was perfectly logical and quite explicable in accordance with known facts. I hope you will allow me to quote a little more at large from my article. I wrote: "Some years ago the Royal College of Physicians of London, in a report on the Mode of Origin and Spread of Leprosy, unfortunately expressed the opinion that it was not contagious. More recently the Leprosy Commissioners in India came to the conclusion that the infectious nature of the disease had been finally established by the discovery of the bacillus and stated 'that the disease was to be classed among the contagious diseases, the influence of contagion being as small as, or even rather less than, in the case of tuberculosis.' They also concluded there was no evidence that leprosy in India was hereditarily transmitted from parent to child and, further, that neither the form of diet nor the sanitary environment of the individual had any specific action in the causation of leprosy. At the same time, the Commissioners added that 'it is probable that bad hygienic surroundings, deficient or improper food, poverty, exposure, and such diseases as syphilis are all factors of great importance in reducing the vital powers of the organism and rendering it more susceptible to attack.' The evidence pointed inevitably to the conclusion that leprosy is an infective contagious disease. But strangely enough, the Commissioners in their final summing up expressed the opinion that leprosy, in the great majority of cases, originated *de novo*. A critic has well said that this conclusion was extraordinary and contrary to the experience of those who had given special attention to the subject in leprous countries. It was all the more extraordinary, I added, seeing that the Commissioners advocated voluntary isolation. Further on in their report the Commissioners remark that both leprosy and tuberculosis are contagious in an equal and minimal degree." I leave it to the reader to judge for himself as to the logic of such reasoning. I would recommend him to read the report of the Leprosy Commission, and also, if I may venture to say so, my *Quarterly Review* article, wherein he will find a succinct survey of leprosy as a whole.

I regret that Dr. Bastian should consider my attitude in the matter intolerant because it clashes with his views on the *de novo* origin of various diseases. I quite thought the *de novo* theory had gone by the board long ago. I regret it all the more as Dr. Charlton Bastian was one of my clinical teachers at University College Hospital. I learnt from him important facts at the bedside, for which I am ready to express my indebtedness. On the other hand, I cannot allow my esteem for him to stifle my own honest beliefs on certain points.—I am, Sirs, yours faithfully,

GEORGE PERNET,
Assistant to the Ski[illegible] College Hospital;
Upper Gloucester-place, N.W., N[illegible]

THE SOCIETY OF MEDICAL PHONOGRAPHERS.

To the Editors of THE LANCET.

SIRS,—May we be permitted as president and officers of the Society of Medical Phonographers to bring the continued existence of the society and its usefulness under the notice of any practitioners or students of medicine who make use of shorthand? Of late the society has not come much under the notice of the profession, but its work continues. Its organ, the *Phonographic Medical Record*, is published monthly and affords the means of obtaining familiarity with medical shorthand, together with definite information on practical medical subjects. The society has also issued a series of small original works in lithographed shorthand with the same object, as well as an extensive vocabulary of convenient outlines and guides to the use of shorthand both by the student and the practitioner. It has also held periodical examinations for students in order to encourage their acquisition and use of shorthand.

The invaluable aid which it can give in medical work, practical and theoretical, in case-taking and note-making, is realised by all who have used it, as it cannot be by others, and the importance of its acquisition before medical studies are commenced is so great that the society has endeavoured by every means to encourage this. But many practitioners who make constant use of shorthand have acquired it long after being engaged in practice. To all, students and practitioners alike, the society is open and its members are ready to give all possible help to those who are endeavouring to obtain the assistance of this time-saving art. The subscription to the society is very small, amounting only to 5*s.* per year for students and 7*s.* 6*d.* for practitioners. The honorary secretary, Dr. Fletcher Beach, will be glad to give any further information and to receive applications for membership.

We are, Sirs, yours faithfully,
DAVID FERRIER, President
E. B. GRAY, W. THOMSON, C.B., Vice-Presidents.
W. R. GOWERS, G. SIMS WOODHEAD, Members of Council
NORMAN PORRITT, Treasurer.
FLETCHER BEACH, Secretary,
Winchester House, Kingston-hill, Surrey
Nov. 6th, 1903.

THE RELATION BETWEEN THE SIZE OF THE CHILD AND THAT OF THE PELVIS.

To the Editors of THE LANCET.

SIRS,—The perusal of the leading article in THE LANCET of Oct. 3rd, p. 963, in which you comment on my paper published in the issue of Sept. 26th, p. 885, makes it plain that I have so expressed myself as to appear to claim more for the law I enunciated than I had any intention of doing. I do not seem to have made the heading clear. You remark that I enunciate a "law by which the size of the child is to be determined." What I wrote was "a law by which the size of the child is determined." The former appears to imply a process by which a man may infer the size of the child in a particular case from that of the mother's pelvis; the latter was intended to draw attention to an orderly working of nature in the average.

In the light of your comments it is evident that the fact that I have made no attempt to establish in any degree the relative effect that different causes have in determining the size of the child will lead the reader to suppose that I do not consider the usually accepted ones as potent. This is very far from being the case and the omission to lay stress on these is due to the fact that opportunity to sift such figures as I have accumulated has hitherto been lacking. It is very far from my intention to put forward this law of parallel growth as the only factor determining the size of the child; it is undoubtedly only one of several, but it is one which has hitherto escaped attention but yet merits further investigation, and it is partly for this very reason that I have published the figures, for being no longer in a position to carry on this investigation myself I wish to bring it to the notice of others for confirmation or refutation. You further criticise my paper in two directions—first, as regards facts and, secondly, as regards the inferences to be drawn from them. The facts you object to, first, on the score of the insufficiency of the measurements. The cases are 111 in number and certainly before such a law as I have stated is allowed generally the figures available will have to be much greater; at the same time I think that the very regularity of the parallelism between the size of the conjugate and that of the child is a warranty that further numbers will confirm those given.

You are disposed to think that my figures are not accurate *and that accurate figures could only be obtained either by* examination on the cadaver or under anæsthesia. Undoubtedly measurements on the cadaver would be most useful, but their accumulation would take very much longer than the accumulation of clinical figures. I do not consider that the condition of anæsthesia would make results more accurate because the recti have usually little influence ten days after delivery in the ease with which the promontory is reached. The muscles are usually still separated and the hand can sink between them without serious resistance. You are further of opinion that it is impossible clinically to estimate the size of the conjugate diameter of the pelvis accurately within a quarter of an inch. This is probably true in any individual case but I think that by taking many measurements the results will be accurate in the average. Even if this conclusion is not correct, it will yet be found that the figures for successive increase of half an inch in the conjugate *diameter, concerning the general accuracy of* which there can scarcely be any question, are just as striking and as strong evidence of the law which I have put forward.

My conclusions are drawn from averages. That the parallelism of the child and the pelvis is one of average is constantly insisted on in all the tables accompanying the paper and it will not necessarily hold in individual cases except within wide limits. In order to avoid making the paper too long no lists of actual figures were given. As an example of the differences in these I may say that taking the Bengalis with a pelvis estimated at between four and four and a quarter inches in the conjugate diameter the weight of the children varied from four pounds 14 ounces to eight pounds six ounces. This in itself is sufficient proof that other factors than that of the size of the pelvis are concerned in regulating the size of the child and that the size of the latter can only be estimated within wide limits from that of the former. I do not wish to claim that the law which I have enunciated is the only or even the chief law by which the size of the child is determined; but subject to confirmation or refutation I hold that it is a factor, a practically unrecognised factor, and one the relative place of which among the others requires investigation which I am not in a position *to carry out myself.*

Your objection that normally sized children may be born through a congenitally contracted pelvis need not, I think, invalidate the general law. Other congenital factors may have been stronger and have *resulted in* the production of a normally sized child. The consideration of the relative influence of these various factors in determining the size of the child, so far as I have figures on which to base conclusions, I have intentionally omitted from my paper and my apparent dogmatism has been due not to any want of appreciation of the importance of these but partly to the wish to emphasise the new factor and partly to the hope that I should find opportunity in the future to sift the evidence satisfactorily.

I am, Sirs, yours faithfully,
CLAYTON LANE, M.D. Lond.,
Captain, I.M.S.
Medical College, Calcutta, Oct. 20th, 1903.

THE M.D. DEGREE OF BRUSSELS.

To the Editors of THE LANCET.

SIRS,—If Dr. N. Leonard will refer the question of the value of the M.D. Brux. to the proper official quarter in Brussels he will find that my statement in THE LANCET of Oct. 17th, p. 1119, is absolutely correct—viz., that the degree does *not* confer the right to practise in Belgium and that the examination is quite a different one from that which the Belgians themselves undergo. A few foreign medical men were formerly authorized to practise a *speciality* in Brussels irrespective of the particular qualifications they held—though similar favours are not now granted. This, I presume, is what Dr. Leonard refers to in his last paragraph in your issue of Oct. 24th. I think if these facts were more widely known fewer Englishmen would be ready to take a degree which is valueless even in the country where it is obtained.

I am, Sirs, yours faithfully,
Ludgate-hill, E.C., Nov. 5th, 1903. P. A. NIGHTINGALE.

SIMPLE CYST OF THE LIVER.

To the Editors of THE LANCET.

SIRS,—Attention having been called to the rarity of simple cysts of the liver in the paper by Mr. Alban Doran in THE LANCET of Oct. 31st, p. 1218, I think it worth while to refer very briefly to one case of my own. I knew at the time I operated on the case that it was a rare one but after reading Mr. Doran's paper it seems to me desirable that it should be recorded.

A woman, aged 63 years, came under my care in hospital in November, 1900, with a smooth round swelling in exactly the position of a distended gall-bladder. She had no symptoms and had noticed the swelling (which was visible) accidentally two months before I saw her. On opening the abdomen I found the whole liver enlarged so that the lower border of the liver reached nearly to the umbilicus, and projecting from it a bluish translucent cyst of the size of an orange. There was no liver tissue on its anterior aspect but it did not quite extend through the substance of the liver below—i.e., it lay above the quadrate lobe. Its wall was very thin, white, and glistening and it contained straw-coloured fluid. It did not in the least resemble hydatid cyst. The gall-bladder was hidden away under adherent colon and omentum. I stitched the cyst wall to the parietal peritoneum and drained it and she made a good recovery.

I am, Sirs, yours faithfully,
Bristol, Nov. 6th, 1903 CHARLES A. MORTON.

ROBERT STEPHENSON AND THE PUBLIC HEALTH.

To the Editors of THE LANCET.

SIRS,—In these days when we think as little of getting into a train for a short or long journey as we do of eating our breakfast or going to church on Sunday it is perhaps somewhat difficult to cast our minds back to the time when George Stephenson constructed and carried through the first railway for passenger and goods traffic that the world has ever known. In the surveying of "The Stockton and Darlington Railway" George Stephenson was greatly assisted by his only son Robert, to whom England owes much as a pioneer in railway enterprise, after having paid due homage to his truly illustrious father. The centenary of Robert Stephenson has recently occurred, for he was born on Oct. 16th, 1803, and in these days when centenary anniversaries are taken as fitting occasions for the recognition of lives that have been spent in the service of their country it seems unjust that a life so well spent and of such practical service not only to Great Britain but to the whole world should be passed by without comment of any description.

When we consider how dependant we are on our railways and other engineering projects, how the health of dwellers in towns is often speedily restored at perhaps a minimum of time and expense by a quick journey to the country or seaside for rest and change of air and scene, when we think also how the congested state of our towns can at any time be relieved and how at the same time the ambitious villager can satisfy his curiosity about town-life and progress by journeying from one place to another, the general public and the medical profession with it can only recall with gratitude the names of those benefactors who have helped, even indirectly, to increase the standard of health in our country and consequently the happiness of the individual. The landmark, therefore, that draws attention to the birth of one of such men can hardly be allowed to pass by unobserved and the name of Robert Stephenson should be again revived and remembered for that ability, perseverance, and industry that have contributed so much to the increased comfort of life and thus been of such inestimable benefit to the public at large. I am, Sirs, yours faithfully,

T. Wilson Parry, M.A., M.B., B C. Camb.

Highgate, N., Nov 9th, 1903.

THE NEW REGULATIONS FOR THE INDIAN MEDICAL SERVICE.

To the Editors of The Lancet.

Sirs,—The text of the new memorandum regarding the Indian Medical Service published in The Lancet of Oct. 3rd, p. 973, and your special article commenting on its provisions sufficiently show that the Secretary of State and his advisers may be sincerely congratulated on the issue of the document, though much still remains to be accomplished and not a little to be explained.

The date of the memorandum is October, 1903, and although the heading of the memorandum would make it to appear that the advantages announced are prospective, yet I cannot help thinking that the wording is at fault and that these advantages are also to be retrospective and that they will apply to the officers now holding commissions. It is a wise departure from an old rule that no promotion examinations should obtain in the Indian Medical Service, that lieutenants after completing 18 months' service and before promotion to the rank of captain will be required to pass an examination in military law and in military medical organisation. I read that the result of this examination may affect an officer's promotion —this statement would have been more useful and better liked had it been accompanied by some explanation of the possibilities attached to such an examination. Is the result of this examination to carry the privilege of accelerated promotion or is failure to pass it merely to retard promotion to captain's rank? and is such retardation to be temporary only or to carry with it a permanent forfeit of position in the Army List? These are the questions which men are now asking.

Section 16, which deals with the "pay and allowances," has evidently been the subject of much earnest attention The gains to the service which are announced are substantial, as the appended table clearly sets forth, in which I have compared the old and new rates of pay.

Rank.	Unemployed pay.		Grade pay.	Staff pay.	In officiating medical charge of a regiment.		In permanent medical charge of a regiment.	
	Old rules.	New rules.			Old rules, minimum.	New rules.	Old rules.	New rules.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Lieutenant	350	420	350	150	400	425	450	500
Captain...	350	475	400	150	400	475	450	550
,, after five years' service	450	475	450	150	500	525	600	600
,, after seven years' service	450	*	500	150	500	575	600	650
,, after ten years' service	500	*	550	150	550	625	600	700
Major	640	*	650	150	—	725	800	800
,, after 15 years' service	677	*	750	150	—	825	800	900
Lieutenant Colonel	852	*	900	350	—	1075	1000	1250
,, ,, after 25 years' service	888	*	900	400	—	1100	1000	1300
,, ,, specially selected for increased pay	900	*	1000	400	—	1200	1100	1400

*Grade pay.

The minimum sum which a lieutenant can now receive after arrival in India is Rs. 420 a month, the equivalent, with the exchange compensation, of £357 a year; while the officer who never aspires to anything beyond the charge of a regiment and who serves for over 25 years will in future draw Rs 1300 a month, which is equivalent to over £1100 a year. To these rates of pay every man who enters the Indian Medical Service may confidently look forward, for paragraph 9 states that "a major is promoted to lieutenant-colonel on completion of 20 years' full pay service"—there is to be no selection for that rank to which every officer, as heretofore, who serves long enough will attain. It will be noted that the "grade pay" and "staff pay" taken together are the equivalent of the pay and allowances for the permanent medical charge of a regiment. We are told that "staff pay" is the pay of a "command" and is drawn in addition to grade pay. What the word "command" will be deemed to signify is not clear but it will no doubt have a wide significance and be applicable to all military medical appointments which are not connected with the medical charge of a regiment.

There are certain circumstances other than those pointed out in your article in which the memorandum may be a disappointment to the service. You rightly comment on the absurdity of saying that men can enter the service up to the age of 28 years and at the same time informing them that the maximum pension is not open to them. As a rule the men who enter the service after 25 years of age are those who have spent additional time in study, in resident hospital posts, and in the junior teaching appointments in the schools, and such men ought to be encouraged in every way, while under the present rules they are almost debarred from the highest rate of the ordinary pension; but it is a real pity also that nothing has been done to increase the rates of temporary and permanent half-pay for those who break down in India and are really incapacited. Many of the captains in the service are married and the sum of £127 15*s*, the rate of permanent half-pay accorded to them, is very small. All of us know of cases where men have been so broken down by the Indian climate that they have been forced to retire on this pittance and in a condition where work in private practice in this country is not possible to them. The rates of half-pay are less than those offered to the officers of the Royal Army Medical Corps and they stand in need of revision.

From your comments on the conditions of civil employment it might be supposed that no improvement in the pay of the officers in civil employment has been contemplated. May I, however, point out that the pay of an officer in substantive charge of a first-class civil station has always been Rs.50 a month more than the pay for the charge of a native regiment and that the pay for the substantive charge of a second-class civil station has always been Rs. 50 a month less than the pay of an officer in permanent charge of a regiment, so that the increase of pay on the military side of the service naturally infers an equal increase for those officers who prefer to work in civil appointments. Now that the chances of private practice are so much less than formerly the pay of a civil surgeon of the second class should be increased so as to be at least equal to that of an officer in regimental employment.

In conclusion, although there are directions in which the memorandum fails to redress obvious grievances, as you rightly indicate in your comments, the additions to pay and pension and the other privileges announced must go some way to render the Indian Medical Service as popular as it was some 20 years ago.—I am, Sirs, yours faithfully,

Veteran.

Nov. 6th, 1903.

TAYLOR'S "PRINCIPLES AND PRACTICE OF FORENSIC MEDICINE."

To the Editors of THE LANCET.

SIRS,—I have been requested by Messrs. Churchill to edit a new edition of Taylor's large work on the "Principles and Practice of Forensic Medicine." Might I appeal through your columns to the profession to send me accounts of interesting and instructive medico-legal cases that have been recently decided? Dr. Stevenson has with the greatest generosity and kindness placed at my disposal a rich collection of poisoning cases, so that I am more particularly anxious for other criminal reports, such as rape, strangulation, &c. Might I ask that dates and references to the trial should accompany any reports sent to me at this address?

I am, Sirs, yours faithfully,
138, Harley-street, W., Nov. 9th, 1903. FRED. J. SMITH.

SOME CASES OF DILATATION OF THE BRONCHIAL TUBES AFTER MEASLES.

To the Editors of THE LANCET.

SIRS,—I beg to call attention to the following slight error which has crept into the publication of my paper in THE LANCET of Oct. 31st. The words "the lungs" on the last line of the second column on p. 1225 should have been "*the lower lobes.*" By the way, the bronchial glands shown in Fig. 2 were not caseous. The enlargement was due to acute inflammation dependent upon the presence in the lung of broncho-pneumonia

I am, Sirs, yours faithfully,
THEODORE FISHER, M.D. Lond.
Clifton, Bristol, Nov. 9th, 1903.

NOTES FROM INDIA

(FROM OUR SPECIAL CORRESPONDENT.)

The Plague Epidemic.—Transport for Invalids.—Medical Missions in India.

A SUDDEN upward leap has occurred in the plague mortality during the past week. After remaining at about 13,000 for two or three weeks it has now risen to 16,204, chiefly due to a recrudescence in the Bombay Presidency. The following figures show the local increases: Bombay Presidency, from 8868 to 10,890; Mysore State, from 554 to 627; the Punjab, from 80 to 425; Madras Presidency, from 146 to 185; United Provinces, from 95 to 120; Bengal, from 41 to 85; and Rajputana, from 33 to 52. Slight decreases have occurred in Central India, in the Hyderabad State, Bombay city, Kashmir, and Calcutta.

The transport *Plassey* has been specially fitted to convey to England 100 helpless invalids on each trip during the ensuing trooping season and the nurses required for duty will be drawn as far as possible from those nurses to whom leave to England is being granted. The nurses will receive full Indian pay during the voyage and their leave will date from their arrival in England.

The Medical Missions in India seem to be doing a good work. There are over 76 mission hospitals and over 100 dispensaries and they are all under the care of fully qualified practitioners. The Church Missionary Society has a group of medical missions in the north-west of India, of which the Kashmir branch has been particularly successful, but the Amritsar branch seems to be almost equally popular. In the south is the London Mission Society's branch in Travancore, which attracts very large numbers and is evidently highly respected. Then there are the hospitals maintained in Bombay, the United Provinces, and in Arcot by the Presbyterians; the hospitals in the Maratha country and in Madura, kept up by the Congregationalists; and the hospitals in Assam, the Telugu country, and Burmah, looked after by the Baptists. The Germans are represented by the Basel Mission in Malabar, and there are the Australasian Baptist Mission in Eastern Bengal and the Canadian Presbyterian Mission in Central India. Even the Salvation Army has its medical mission at Nagercoil, in Travancore, under a well-qualified graduate. There is no doubt that the medical part of these missions is supplying a long-felt want amongst the masses of the poor natives in India who in illness are otherwise at the mercy of ignorant quacks or without any assistance whatever. Judging from reports many of the officers must find plenty of work in strictly following their profession. The opportunities for practice are immense and embrace all branches of our profession.

Oct. 24th.

THE
ELEVENTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

THE DIVISION OF DEMOGRAPHY.

Infantile Mortality.

THE seven sections of hygiene met, as already explained, in the various committee rooms of the two Houses of Parliament. This was very convenient as at Brussels the Senate and the House of Representatives are located in the same building. But there was not room for the division of demography so it was allotted the Palace of Academies where there was ample space. But this building is on the other side of the Park and is from ten minutes to a quarter of an hour's walk from the Houses of Parliament; it was not easy, therefore, for the members of the division of hygiene to go to the division of demography so that the two were more separated than was desirable. The members of the division of demography on their side had but little time to spare; for their programme was very overloaded. They had printed reports on no less than 14 different questions though only 12 resolutions were sent from the division to the general assembly of the entire Congress. On the first question Dr. J. F. W. Tatham, superintendent of statistics at the General Register Office, Somerset House, London, presented a report on Infantile Mortality in England which was brief and yet very complete and easy to grasp. The only difficulty in regard to this report is that in England no record is kept of stillbirths as is done on the continent. Thus, Dr. Guillaume, chief of the statistical bureau at Berne, was able to explain that since 1874 the law rendered obligatory the registration of all births at six months, whether still or living. By this means it had been ascertained that in Switzerland the proportion of stillbirths was equal to 4 per cent. of the total births. Dr. J. Wilmart of the Brussels bureau of hygiene gave a brief account of the law on the registration of births in all the countries of Europe and statistics relating to the same. For Brussels there are statistics not only in regard to stillbirths after six months but also of miscarriages before six months. Dr. J. Bertillon (France) thought that the deaths of infants were due to a special microbiology. Dr. Kiaer (Norway) urged that infantile mortality ought to be studied separately for each class of society. Dr. Presl (Austria) insisted that insufficient or unsuitable food was the principal cause of infantile mortality and in this he was supported by Dr. Maxweiller (Belgium). Dr. Kerstberg (Berlin) alluded to the very significant statistics drawn up at Berlin, which indicated the state of the weather and temperature as the principal cause of the high infantile death-rate, and Dr. G. von Mayr (Munich University) insisted that in Germany the infantile mortality had decreased though industrialism had increased. There were consequently other causes than the fact of the mother working in a factory or mill. M. Hector Denis, vice president of the division and professo [illegible] insisted [illegible] from th [illegible] problem [illegible] absolute. [illegible] cause of death details as to the social or economic position of the parents. It was particularly necessary to state whether the mother worked and at what trade. Finally the following motion was adopted:—

> [illegible] ortality is of great im- [illegible] the social condition of [illegible] themselves improve the [illegible] es expresses the desire [illegible] ministrative ordinances [illegible] g premature births and

stillbirths) so that all births should be registered together with their accessory circumstances. It would be the duty of statisticians, acting in agreement with the medical practitioners, to examine the lists of these births, so as to obtain uniform records of stillbirths and premature births.

The General Death-rates.

After thus dealing with infantile mortality the division of demography took in hand a number of reports on general mortality. Of course the main object is to obtain international uniformity in the method of recording deaths, their causes, and other essential facts. The chief difficulty, according to M. E. NICOLAI, who represented the Belgian Ministry of the Interior, was due to the rules in regard to professional secrecy. He thought that the receiving of death certificates should be concentrated in the hands of one authority instead of being left to local authorities.

Dr. DE MARTEAU (Belgium) did not think that such centralisation was possible nor could he approve of anonymous declarations. Professional secrecy was well in its way but it should not be placed above the interests of humanity.

Dr. BERTILLON thought that it would be very difficult to obtain a uniform nomenclature of the causes of death. A proposal to that effect was made at the Congress held in Brussels in 1853. In 1900 at the Paris Congress a new nomenclature was introduced but it was not yet universally adopted. Nevertheless it had served to show, for instance, the extreme scarcity of typhoid fever in Germany, while at the same time it demonstrated that in Spain 130 persons per 1000 of the population contracted that disease. Small-pox had caused only one single death in Germany during the last two years, though at Marseilles, Toulon, and in the large Spanish and American towns there had been many deaths from that disease. On the other hand, in Germany 22 out of every 1000 inhabitants died from measles and this was a larger proportion than in most of the other countries. The places which suffered most from all kinds of maladies were the American towns of Pittsburg and Alleghany. Ghent and Brussels suffered most from whooping-cough and Paris from diphtheria. At Havre and Rouen, where alcoholism was very prevalent, there were more deaths from tuberculosis than in any other part of France. There was but little cancer in America and in Spain; it was in Germany and the industrial towns of France that this disease was most prevalent. Dr. Bertillon explained that these comparisons had been rendered possible by the action of M. Delcassé, the Minister for Foreign Affairs of the French Republic. In 1900 M. Delcassé had brought together the representatives of 26 States and they drew up a convention requesting that a uniform nomenclature should be adopted (the Bertillon nomenclature). This was accepted by the United States of America and at their suggestion it was to be modified, if necessary, once every ten years. There were three sets of papers to be filled. The first contained the fullest details, the second was abbreviated, and the third was very short. The progress of this nomenclature had been most encouraging, for it was now applied to populations numbering in all 121,000,000 persons.

M. NICOLAI proposed, and the division adopted, the following motion:—

> The law prescribing the verification of all deaths by a medical officer appointed for that purpose by the local authority should be effectively applied. A law to this effect should be enacted where it does not already exist. A law should be adopted compelling medical men to notify to their Government the cause of all the deaths that occur among their patients. Pending the adoption of legislative measures in this sense an anonymous declaration of all causes of death should be made and this should be done in a manner similar to that prevailing in Switzerland.

The Birth-rates.

The questions relating to birth-rates were hurried over and the division adopted the following motion:—

> To give a statistical analysis of demographical figures these should be subdivided into homogeneous groups. To constitute these groups it is necessary that multifarious details should be supplied. In drawing up certificates and in the classification of statistics based on these documents relating to the civic position of individuals, it is desirable that the details of information given should be increased so as to facilitate the formation of the above mentioned homogeneous groups. The documents could further supply the elements of two important reports; one relating to the total fecundity of marriages determined at the moment of their dissolution, the other applicable to the annual fecundity as shown by the birth of children.

Statistics on Insanity.

Though not placed so early on the agenda the division then discussed statistics in regard to the prevalence of insanity. Dr. DE BOECK (Brussels) did not think that these were satisfactorily prepared as there was no proper record of the patients who were living with their families.—Dr A. MAHAIM (Lausanne University) thought that the Belgians were behind in their methods of the treatment of mental diseases and protested against the use of force. Naturally there were objections raised to these strictures but the division became harmonious again in the adoption of the following motion:—

> The Congress expresses the desire that statistics should be periodically prepared in all countries on the insane who are confined in asylums and those who are not confined. Such statistics should be drawn up even where it is only possible to obtain the figures relating to cases that have been notified to the public authority.

Statistics on Alcoholism.

The question of alcoholism was now discussed and it naturally awakened keen public interest. Dr. MAHAIM explained that Switzerland was one of the few countries where statistics as to the mortality attributable to alcoholism really existed. If the ordinary statistics were consulted it would appear that the deaths due to alcoholism amounted to 0·54 per 1000 in France; 2 60 in England; 2 36 in Norway; 3·83 in Belgium; and 6·25 in Sweden. But these figures in nowise corresponded with the consumption of alcohol in those countries. The fact was that in many instances only those who died from delirium tremens or while manifestly drunk were entered as deaths due to alcoholism. In Switzerland deaths indirectly due to alcoholism were chronicled. The result was that alcoholism was recognised as having killed in Switzerland as many people as typhoid fever or small-pox or diphtheria, that it was the most fatal cause of death after tuberculosis and pneumonia. It was quite as dangerous as the zymotic diseases and therefore arbitrary measures to prevent its spread were quite as justifiable.

Dr. BERTILLON, however, thought that statistics ought to give facts and not opinions. If a man died from cirrhosis the death must be entered as due to this cause, though the medical attendant might be quite right in deeming this to have resulted from alcoholism. Nevertheless, it was an opinion and they must only officially register facts. Opinions at best could be put in as marginal notes.

Dr. MAHAIM agreed with this and while recognising that the information required could not be looked upon as mathematically exact thought that it would nevertheless be instructive and interesting. The motions adopted on this question were as follows:—

> The Congress, recognising that heredity and alcoholism are among the most [illegible] efforts should be made to propa[illegible] riages with alcoholic persons o[illegible] in the production of insane offspring.
>
> The Congress considers that the only means by which Governments will at last be able to acquire a really precise knowledge of the danger of alcoholism and will be led to understand the necessity of adopting energetic measures is to provoke and to organise a vast statistical referendum in which the losses due to alcoholism would be minutely analysed. The division of demography asks that the form of such statistics shall be studied at the next congress.

Trade Diseases.

The rates of mortality in the different trades or industries were then discussed. The first object evidently should be to assimilate the statistics of the different countries dealing with the mortality in various trades so that the results might be compared and the information collected be of use internationally.

M. DENIS, reporter on this question, spoke at great length. He gave a full account of what the statistics collected in England had demonstrated and urged that the same classification should be adopted in all countries. He thought that the work accomplished by Dr. Bertillon would facilitate such unification.

Dr. VON MAYR pointed out that the benefit societies rendered great help in this respect and M. CAUDERLIER (an engineer of Brussels) insisted that the economic position of the workers should be stated side by side with the vital statistics. He insisted that in England the trades where the sanitary conditions were bad had been proved to produce the highest mortality.

Poverty and Pauperism.

Special statistics in regard to poverty were next taken under consideration. On this question M. DE LANNOY, delegate of the Belgian Ministry of Justice, was inclined to accept Mr. Seebohm Rowntree's "Standard of Poverty," though it seemed more like a certificate of chemical analyses than a picture of real life. He thought that wherever relief was given, whether by public or private charities, statistics should be drawn up. It was absolutely necessary that birth-rates and death-rates should be studied in conjunction with poverty rates. Such comparisons were much needed by the legislator. Following the example given by Mr Rowntree a minimum standard of living should be established for each country according to the cost in each locality of the necessities of existence. Those who had not money enough to live up to this minimum could be qualified as poor. But in Belgium the much easier task of recording in a systematic manner all the cases where relief was given had not been accomplished.

Dr. KIAER remarked that the period of life when there was the least poverty had also to be noted. People were not poor all the time.

A good deal of discussion ensued as to the possibility of obtaining trustworthy statistics on the prevalence of poverty and finally the division adopted a motion stating that:—

> The Congress considers that the practical utility of demographic [illegible] extremely useful to demography.

Statistics on Suicides.

M. DENIS *followed with his report on suicides* He had studied the manuscript reports at the Ministry of the Interior and the town-hall of Brussels and sought to show the social aspect of the causes of suicide. During the first six months of the year the number of suicides increased and they decreased during the last six months. But the *official statistics did not keep any record of the attempts* at suicide which from the sociological point of view were of equal importance. Men succeeded more frequently than women in killing themselves. They generally hanged themselves or employed firearms, while women preferred drowning. Widowhood was a very constant cause of suicide at Brussels. There was a distinct connexion between the density of population and the frequency of suicides. Economic conditions were of the greatest importance and there was always an excess of suicides at times of commercial depression.

Dr. VON MAYR insisted that suicides were more frequent in the spring which was the season of accentuated human activity Other speakers insisted on the desire of families to conceal the facts and the consequent difficulty of obtaining trustworthy statistics.

The Crowding into the Towns

Migrations, the depopulation of rural districts, and the increase of town populations formed the next subject discussed.

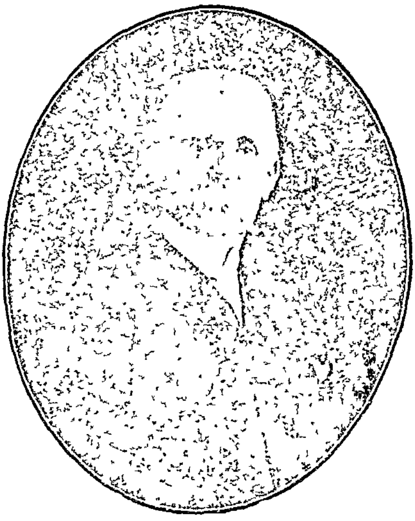
On this question M. NICOLAI, delegate from the Belgium Ministry of Public Instruction, presented a very lengthy report and many statistics In dealing with such a matter a great variety of causes had to be considered. In Belgium taking the average for the years 1890 to 1900 the birth-rate amounted to 29 65 per 1000 in the agricultural communes, to 29·30 in the industrial communes, and to 28 18 in the urban communes. In Belgium therefore the question of the depopulation of rural districts had not reached an acute stage. To this it was objected that though many men still lived in rural districts they went to work in neighbouring towns.

M. PAUL MEURIOT (France) presented a report explaining that it was the population of the suburbs of the large towns that showed the greatest increase and nowhere was this more alarming than in London. The outer ring of London now consisted of 149 additional parishes, covering 368,500 acres or 1491 square kilometres In 1861 this region had a population of 419,000, while the metropolis had a population of 2,803,000. Thus Greater London only contained 13 per cent. of the total combined population of metropolitan and Greater London. In 1881 this proportion had increased to 20 per cent but in 1901 the outer ring had 2,044,000 inhabitants, or 31·1 per cent. of the total. Thus the increase of population in the outer ring from 1861 to 1901 was 1,626,000, or 388 per cent, while the increase in the metropolis proper was 1,733,000, or only 61·9 per cent. 40 years ago there were 281 inhabitants to the square kilometre of the outer ring and to-day the same space had 1366 inhabitants In 1841 there were 12,738 inhabitants at West Ham and in 1901 they had increased to 267,308. The same could be said about other centres though the figures had not reached equally alarming proportions. In Paris there were 547,256 inhabitants in 1801 and outside Paris in the department of the Seine 84,052 inhabitants. In 1901 the figures had risen to 2,714,068 and 955,862 respectively. From 1881 to 1890 the increase of population in the four suburbs of St. Petersburg was equal to 18 7 per cent. It equalled during the ensuing ten years 140 6 per cent. The suburbs of Berlin only contained 6·7 per cent. of the total population in 1871 and they contained in 1900 no less than 27·9 per cent of the total. From these and many other similar figures M. Meuriot concluded that it no longer sufficed to consider the statistics of a large town unless the neighbouring districts or suburbs were included. Finally, it was generally agreed that the whole question of the migration of population, the overcrowding of urban districts, and the depopulation of rural districts needed further study and investigation. Therefore the discussion on these questions should [illegible]

The advant[illegible] and of creating a un[illegible]fly considered and a motion was adopted in favour of constituting an international bibliography on hygiene and demography. With this the labours of the division were brought to a close.

Final Excursions and Remarks.

Having now concluded the summary of the discussions held in the seven sections of hygiene and in the division of demography it is only necessary to add a few words of grateful acknowledgment to those who have helped me in this somewhat arduous task. The President of the Congress, M. Emile Beco, the general secretary, Dr Putzeys, and the secretary, Dr. Voituron, always rendered whatever assistance it was in their power to give The courtesy of these gentlemen made my task an agreeable one throughout and I am pleased to have an opportunity of publicly tendering them my best thanks. Nor should I conclude without saying a word about the excursions in which many members of the Congress participated after the Congress was over. The permanent deputation of the Provincial Council of Liège took some 200 members to visit the magnificent sanatorium which it has built at Borgoumont. Here there are 114 beds with 33 cubic metres of space for each bed, and the ventilation is so contrived that the air can be changed completely three *times* per *hour* The *sanatorium* is built high up among the mountains and forests in an absolutely isolated



Dr. Putzeys, General Secretary of the Eleventh International Congress of Hygiene and Demography.

spot which it takes two hours to reach by carriage from Spa. In the afternoon the members of the Congress were shown the sights at Spa and entertained at a banquet by the municipality. At the lunch at Borgoumont and at the dinner at Spa many congratulatory speeches were made and the members of the Congress were well pleased with all that they had seen.

There was also an excursion to the intake of the new water-supply for the suburbs of Brussels, when 60 members of the Congress went to Sovet The reservoirs, the galleries cut in the chalk, and the protective measures to prevent contamination of the gathering grounds were all examined Then there was a banquet at which Dr. PARMENTIER of the *Belgian Medical Gazette* in a speech rendered special homage to Dr. Voituron, the indefatigable secretary of the Congress, who had served as a connecting link between all concerned and had borne the brunt of the hard work. Dr. VOITURON replied that he was not alone but that the undoubted success which had been achieved was in a very large measure due to the great work done by the President, M. Beco, and the general secretary, Dr. Putzeys. These are opinions in which all who were present are likely to share. In conclusion, I think I may fully endorse the above remarks and further add that the Brussels Congress has been one of the best managed and most useful congresses of the entire series.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Visit to the Liverpool School of Tropical Medicine by the Right Hon. Joseph Chamberlain, M.P.

PRIOR to his departure from Liverpool at the close of his political engagements Mr. Chamberlain paid a visit to the School of Tropical Medicine, in which he took so deep an interest while at the head of the Colonial Office As is well known the existence of the Liverpool School of Tropical Medicine is primarily due to Mr. Chamberlain who was desirous that something of a practical nature should be done to make the West African colonies more healthy for white men. He was ably and enthusiastically backed up by Sir Alfred Jones, K.C.M.G., who has been the chairman of the school from its inception. Mr. Chamberlain being desirous of inspecting the school put himself into communication with Sir Alfred Jones who promptly made all the necessary arrangements for the visit. At the same time Sir Alfred Jones took steps to insure that, as far as possible, Mr. Chamberlain's desire that the visit should be of a private and informal character should be carried out. The research portion of the Tropical School work is situated at the University buildings in Brownlow Hill, while the clinical ward of the school is at the Royal Southern Hospital. Both institutions were therefore included in Mr. Chamberlain's tour of inspection. Mr. Chamberlain, accompanied by Mrs. Chamberlain and the Earl of Derby, arrived at the University before noon. The visitors were received by Vice-Chancellor A. W. W. Dale, Sir Alfred Jones, Professor R. W. Boyce, Professor C. S. Sherrington, Major Ronald Ross, C.B. (head of the Tropical School), Dr. A. S. F. Grünbaum, and several members of the committee of the Tropical School. The visitors were first conducted to the new Johnston laboratories where the research work of the Tropical School is carried on. Major Ross conducted Mr. Chamberlain and party over the school, explaining all the details of the work, and the right hon. gentleman displayed the keenest interest in everything shown to him. Amongst other things, Major Ross was fortunately able to show him a new parasite of man which has just been discovered in India and was sent by the discoverer to the Liverpool School of Tropical Medicine for investigation. Mr. Chamberlain was extremely interested in the new parasite and in the specimens of mosquitoes which Major Ross was able to show him. It was explained to Mr. Chamberlain that at the present moment there are many students at the school, several of whom have come from foreign countries. About an hour was spent in inspecting the school, after which the party were driven in Lord Derby's carriage to the Royal Southern Hospital in the tropical ward of which are 12 patients, chiefly suffering from malaria The visit to the Royal Southern Hospital also proved of much interest to Mr. Chamberlain and party.

Liverpool Royal Infirmary: Presentation to the Honorary Treasurer.

A pleasant little gathering took place in the board room of the Royal Infirmary on Nov. 4th, when the committee, the medical staff, and other friends of the institution presented the honorary treasurer (Mr. Ralph Brocklebank) with his portrait painted in oils by Mr. Hall Neale, a local artist, in recognition of his long services to the Royal Infirmary. Mr. James Lister, the President, made the presentation to Mr. Brocklebank in a felicitous speech. The picture bore the inscription: "Ralph Brocklebank, hon. treasurer of the Royal Infirmary since 1879, and chairman in 1898 and 1899. Presented by his friends and colleagues in recognition of his work and services in connexion with the hospital." Amongst the honorary medical officers present were Sir William M. Banks, Dr. A. Davidson, Dr. T. R. Glynn, Dr. R. Caton, Dr. A. Bernard, Mr. Rushton Parker, Mr. F. T. Paul, Dr. T. B. Grimsdale, Dr. T. R. Bradshaw, Dr. John H. Abram, and Mr. G. G. Hamilton.

University of Liverpool: Inaugural Ceremony at St. George's Hall.

A brilliant scene was witnessed at St. George's Hall on the afternoon of Nov. 7th on the occasion of the ceremonial inauguration of the University of Liverpool. The programme consisted of the formal presentation of the charter to the first Chancellor of the University (the Earl of Derby, K.G.) by the Lord Mayor (Mr. W. W. Rutherford, M.P.) in his capacity as chairman of the university committee, and congratulatory speeches by the mayors and deputy mayors of neighbouring towns and by Sir Oliver Lodge, the principal of the University of Birmingham, late professor of physics at University College, Liverpool. The large hall was filled to its utmost capacity with the *élite* of the city and neighbourhood and an element of hilarious enthusiasm was provided by large bands of students who occupied the galleries. The chief participators in the ceremony, wearing their distinctive robes, formed into procession, entered the hall punctually at 3 P.M., and ascended the platform in the following order: the registrar (Dr. Londini), graduates (ladies and gentlemen), professors and lecturers of the faculties of engineering, law, medicine, science, and arts; the court and council, mayors and civic dignitaries, the vice-chancellor (Principal Dale), the pro-chancellors (Mr. E. K. Muspratt and Sir Edward Lawrence), the Lord Mayor and Sir Charles Petrie (the ex-Lord Mayor), and the Chancellor (the Earl of Derby). The scene on the platform was strikingly picturesque, full of colour and pleasing contrast. The Chancellor, who occupied the chair, was attired in his Privy Council robes and the pro-chancellors and the vice-chancellor wore their official robes for the first time, those of the pro-chancellors being of black silk, richly ornamented with silver lace, with academic caps with silver bullion tassels, and those of the vice chancellor's also of black silk, faced with crimson velvet and white fur, worn under a deep ermine cape faced with crimson velvet and fastened with white silk frogs, tassels, and silk cords. The National Anthem having been sung to the organ accompaniment of Dr. Peace (the city organist), the Lord Mayor in a brief speech of congratulation handed the charter of incorporation to Lord Derby who suitably accepted it in a graceful speech. Expressions of congratulation on the success of the application for a university charter from various civic representatives followed. Sir Oliver Lodge, the principal of Birmingham University, also offered the congratulations of that body to the authorities of the new University. The vice-chancellor (Principal Dale) having acknowledged the various congratulations the proceedings terminated.

The Prevalence of Measles in Lancashire.

In his annual report to the Lancashire county council the medical officer of health (Mr. E. Sergeant) states that one of the most fatal of infectious diseases at the present time is measles and that this malady during the year 1902 gave rise to 653 deaths. Its prevalence is much increased by attendance at elementary schools. In populous localities these schools act as centres of rapid and extensive propagation of infectious diseases among the pupils. As a precautionary measure, therefore, not only children themselves suffering from measles but also members of the invaded households should be excluded from school until danger of their communicating the disease has passed. He adds that when means fail effectually to control the spread of measles the closure of the schools may with advantage be prescribed.

Nov. 10th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

New Hospital for Monmouth.

THE Monmouth dispensary was established so long ago as 1810 and in 1868 the institution was enlarged to accommodate nine in-patients. The inconvenient arrangement of this building and its inadequacy for the needs of the district have, however, for some time been apparent, so that it was a great relief to the managers when a few years ago Lord Llangattock very generously offered to assist in the provision of an entirely new building. An admirable site on which the old county gaol stood was secured and after the gaol was demolished a new hospital was erected, the institution being formally opened on Nov. 6th by Lord Llangattock. His lordship contributed £2000 towards the £8000 required for the building and furnishing and £1200 were given by Miss Philpott of Maida-vale, London. The hospital is in one block and with its half-timbered gables and balcony approached by a flight of steps resembles a Kentish homestead. There is accommodation for 20 patients in two six-bed wards and eight single-bed wards.

Butchers and Tuberculous Meat.

The agitation of the butchers of Glamorganshire and Monmouthshire[1] to secure from farmers and cattle dealers a guarantee that animals purchased are free from tuberculosis has at length borne fruit. Those butchers who are members of their trade associations are evidently determined to act together, and at the end of September passed a formal resolution to the effect that "on and after Monday, Nov. 2nd, 1903, no live-stock will be purchased by members of the allied association unless a warranty be given." A large stock sale was held at Llantwit Major on Nov. 2nd and the butchers inquired if any warranty would be given. As the reply was in the negative the buyers from Barry, Cardiff, Newport, and the Rhondda valleys refused to make any purchases. On the same day at a sale at Cardiff a warranty was given by the auctioneer in connexion with a scheme of insurance and at a sale held at Newport on Nov. 4th a guarantee was given by the farmers and dealers. It is stated that at both the Cardiff and Newport sales the prices realised were higher than at Llantwit Major. The principal argument used by the butchers in favour of securing a guarantee is that while they see the animal purchased for a few minutes only the farmer has opportunities of finding out its condition during many months. The farmers, on the other hand, declare that it would be impossible to put into actual practice any scheme of compensation owing to the difficulty there would be in identifying a particular carcass, to which the butchers reply that a distinguishing mark might quite easily be placed upon the hide. The most reasonable solution of the difficulty would appear to be in the adoption of some form of insurance with the premium paid jointly by the purchaser and vendor. During last year about 40 head of cattle were seized in Cardiff and about 15 in Newport and it has been estimated that a premium of 1*s.* on each beast sold would provide a sufficient insurance fund. It is satisfactory to find that the Cardiff butchers admit that the meat inspection as carried out at the public slaughter-houses is very rigid and that there is very little chance of diseased meat escaping the inspectors. It appears that it has for some years been the custom for the auctioneers to give to the butchers 1*s.* per head for cattle and 1*s.* for each pen of sheep purchased as "luck money," and the insurance scheme mentioned above as having been adopted at the Cardiff stock sale involved the retention by the auctioneer of this "luck money" on the understanding that he would himself give a guarantee with respect to the animals sold.

Refuse Disposal at Cardiff.

The question of providing a refuse destructor for Cardiff has been discussed by the corporation over and over again during the past 20 years and more than one definite recommendation has been made by the health committee. A special subcommittee recently reported at some length and advised the erection of an 8 cell destructor at an estimated cost of £15,000. The working expenses, it was considered, would amount to £2300 annually but there would be an annual saving of £500 in haulage. At present the Cardiff refuse is removed to tips on the outskirts of the town. In view of the heavy expenditure to which the corporation is already committed—noticeably in connexion with the new town hall and law courts—it has been decided to continue the present insanitary method of dealing with the town refuse. The corporation has decided to purchase two motor scavenging carts at a cost of £500 each.

Rainfall.

Although the rainfall during October was excessive in al parts of the country there was a remarkable difference between the amounts of rain which fell on the two sides of the Bristol channel. At Bristol and at Weston-super-Mare on the eastern side 7·7 and 8·3 inches were recorded respectively, while on the western side there fell at Newport 14·6 inches, at Cardiff 10·4 inches, at Swansea 11·4 inches, and at Carmarthen 15 8 inches. In the hilly districts of South Wales, as might be expected, there was a still greater increase. The rain gauge at the Cardiff collecting reservoirs in Breconshire recorded 21·4 inches for October and 101·3 inches for the ten months of the year; at the Swansea gathering grounds at Cray, where large reservoirs are now being constructed, 33 4 inches fell during October and no less than 182 8 inches have fallen during the present year; at the head of the Rhondda valley, which is 1700 feet above sea-level, 20 5 inches were recorded during October and 98 inches during the ten months of the year.

Vaccination Expenditure.

At the meeting of the Wellington (Somerset) board of guardians held on Nov. 5th it was reported that the cost of vaccination for the four years previous to the passing of the Vaccination Act was £210, while for the four years subsequent to the enforcement of the Act it was £636. The guardians decided to write to the Local Government Board expressing the opinion that that Board when calling for such returns as those of vaccinations, which involved so much additional work to the clerk, should pay for such extra services.—At the meeting of the Wells (Somerset) board of guardians held on Nov. 3rd it was reported that for the four years previous to the passing of the Vaccination Act the fees paid to the public vaccinator amounted to £124, while the fees for the four years subsequent to the passing of the Act were £395, an increase of £271, although fewer children were vaccinated during the latter period.—At the meeting of the Newton Abbot (Devon) board of guardians held on Nov. 4th it was reported that for the four years preceding the enforcement of the Vaccination Act the fees paid to public vaccinators amounted to £874, whilst for the four years following the passing of the Act the fees were £1202.

Nov. 10th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The New Master of the Rotunda Hospital, Dublin.

A "CHARTER" meeting of the governors and guardians of the Rotunda Lying-in Hospital was held on Nov. 8th. The seventh and final year of office of Dr. R. D. Purefoy as master of the institution having expired the following motion was passed unanimously:—

[illegible] Hospital, on the retire-
[illegible] office of master of the
[illegible] to him for his devoted
[illegible] ffice and to the interests
[illegible] appreciation of the dis-
[illegible] we most warmly con-
[illegible] e hospital and on the
[illegible] been effected during his
[illegible] assisted to have carried
[illegible] our best wishes for his
success in his future career.

The ceremony of presentation to the hospital of a bronze bust of Dr. Purefoy by the past and present nurses of the institution took place on Nov. 3rd in connexion with the expiration of his term of office. The governors proceeded with the election of a new master, when Mr. Ernest Hastings Tweedy was declared duly elected master by a majority of votes.

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[1] THE LANCET, August 8th, p. 428, and Sept. 12th, p. 793.

Mercer's Hospital, Dublin.

At the monthly meeting of the governors of Mercer's Hospital held on Nov. 3rd Dr. Seton S. Pringle was elected a visiting surgeon to the institution, vice Dr. Henry Croly.

The Typhoid Fever Problem in Belfast.

At a meeting of the City corporation held in Belfast on Nov. 2nd great dissatisfaction was expressed at the attitude of the public health committee in not discussing Dr. J. Lorrain Smith's report, but it appeared that a report presented to the public health committee by its executive sanitary officer, Mr. C. Scott, C.E., which was sent to each member of the council was to be regarded as a reply. In this report Mr. Scott considers the recommendations and remarks of Dr. Smith. In reference to the shell-fish he points out that there is no legal power to prevent the collecting or selling of shell-fish. As to milk, he says that new regulations came into force in reference to dairies, cowsheds, and milk-shops within the city on Sept. 4th, 1903. As to milk brought in from the country, he admits that there is no control, but adds that the number of cases of typhoid fever due to infected milk has been very small. In reference to pig-keeping there are, it seems, still about 2556 pigs kept in the city and Mr. Scott recommends that the distance from the pig-sty to the houses be increased from 15 to 50 feet. He recommends that all sewers should be constructed with a sufficient number of inspection chambers and ventilation shafts should be provided when the sewers are being constructed. Between January, 1899, and September, 1903, the number of houses in which the drains were reconstructed was 18,330. The average rate at which the house drains of the city are being reconstructed is about 2900 annually. Between April, 1899, and September, 1903, the drains of 11,869 houses were tested, of which 4103 were found to be defective; that is, 35 per cent. of all the drains tested were found to be defective. Further and more systematic testing of house drains should be done. Between Jan. 1st and Sept. 19th, 1903, it appears that 55,176 houses were inspected and 1463 written and 2312 verbal notices were given to the tenants to cleanse their habitations, and in this same time 6160 premises were cleansed. Finally, Mr. Scott deals in a very trenchant way with susceptibility to disease, with the wretched conditions under which the poor live, people who sleep with their windows closed, who avoid cold water as if it were a sin to use it, and who live chiefly on stewed tea and white (household) bread, the teapot rarely off the fire—tea for breakfast, for lunch, for dinner, and for supper—and, he argues, a population of this type will be liable to take every infectious disease on the whole list, especially tuberculosis and other kindred diseases, their resisting power being reduced to a minimum by foul air, filth, and unwholesome food. If the people in the towns could go back to the old-fashioned diet of porridge, milk, broth, and wholemeal bread their physique, their general health, and their disease-resisting power would be increased. Sanitary science, Mr. Scott thinks, has been too much occupied in producing so-called satisfactory statistics of births and deaths, forgetting that the true test of efficient sanitation is the production of a healthy, energetic, and disease-resisting people. A report was also received from one of the officials of the works committee pointing out the unsatisfactory state of many of the sewers of the older portions of the city. It is, in fact, perfectly clear from various sources that the drainage system of Belfast is in a deplorable condition and that in the past there has been most grave inefficiency of administration.

Ulster Medical Society.

The present session of this society was opened on Nov. 5th when the inaugural address was delivered by the President, Dr. John Campbell, surgeon to the Samaritan Hospital for Women, Belfast. Taking for his subject Some Minor Gynæcological Affections, he described at some length the various methods of treatment to be followed in cases of pruritus vulvæ, inflammations of the genital organs, lacerations of the perineum and the cervix, displacements of the uterus, pains for which there was no tangible cause, backache, and urethral caruncle. With respect to displacements he said that practically only backward displacements and descent need be considered. When the uterus was freely moveable replacement and the insertion of a pessary were the proper treatment but when there was fixation to even a slight degree the less the organ was meddled with the better. Prolapse of the uterus was not much benefited by repair of the perineum unless the repair were carried so far forward as almost to close the vagina. This was impracticable in most cases so that it was necessary to resort to pessaries or when they could not be tolerated to pneumatic pads and bandages.

The Treatment of Consumptives in Belfast.

The public health committee of the corporation of Belfast having been defeated in its scheme for providing day shelters for consumptives in one of the public walks in a walled-in garden proposes now to advertise for a ten-acre field and to erect shelters there. Mr. Robert Brown, the honorary secretary of the Ulster Branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis writes to the Belfast papers strongly objecting to such a plan, on the ground that no place can be secured except at the end of one of the tram-lines, to reach which would cost each person fourpence. What good, he says, would a piece of bread (brought by the patient from his or her home) washed down with a glass of milk, to be provided, do? On wet days few would travel to the shelters; when the weather was dry a large number would come and how would the accommodation and the amount of milk be regulated, and would the public allow coughing consumptives to ride backwards and forwards in public vehicles? He advocates the erection of a proper sanatorium and not such a scheme as the public health committee suggests, which is mere nibbling at the outside of the question. He points out what bungalows have done, all that is needed being an old country house with an administrative block and some cheap shelters. A month at such a place for each patient would teach him the value of fresh air and the importance of dealing properly with the expectoration. Such a place with 100 beds would give 1200 patients four weeks' treatment each year. This would probably be enough for Belfast if such a place as the old Royal Hospital were taken for all incurable cases, in which the infection is most virulent, both in and out of the workhouse. In Italy this fact is recognised and such cases are compelled to go to hospital, and as a consequence Italy, in spite of poverty and dirt, is freer from this disease than any country in Europe. The proposed addition of 20 beds to the Forster Green Hospital is good, as far as it goes, but is utterly inadequate. The cheapest way in the end, as pointed out by Mr. Brown, is to put forth every effort at once to crush out the fell scourge of consumption, and he thinks that 100 beds in a sanatorium, with a place to isolate incurable cases, would go far in five years to show in Belfast a distinct decline in a disease the prevalence of which is such a discredit to a modern up-to-date city.

Salaries of Union Medical Officers in Ireland.

A rather important conference was held on Oct. 31st in the board room of the Ballinasloe Union to consider the salary to be attached to the medical officership of the Filconnel district, for while the guardians propose £150 per year the Irish Medical association—backed as it is by THE LANCET and the British Medical Association—asks £200. After a long discussion Mr. Byrne, as one of the representatives of the ratepayers, proposed a motion requesting the Irish Members of Parliament to obtain the repeal or amendment of Clause 6 of the Irish Local Government Act, which precludes boards of guardians from obtaining—as formerly—half of any increase of the salaries of medical officers. The motion was carried and Mr. Byrne then proposed:—

> That we, the board of guardians of the Ballinasloe Union, do ask the various boards of guardians in Ireland and the Irish Medical Association to appoint deputations to meet at the Mansion House, Dublin, for the purpose of discussing the much vexed question of the dispensary doctors' salaries, and we suggest that the Local Government Board should appoint a member of their body, or one of their inspectors, to attend the meeting. Copies of this resolution to be sent to the various boards of guardians, Members of Parliament, and the Chief Secretary. The meeting to take place on Tuesday, the 1st December. Three members of each board to be appointed on each deputation.

The motion was adopted unanimously. Mr. T. T. Collins, on behalf of the medical gentlemen, proposed a vote of thanks to the guardians for the very cordial way in which they had met them. Mr. T. J. Rossiter seconded the motion which was carried and the conference came to a close.

Irish University Education.

According to the *Irish Times*, at the meeting of the Cabinet last week Mr. Wyndham's new scheme was not passed owing to most decided opposition. Legislation for the labourers has been promised and this will, so far as

Ireland is concerned, be her share of next session's measures. The recent Land Act involves a very large expenditure of State-guaranteed money for many years to come and any attempt to saddle the Exchequer with more obligations is deemed impolitic as far as Ireland is concerned. It is also rumoured that the Government whips had evidence of the greatest opposition to rendering university education in Ireland sectarian.

Nov. 10th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Naval Surgeons and Professional Secrecy.

A CONFLICT has recently taken place between the naval surgeons and the authorities of the naval engineering works at Indret. It is part of the duties of naval surgeons to look after the wives and children of workmen in the arsenals and naval engineering works and to send in a daily report of their visits. The question arose whether it was fitting for the surgeons to indicate in their reports the nature of the illness or whether they should mention some and keep the others secret. During the absence on leave of the principal medical officer the chief of the Indret works, M. Clauzet, ordered a first-class surgeon, Dr. Averous, to specify in his reports the nature of the illnesses from which the wives and children of the workmen were suffering and if the complaint came under the heading of a professional secret he was to notify this fact on his report sheets. Dr. Averous refused, saying that there was no list of diseases coming under the head of professional secrecy. Moreover, to name certain diseases and to conceal the nature of others would identify the case. M. Clauzet did not consider these reasons sufficient and put Dr. Averous under arrest. When the principal medical officer, M. Alix, returned he was informed of the situation and quite agreed with the view taken by his colleague. Dr. Averous has appealed to the authorities (*réclama par voie hiérarchique*) against his sentence and the matter has been submitted to the Naval Minister.

Sleeping Sickness.

In my letter which appeared in THE LANCET of Oct. 31st I drew attention to the discussion at the Academy of Medicine of this remarkable disease. At the meeting of the academy held on Oct. 27th M. Blanchard reminded the meeting that he had announced that M. Brumpt had been enabled to inoculate a monkey with the parasite of sleeping sickness, which monkey died after about six weeks, having previously presented all the symptoms of sleeping sickness. Film preparations made from the blood of this monkey and stained by Nocard's method showed numbers of the trypanosoma Ugandense. The monkey in question was a macacus cynomologus, an Asiatic species which had been purchased in Antwerp and sent to the Congo. Before any experiments were made, and also after inoculation, its blood was tested for parasites and none was found up to the thirteenth day after inoculation. The parasite only appeared later. This experiment is the first in which sleeping sickness in the monkey has [illegible] the previous [illegible] shown that [illegible] glossina pal[illegible] which were [illegible] to confirm those previously announced by Brumpt about June 27th concerning the intervention of glossina in a parallel case. Bruce, however, had only been able to show that he had found trypanosomata of an undetermined species in the blood of a monkey which had been bitten by some 200 glossinæ collected in the neighbourhood and consequently being possibly infected with trypanosomata of unknown origin. Moreover, the monkey showed parasites in its blood as early as the fourteenth day, while in two experiments made by Bruce, in which he inoculated a monkey successfully with cerebro-spinal fluid taken from a patient suffering from sleeping sickness, the parasites did not appear in the blood until the twenty-second or twenty-third day. It is probable, then, thinks M. Blanchard, that Bruce in the experiment with the monkey and the glossinæ inoculated a parasite of rapid evolution such as that of nagana and not that of true sleeping sickness.[1]

Congress of School Hygiene.

The Congress of School Hygiene and of the Physiology of School Mastering (*pédagogie physiologique*), which has been organised by sundry medical men and laymen for the improvement of [illegible] at Paris on Nov. 1st in the School [illegible] sat for two days. Papers were re[illegible]ld, amongst others, on the following subjects: the Duties of Medical School Officers; the Comparative Value of Morning and Afternoon Work; the Afternoon Rest; and the Division of Hours of School Work.

Infantile Gastro-enteritis treated by Starchy Foods.

At the meeting of the Pediatric Society held on Oct. 20th M. Méry read a paper in which he advocated the use of starchy food as a transition diet in the gastro-enteritis of infants. For the arrest of gastro-enteritis which depends upon intestinal fermentation there is nothing like plain water, but this diet cannot be continued for long. A return to a milk diet is often followed by a return of the diarrhœa and the child very often becomes more and more cachectic and finally dies. M. Méry has obtained good results by giving starchy foods after stopping the plain water and before going back to milk. He uses starch water, rice water, and vegetable soup. This last, together with rice water, has given very good results, superior to those obtained with modified milk, skim milk, or butter. In infants who are more than six months old the results have been admirable; in those under that age they have not been so good. But in all cases the weight of the infants has increased, even in those who died. This feature is not due to the food value of starch but is due to retention of water by the tissues. The proportion of salt in a vegetable decoction is double that of milk and it is reasonable to suppose that an organism overcharged with salts will fix a certain quantity of water. Some children, in fact, exhibit œdema without albuminuria. This œdema disappears when they are put upon a milk diet but they also lose weight. It is easy, then, to see how a vegetable diet can successfully prevent the rapid dehydration which occurs in children suffering from gastro-enteritis.

Appendicitis in the Army.

At the meeting of the Academy of Medicine held on Nov. 3rd M. Chauvel, formerly the head of the Naval and Military Sanitary Department in Paris, read a note upon the above subject. M. Chauvel has published a former report upon this subject, but that one dealt with certain uncommon and very serious cases which showed an enormous mortality —viz., 31·8 per cent. In the present paper M. Chauvel gave a general view of military appendicitis and by official statistics which he brought with him showed that the mortality was only 14·9 per cent., a figure which compares well with those obtained in civil hospitals. One very remarkable point is the extreme rarity of appendicitis in Algeria, at least among the natives. Excess in food is very rare among them and so also is influenza. M. Chauvel's paper brought up M. Lucas Championnière to answer and in his reply he said that every day more and more confirmation was forthcoming of the idea that it was the abuse of a meat diet which was the principal cause of appendicitis. In those countries where the natives eat very little meat, as in Brittany, appendicitis is very rare. In England and the United States, where a great deal of meat is eaten, appendicitis is four times more common than in Paris. As to the rôle played by influenza there is at present an inquiry being carried out in the usual manner in Tunisia and on the coasts of Italy, where the first epidemic of influenza in 1889 was particularly severe. The object of this inquiry is to find out if in those countries which are very sparing from the point of view of a meat diet there was together with the influenza an outbreak of cases of appendicitis.

Nov. 10th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

An Italian Sanatorium.

THE ambitious scheme for providing sanatoriums for the *open-air treatment of pulmonary consumption*, which was drawn up by an influential committee under the presidency of Professor Baccelli shortly after the death of King Humbert three years ago, has so far gone little beyond the subscription stage, and it has been left to private effort to establish the first institution of this kind in Italy on any large scale. The "Primo Sanatorio Italiano," which is now open to receive patients, was begun two years ago with a capital of about 500,000 lire (£20,000), raised by private enterprise on the initiative of Dr. A. Zubiana, under whose direction the building was erected and to whose care the management of the establishment has been entrusted. Situated at Sondalo in the midst of the large pine forest of Sortenna in the Valtellina and at a height of 1250 metres (4100 feet) above sea level, and favoured by the sunshine and warmth of an Italian climate and a purity of the atmosphere not inferior to that of the neighbouring Engadine, the new sanatorium enjoys great natural advantages. It is well sheltered from the winds by a background of high mountains and by the forest of larch and pinewood around it, while it commands magnificent views of the lovely valley beneath. Far from any human habitation, it is reached in about three hours by a carriage road from the station of Tirano on the Colico-Sondrio railway and is therefore within an eight hours' journey by rail and road from Milan. The sanatorium has 60 beds and all the bedrooms have a southern aspect, most of these being also provided with balconies. It is constructed and furnished in the most approved and up-to-date manner, the angles at the floor and ceiling of the bedrooms and corridors being all rounded, the walls covered with washable glazed linen or painted and varnished, and the floors laid with tiles, linoleum, or wooden parquets. There are electric light and steam heating at low pressure throughout and ventilation is secured in all the rooms by windows furnished above and below with double casements. An excellent water-supply, which is brought from sources at Escio, nearly a mile off, is distributed through all the rooms and corridors and there is abundance of hot water on every floor. There is a plunge bath for every eight rooms and a complete installation for hydrotherapy, massage, and inhalations has been provided. Annexed to the waiting-room are rooms for laryngoscopy and radiography and a chemical and a bacteriological laboratory. There is also an operating room for cases requiring operative interference. The laundry is worked by steam and is supplied with apparatus for sterilising clothing and spittoons. The verandahs, which are so placed as to command the lovely view, are large and airy and provided with chairs made to revolve. Besides a large and lofty dining hall there are six public rooms, including drawing, reading, writing, recreation, music, and ladies' drawing rooms. There are covered galleries for bad weather, while in fine weather the patients can enjoy walks of the most varied kind through the avenues and footpaths in the garden and the surrounding woods. Owing to the slope of the site on which the sanatorium is built it has been possible to provide each floor with a bridge over which patients can pass on the level in order to gain access to the grounds.

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[1] [illegible] ntly returned and has brought [illegible] upon sleeping sickness, the [illegible] is tsetse fly disease in human

Cases of Supposed Poisoning in a Hospice.

During the first week of October there died at the Hospital of San Giovanni two children who had been conveyed thither from the Hospice of Santa Margherita, a reformatory and orphanage in Rome containing about 200 inmates. The cause of death was proved by a necropsy to be enteric fever. Two of the nursing sisters, a teacher, and several other children at the institution had sickened at about the same time, the severer cases being likewise removed to the Hospital of San Giovanni and all presenting symptoms of typhoid fever. On the 14th and two succeeding days about 20 other children at the hospice became suddenly ill but with different symptoms, there being no fever but very grave signs of gastro-intestinal irritation of an almost choleraic character. The worst of these cases were also removed to the hospital, where on the 18th two of them died after 18 hours of suffering, with vomiting, agonising pains in the abdomen, frequent bloody stools, cyanosis, and collapse. The whole hospice was meanwhile cleared out and thoroughly disinfected. In carrying this out it was found that the sanitary arrangements were very defective, the sewers for one thing never having been connected with the main sewers of the city. That there was no question of typhoid fever infection in the last group of cases was, however, conclusively proved by the necropsy of the two fatal cases which showed that death was due in each of them to poisoning from the ingestion of some powerful irritant. There were acute and diffused peritonitis, large necrotic erosions of the stomach, acute enteritis, and acute nephritis—such lesions, in short, as might have been caused by a strong caustic such as corrosive sublimate. An analysis of the viscera and their contents is being made; meanwhile it is believed that through some lamentable blunder on the part of the attendants powders containing perchloride, in place of subchloride, of mercury must have been administered to the children as a purgative. A third death with similar symptoms and post-mortem appearances has since taken place and one more at least of the unfortunate little patients will probably succumb before the toll of victims is complete.

Proposed International Congress on Malaria at Rome.

The following motion was proposed by Professor Queirolo of Pisa at the Congress of Internal Medicine, lately held at Padua, and carried by acclamation:—

> Considering that Italy, chiefly through the merit of the Roman school which has promoted and cultivated with such zeal and signal success the study of malaria, holds the first place in respect of these researches; also in view of the fact that the victories achieved by science in this field have led to [illegible] the prophylaxis of malaria, this [illegible] the promotion of an internationa[illegible] be held in Rome.

Nov. 5th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Cancroin of Professor Adamkiewicz.

SOME years ago Professor Albert Adamkiewicz of Cracow in Austrian Poland read a paper in Vienna announcing the discovery of a remedy against carcinoma. This remedy, to which he gave the name of cancroin, was a solution of choline, citric acid, and phenol. The most eminent physicians and surgeons, however, such as Billroth, Albert, and Kaposi, agreed that this method of treatment had nothing to recommend it and Professor Adamkiewicz has therefore sought some other way of inducing the profession to make use of cancroin. In the middle of October the chief surgeons of the public hospitals belonging to the State were surprised by receiving an order from the Home Secretary to make trials of the cancroin of Professor Adamkiewicz. This remarkable and unprecedented order has naturally aroused much indignation in medical circles. Professor Adamkiewicz also called the newspapers to his aid, publishing most encouraging results of the treatment of cancer by means of cancroin, but Dr. Husche of Rostock has stated that one of the patients whom Professor Adamkiewicz and Dr. Katscher claimed to have cured really died from cancer of the stomach a short time after treatment with cancroin.

"Grande Crise Gastrique."

A paper on this subject has been read by Professor Pal before the Vienna Gesellschaft der Aerzte. He found that there was a very great increase of vascular tension during the gastric crisis, often to the extent of 150 per cent. of the tension under normal conditions in the same patient, but this increased tension was by no means produced through pain, as some investigators have supposed, because very violent attacks of pain, according to Professor Pal, produce only depression of the blood pressure. Professor Pal found that the blood pressure increased before the pain began and that the vascular tension, in fact, caused the pain. The high vascular tension disappeared at the same moment as the pain did. Through artificial depression of the vascular tension it was possible to control the pain and all the other symptoms of the "crise gastrique." If the depression of the vascular tension comes to an end the pains are renewed. The effect of morphia presents points of interest, for morphia only soothes the pain through blunting the sensibility and the peculiar symptoms of the crisis may remain. Professor Pal explains the "grande crise gastrique" as being a vascular phenomenon, a peculiar contraction of the smallest vessels of the intestines. All conditions found during the crisis were directly or indirectly produced by this fundamental phenomenon—namely, the irritation of the vasoconstrictor branches of the splanchnic nerves. In the discussion Professor Winternitz remarked that very often the attacks of pain in tabes dorsalis were not associated with an increase of blood pressure, but, on the contrary, with depression of it. Professor Winternitz had also seen some cases of gastric crisis with high tension of the blood-vessels, but in another case it was possible to observe in the normal state high blood pressure and during the attack of "crise gastrique" a very low one.

Reflex Palsy of the Extremities and Reflex Impairment of the Power of Writing and Speaking.

A paper on this subject has been read by Professor Urbantschitsch before the Gesellschaft der Aerzte. He said that in cases of otitis media palsy of the extremities occurred sometimes, but medical men did not recognise a connexion between this symptom and otitis media although it was not difficult to show that the treatment of otitis when successful was followed also by a diminution of the palsy Impairment of the power of writing was often produced by otitis media, by pressure on the mucosa of the middle ear, and by syringing the ears The introducing of tampons into the ear might in about one fifth of the cases act similarly The same causes produced reflex paresis of the muscles of vocalisation with consequent impairment of speech Many patients who were suffering from ear disease spoke with difficulty and only in a slow hesitating manner; some letters, especially "s," they were quite unable to pronounce Often they were unable to read fluently Professor Urbantschitsch had observed patients suffering from ear disease and presenting symptoms similar to apoplexy in whom the treatment of the ear complaint showed the reflex nature of this paresis beyond a doubt Similar symptoms of paresis were also produced by irritation of the sensory nerves of the mucous membranes of the nose and mouth, but after cocainisation of the mucous membranes of the ear, nose, and mouth it was impossible to elicit the same effect, a sign of the reflex nature of this peculiar disease It seemed to be necessary to examine the ear and nose in all cases of paresis of the extremities and impairment of the power of speaking and writing

Experiments on Living Animals

The anti Semitic Landtag (Diet) of Lower Austria has prohibited vivisection and all experiments on animals in the hospitals under its control As the obstetrical clinics of Vienna University receive financial support from the Landtag and are under its control this assembly has ordered all experiments of every kind on animals to be stopped The professors of obstetrics protested against this order but as yet without any results The same Landtag sanctioned a grant to the university polyclinic only under the condition that Jewish professors should be subject to the authority of Christian professors in their treatment and prescriptions

Nov 9th

NEW YORK

(FROM OUR OWN CORRESPONDENTS)

The Sale of Headache Remedies in New York

THE facility with which persons can obtain powerful and dangerous drugs in the druggists' shops of New York city has been recently engaging the attention of writers on medical matters This is especially the case with regard to headache remedies These are sold in enormous quantities to individuals who are entirely ignorant either of the action of the powerful drugs therein contained or of the cause of the pain from which they desire to obtain relief The druggist assures the sufferers that certain powders, wafers, or tablets will have the desired effect and, indeed, in a very large number of instances temporary relief is quickly obtained The druggist will also declare that the remedy advocated is harmless The majority of these remedies are mainly composed of acetanilide phenacetin, antipyrin, or of some other of the coal tar derivatives and are consequently, when not absolutely dangerous, in a high degree depressing The medical journals of New York have been warning the public for some time against the indiscriminate use of the drugs known as headache remedies

Dowie in New York

The descent upon New York of Dowie and his restoration host from Zion City has been made the theme of discussion by some of the medical journals and by all the lay journals The *New York Medical News* treats the question from a psychological standpoint and seems to maintain that the so called Dr Dowie is more or less insane The writer of the article is of the opinion that he is the victim of a conviction of reincarnation such as is so common among the insane that every asylum in the country has some examples of it "Further," the writer says, "with this fixed idea become a ruling passion there is combined a capacity for business and the administration of affairs, a positive genius for organisation, and withal a persuasiveness of language and a magnetism of personality that make the possessor of these heterogeneous qualities a most interesting subject for study and painstaking investigation " The majority of the journals take a far more material view of the matter and insist that Dowie is simply a clever fakir who, knowing human nature, plays upon the weaknesses of mankind in order to make money and at the same time to gratify his vanity Whether Dowie, Mrs Eddy, and others of the same kind are influenced by good motives or not one thing at least is certain that they cause a great deal of harm and for this reason alone should be suppressed To the ordinary observer it would seem that they fleece their followers and those of the outside public who allow themselves to be deluded in order to live in luxury invested with a notoriety which they are persuaded is fame Perhaps the most unpleasant feature of Dowie's miscalled religious tenets is his professed belief in faith cure If grown up persons refuse to be treated by a medical man when injured or when attacked by disease no valid objection can be made to their action, but when a parent or guardian will not allow a sick child to be treated by a qualified physician or surgeon then it is perfectly right that such an individual should be severely punished Even in the United States, where every latitude is allowed to the irregular fraternity, this view of the case is beginning to impress itself upon the minds of the community at large

Yellow Fever Quarantine in Texas and Louisiana

It was announced on Oct. 23rd that the Governor of Texas had quarantined the whole of that State against San Antonio where yellow fever is prevalent Railroads are forbidden to operate trains in or out of San Antonio or to handle any freight or passenger business from that city until the quarantine is removed On Oct 23rd the Louisiana State Board of Health issued a proclamation of quarantine against Laredo and San Antonio, Texas and in addition to this all railroads and other common carriers were prohibited under penalty from bringing into Louisiana passengers, household goods, and cars from those places unless they were first fumigated with sulphur by authorised health authorities The situation as regards yellow fever is declared to be encouraging at San Antonio and much indignation has been expressed at the action of the Governor of Texas in proclaiming a State quarantine against that town, while no such step has been taken with regard to Laredo where the disease is said to be more widespread

Nov 3rd

Obituary.

PHILIP BROOKES MASON, M R C S ENG , L S A.,

CONSULTING SURGEON TO THE BURTON ON TRENT INFIRMARY

THE profession is the poorer by the death of Philip Brookes Mason, a man of sterling qualities and excellen intellectual gifts, as the following record of his academical career will show Mason commenced his medical education in 1858 by spending a winter and a summer session in Glasgow, where he gained prizes in the classes of anatomy, chemistry, and botany After that he spent a year in his father's surgery at Burton on Trent and then entered at University College, London, where he gained seven gold and silver medals as well as the Filliter exhibition of £30 in pathological anatomy, the Longridge exhibition of £40 for general proficiency in medicine and surgery, and the Atkinson Morley scholarship of £45 a year for three years in surgery In 1864 he became a Member of the Royal College of Surgeons of England and a Licentiate of the Society of Apothecaries He was house surgeon in the hospital to Mr Erichsen and Sir Henry Thompson In 1864 he was appointed demonstrator of anatomy in University College and held that appointment for three years, and in this position in the temporary absence of Professor G V Ellis, delivered the lectures in the class of anatomy In the University of London he obtained at the preliminary examination (scientific) exhibitions of £40 a year for two years in biology and also in chemistry and materia medica In 1866 when he was intending to present himself for the second M B examination in the University of London and the final examination for the Fellowship of the Royal College of Surgeons of England, cholera broke out in London and he was appointed by Dr George Buchanan, whose work as assistant physician at the Hospital for Sick Children in Great Ormond street he had been doing during that summer, to the charge of the temporary Hospital for

Children for the parishes of St. Giles and Bloomsbury. Early in 1867 his father died suddenly, leaving his family unprovided for, and he was obliged to take over his practice, and the duties of a very large country practice effectually put a stop to his passing any more examinations and thus it was that he never held the higher degrees. From 1870 he was surgeon to the Burton-on-Trent Infirmary, which now contains 60 beds and serves a large manufacturing, railway, and colliery district, and this afforded him considerable practice both in general and in operative surgery. He was the first surgeon in the neighbourhood to perform ovariotomy and that successfully. He was also surgeon to the Burton-on-Trent Dispensary and to the Post Office.

With regard to his private life a friend writes: "He never took any part in municipal politics. I believe he never voted in a municipal election of any kind and never more than once, I believe, in a Parliamentary one. He was elected a member of the Burton Feoffees for the administration of the combined charities in 1882 and was chairman of that body in 1898. In 1888 he was made a magistrate of the borough of Burton-on-Trent, being one of the gentlemen appointed when the borough bench was first formed in that year. He continued to sit on the bench up to 1899. He was from its foundation a member of the Burton-on-Trent Archæological and Natural History Society and was at one time president. He read several important papers before the society."

Mr. Mason was a great naturalist and made many communications to the Linnæan and cognate societies. He was a born collector and once said that he began collecting at the age of four years. No natural curiosity came amiss, but it was to insects, and especially beetles, that he was mainly devoted. His specimens were mounted (by himself) with the greatest neatness and skill and some years ago had assumed such proportions as to lead him to build a fire-proof museum adjoining his house, and here it was that he spent almost every moment of his leisure. This collection is a wonderful one to have been brought together by one man. The specimens in it must amount to many thousands and their arrangement is most skilful. He had probably the largest collection extant of British beetles, but of the scientific value of the collection it must be left to entomologists to speak. Mr. Mason married rather late in life Miss Saunders, the daughter of Mr. William Saunders, a Burton brewer. This lady proved a most suitable helpmate and during his somewhat prolonged illness nursed him with the most unremitting and tender care. But for his father's sudden death Mr. Mason must have taken a high position in the scientific and medical world and would doubtless have joined the teaching staff of a medical school. His death will be greatly lamented by University College men whose memories take them back to the "sixties." Among his fellow students were Sir John Williams, Sir R. Douglas Powell, Matthew Berkeley Hill, H. C. Bastian, Sir W. R. Gowers, Marcus Beck, G. V. Poore, F. T. Roberts, John Tweedy, and others who have become known to the profession.

He died on Nov. 6th and was buried at Burton on the 9th, a large number of sorrowing friends being present at the funeral. He left no issue.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Friedrich Betz of Heilbronn, at the age of 84 years. In early life he was a prolific writer on medical subjects and was the first editor of *Memorabilien*. —Dr. Fochier, professor of midwifery in Lyons.—Dr. A. Gallet, professor *agrégé* of surgery in the University of Brussels and surgeon to the St. Jean Hospital in that city. —Dr. Brassac, formerly director of the Medical Department of the French Army.

MEDICAL MEN AND THE MUNICIPAL ELECTIONS.—At the meeting of the Monmouthshire County Council held on Nov. 4th Mr. John Davies James, M.R.C.S. Eng., L.S.A., was elected an alderman.—At Newport (Mon.) municipal election Mr. Sutton, L.R.C.P., L.R.C.S. Edin., was returned for the St. Woolos Ward.—At Bristol on Nov. 2nd Mr. Colston Wintle, L.R.C.P. Lond., M.R.C.S. Eng., was returned for the Horfield Ward by a very large majority.—Dr. Henry Dutch has been returned councillor for the Grosvenor Ward, City of Westminster Council.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen have passed the Second Examination of the Board in Anatomy and Physiology:—

Charles Ernest Anderson, King's Colleg [illegible] son Billings, London Hospital; [illegible] ohn Butterworth, L.D.S. Eng., Owens [illegible] uel Earle Cathcart, Middlesex Hospital; [illegible] University College, Cardiff; Samuel Wilfrid Daw, Guy's Hospital; John McDougall Eckstein, St. Bartholomew's Hospital; Harry Rumsey Edwards, King's College Hospital; Albert Edward Evans, University College Hospital; Shiavax Hormuzshaw Gandhi, Bombay and Owens College, Manchester; Percy Charles Garrett, Owens College, Manchester; Frederic William Wandby Griffin, B.A. Camb., and Richard Athelstane Parker Hill, B.A. Camb., Cambridge and St. Bartholomew's Hospital; Elliott Thornton Glenny, Rupert Lawrence Haines, and William John Jago, St. Bartholomew's Hospital; Roderick Jackson, University College, Liverpool; Robert Bruce Low, University College Hospital; Peter Donald Fraser Magowan, Guy's Hospital; Joseph Leopold Meynell, London Hospital; Percy Moxey, University College, Bristol; Harry Williams Nicholls and Sidney John Rowneree, Middlesex Hospital; Alexander Morton Pollard, King's College Hospital; John Pugh, St. Mary's Hospital; George Andrew Russell, Birmingham University; Harold Kenneth Salisbury, University College, Bristol; Ernest Albert Saunders, King's College Hospital; Edgar Arthur Shirvell, London Hospital; George Alan Simmons, St. Thomas's Hospital; Herbert McLean Staley, Owens College, Manchester; John Tate and Arthur Christopher Watkin, University College Hospital; Christopher Tylor, B.A. Camb., Henry Cecil Waldo, Ambrose Cyril Wilson, and William Harrison Woodburn, B.A. Camb., St. Bartholomew's Hospital; and Ismael Valerio and Ernest Wragg, B.A. Camb., Guy's Hospital.

UNIVERSITY OF OXFORD.—The following dates are announced for the medical and preliminary examinations (in each case the date mentioned is that on which the examination begins):—Preliminary examinations in Physics and Chemistry, Dec. 7th, and in Botany, Dec. 14th; further examination in Mathematics, Dec. 14th (names to be sent in by Dec. 2nd); First M.B. examination (Anatomy, Physiology, Materia Medica, and Organic Chemistry), Dec. 9th (names to be sent in by Nov. 25th); Second M.B examination, Dec. 9th (names to be sent in by Nov. 25th); Preventive Medicine, Nov. 24th. The examination in Pathology in the second M.B. may be taken separately at any time after passing the first M.B. examination and before the remainder of the second M.B examination. Forms of entry, certificate forms, &c., can be had on application to the secretary to the Boards of Faculties, Clarendon Building, Oxford. Names entered late are admitted up to certain dates, which vary for the different examinations, on payment of an additional fee of two guineas. Degree days for this term are on Nov. 19th, Dec. 10th, and Dec. 17th.

LEEDS HOSPITAL FOR WOMEN AND CHILDREN.—The jubilee year of this hospital has been opportunely celebrated by the formal opening of an entirely new group of hospital buildings. The old building, which was not originally constructed for a hospital, will for the present be adapted as a residence for nurses and servants. The opening ceremony was performed by the Right Honourable the Viscountess Mountgarret on Oct. 30th. The new buildings will accommodate about 45 gynæcological patients and a few cots are provided in a separate ward for children In addition to these an isolated portion of the building has been specially arranged as a small lying-in hospital with space for five beds. This it is hoped will be the nucleus of a larger lying-in hospital when sufficient funds are forthcoming. Hitherto there has been no lying-in hospital in Leeds. The wards for the reception of gynæcological patients occupy a long two-storyed pavilion. The space under the ground floor is, owing to the fall of the ground, very extensive, and having been left unoccupied it allows of a free circulation of air beneath the entire pavilion. The wards are 100 feet long, 24 feet wide, and 13 feet high. Each bed has a linear space of 10 feet, a floor space of 120 square feet, and a cubic air space of 1560 cubic feet. All the windows are double, in order to counteract the cooling effect of the extensive window surface.

CENTRAL MIDWIVES BOARD.—At the last meeting of the Central Midwives Board a letter was read informing the board that a person representing himself as deputed by the county councils to receive the names and fees of midwives desiring to be certificated by the Central

Midwives Board had visited a nursing institution and had endeavoured to collect the fees The board consequently desires it to be known that the secretary alone is authorised to receive the fees and as it is in possession of a description of the impostor it trusts that the publicity of the press may lead to his early detection At the same meeting the secretary was instructed to add the Rural Midwives Association 47, Victoria street, London, S W, to the list of bodies to whom applicants for training in midwifery should be referred while the board resolved to receive the certificates of the following bodies as approved qualifications under Section 2 of the Midwives Act, 1902 (1) Queen Charlotte's Lying in Hospital (2) Manchester Southern and Maternity Hospital (3) Liverpool Ladies' Charity and Lying in Hospital, (4) British Lying in Hospital, (5) Glasgow Maternity Hospital, and (6) St Mary s Hospital, Manchester The names of 126 women were passed under Section 2 of the Act and ordered for entry on the roll Of this total 74 claimed as holding the certificate of the Obstetrical Society of London, three that of the Rotunda Hospital, Dublin, and 49 were admitted as having been in *bona fide* practice for one year prior to July 31st, 1902

UNIVERSITY OF CAMBRIDGE —As was expected in the University the electors to the chair of Physiology have appointed Dr J N Langley F R S, to be professor in succession to Sir M Foster, K C B The general board of studies has appointed Dr A. Hill to be University Lecturer in Advanced Anatomy, and Dr A. C Ingle to be University Lecturer in Midwifery The Allen scholarship, value £250 for one year, for research in medicine or other branch of science, is about to be vacant Graduates of the University under the age of 28 years may apply to the Vice Chancellor before Feb 1st 1904 stating the nature of the investigation they desire to pursue During the present year 88 candidates have been admitted to the examination in State medicine for the Diploma in Public Health 41 passed both parts of the examination The council of the Senate proposes that a syndicate shall be appointed ' to consider what changes, if any, are desirable in the studies, teaching and examinations of the University, ' to confer with such persons or bodies as it may think fit, and to report before the end of the Easter term 1904 The scientific members of the syndicate as proposed are Dr D MacAlister, Dr A. R Forsyth, F R.S, Professor J J Thomson F R S, and Mr W Bateson, F R S

THE FINANCIAL POSITION OF GUY'S HOSPITAL —At the annual general court of the governors of this hospital held on Nov 6th Mr H Cosmo Bonsor, the treasurer took the chair and made a statement with respect to the financial condition of the hospital He said that all the wards are now opened and more than 600 beds available for patients and that the cost of maintenance could not be less than £60 000 per annum Towards this the hospital had an income more or less assured of about £35 000 per annum and in addition had recently been in receipt of about £11,000 annually from King Edward s Hospital Fund for London, the Hospital Saturday and Sunday Funds subscribers and other sources leaving a deficiency in ordinary income of about £14 000 per annum The treasurer further reported that of the £180 000 appealed for in 1901 for renovation and building only £103,000 had been so far received and that the institution was in debt for the balance which had been made up by temporary loans It was unanimously resolved that, "The treasurer be requested to obtain the widest currency possible for a short statement of the present circumstances of the charity, and further to continue a vigorous appeal with a view of enlarging the basis of public support adequately to the increased needs of the establishment' Guy's Hospital has been rightly held up as an example to be followed by other metropolitan hospitals for its admirable internal arrangements and good and economical working and we feel very strongly that the charity ought to be relieved from the financial strain indicated by an annual deficit of £14 000 A hospital cannot any more than a private individual for ever live on its capital That Guy's Hospital is appreciated by the great British public has been proved by its position and by the number of beds constantly occupied To treat effectually 130 000 patients every year is no small task and a hospital which can carry on such a work with good results and economy deserves—nay, has the right to claim—support from the public Certainly Guy's Hospital has received some large special donations and legacies but the pressing needs of the hour have exhausted such sources of income as fast as they occurred We trust that the public will come to the rescue

A FEMALE VACCINATION OFFICER —At the meeting of the Chipping Sodbury (Gloucestershire) board of guardians held on Nov 4th a lady was appointed vaccination officer

HARVEST FESTIVAL —An interesting harvest festival was held in the chapel of the Cancer Hospital, Fulham road, London S W, on Nov 5th, at 7 P M, when a touching and appropriate sermon was preached by the Archdeacon of London The chapel was very prettily decorated, the work having been carried out by some lady friends of the hospital assisted by the matron and her sisters and nurses

GLASGOW OPHTHALMIC INSTITUTION POST-GRADUATE DEMONSTRATIONS ON DISEASES AND INJURIES OF THE EYE —The seventh annual course of demonstrations was inaugurated on Nov 3rd Dr R Perry, one of the managers of the Glasgow Royal Infirmary presiding Dr A Maitland Ramsay chose as his subject ' A Blow on the Eye its Immediate and Remote Results ' The attendance was larger than on any previous occasion

UNIVERSITY COLLEGE, BRISTOL FACULTY OF MEDICINE —At University College, Bristol, on Oct 30th, Sir W Ramsay presented the following prizes and certificates to the successful candidates Winter Session—Medicine prize, S C Hayman Surgery S C Hayman Public health prize, J D Calcott certificate, L Shingleton Smith Senior anatomy prize J W Willcox, certificates, A J Wright, V Green Armytage, R E Thomas, G S Parkinson, and J F Blackett Junior anatomy certificates J M Hammond and P S Tomlinson Physiology, Part I prize J W Willcox, certificates L J Short and R B M Hopkins, Part II prize, R B M Hopkins, certificates J W Willcox, J F Blackett L J Short, F T Boucher, V Green Armytage and E S Goss, Part III prize, H S Rivington, certificates J M Hammond L J Short P S Tomlinson, C H Taylor R N W Biddulph, and E V Connellan Biology prize P S Tomlinson, certificates W T Clarke, W W Morrison A H Dawes and P Sinnock. Chemistry prize W T Clarke, certificate, P S Tomlinson Summer Session—Pathology prize J D Calcott, certificates, A W Richardson and S C Hayman Medical jurisprudence prize, A W C Richardson, certificates, J D Calcott and S C Hayman Operative surgery prize, S C Hayman, certificate L N Morris Midwifery prize, W J H Pinniger, certificates F Shingleton Smith, L Shingleton Smith and L N Morris Practical medicine, Surgery and Midwifery prize L N Morris, certificates, F Shingleton Smith, A N Thomas, W J Pinniger, and F G Bergin Anatomy prize, P S Tomlinson, certificate J M Hammond Practical chemistry prize, P S Tomlinson certificate W Morrison Pharmacology and Therapeutics prize J W Willcox Materia medica prize, E Davies, certificates R J Parnell and S H Kingston

SOCIETY OF APOTHECARIES OF LONDON —The Lord Mayor s Day dinner of the Society of Apothecaries was held at the Society s hall in Blackfriars, London, on Nov 10th the Master of the Society Mr Clarence Cooper, being in the chair, supported by the wardens Mr Albert B Day and Mr J H Jeffcoat Covers were laid for about 100 persons and amongst the guests were Sir W S Church President of the Royal College of Physicians of London Mr J Tweedy, President of the Royal College of Surgeons of England Mr A Gibbs M P, Sir Joseph Fayrer Professor A Macfadyen, Sir Hugh Beevor, Sir William Wilson Sir Trevor Lawrence, Dr F T Roberts Mr S R Atkins, President of the Pharmaceutical Society Mr S F Cowell, Mr Shirley F Murphy, Dr Dawson Williams Mr W Arbuthnot Lane Mr W A Frost Dr A H N Lewers, Mr Andrew Clark, Mr. G H Makins and Dr F de Havilland Hall Mr Cooper, in proposing the toast of "The King," referred to the warm interest taken by His Majesty in medical work and pointed out how it encouraged advancement in scientific research In proposing the toast of ' The Visitors ' Mr Day extended a warm welcome to the President of the Royal College of Physicians of London the President of the Royal College of Surgeons of England, and the other guests This toast was responded to by the Presidents of the Royal Colleges. Sir William S. Church said that there was a close connexion between the Society of Apothecaries and St. Bartholomew's Hospital and for more than two centuries there had been at St. Bartholomew's a resident apothecary, the last being Mr. Frederic Wheeler, to whom he (Sir William Church) had been apprenticed. Mr. Tweedy said that all must respect the useful work done by that Society in the interests of the medical profession. To Mr. Tweedy was also entrusted the office of proposing the toast of "The Society of Apothecaries of London." He said that before the earliest association of Barber Surgeons in London a Society of Apothecaries existed with records reaching back to the Crusades, when the Apothecaries were an active and energetic body. During the terrible plague of London the Apothecaries were about the only persons who remained in the City to attend the sick and the dying. The Society of Apothecaries had fulfilled a very important function in promoting medical education and licensing practitioners. In his opinion the medical student was in danger of being over-educated and he would rejoice to see that Society take a larger share in the future in medical education and qualification. The subject was an economical one as well as educational because the increasing cost of medical education had reached such a degree that a man had to consider whether it was worth while paying for the costly and elaborate training required for the University of London with no further recompense at the end than such as was to be gained in remote country districts. Mr. Cooper, in acknowledging the toast, explained the lines on which the Society had lately been affording opportunities for the progress of medical science.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to The Lancet *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

Bailey, Robert Cozens, M.S. Lond., F.R.C.S., has been appointed Assistant Surgeon to St. Bartholomew's Hospital.

Bent, Sidney C. H., M.D. Brux., M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Surgeon to the Evelina Hospital for Sick Children.

Booth-Clarkson, Captain J., L.R.C.P. Lond., L.R.C.S., Reserve of Officers, District Surgeon and Health Officer for Alexandra County, has been appointed a Justice of the Peace for Alexandra County, Natal.

Duncan, W. Henry, L.R.C.P. & L.R.C.S. Edin., has been appointed House Surgeon to Nottingham Children's Hospital.

Greenwood, Alfred, M.D. Vict., D.P.H., Medical Officer of Health of Blackburn, has been appointed Medical Officer to the Blackburn Education Authority.

Hepburn, David, Professor, M.D., C.M. Edin., M.R.C.S., F.R.S. Edin., has been appointed Dean of the Faculty of Medicine of the University College, Cardiff.

Orange, Margaret, L.S.A. Lond., M.D. Brux., has been appointed Lecturer on First Aid and Home Nursing, London School Board, and Clinical Assistant to the Evelina Hospital for Children.

Parsons, E. D., L R C.P. Lond., M R.C.S., has been appointed House Physician to the Evelina Hospital for Sick Children.

Samuel, Henry T., L R.C.P. Lond., M.R.C.S., has been appointed Assistant House Physician to the Cardiff Infirmary.

Simon, David Ap, M.B., B.S. Glasg., has been appointed Certifying Surgeon under the Factory Act for Nantgaredig District of the County of Carmarthen.

Stuart-Low, William, F.R.C.S. Eng., has been appointed Assistant Surgeon to the Central Throat and Ear Hospital, Gray's Inn-road.

Smith, D., M.B., M.S. Glasg., has been appointed Certifying Surgeon under the Factory Act for the Creetown District of the County of Kirkcudbright.

Timms, A. E., L.R.C.P., L.R.C.S. Edin., has been appointed Assistant House Surgeon at the Cardiff Infirmary.

Wheeler, E. R., M R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the Evelina Hospital for Sick Children.

Whitelocke, R. H. Anglin, M.D., M.Ch. Edin., F.R.C.S. Eng., has been appointed Lichfield Lecturer on Clinical Surgery in the University of Oxford.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Army Medical Service.—Examination of Candidates for not less than 30 Commissions in the Royal Army Medical Corps.

Bethlem Hospital.—Two Resident House Physicians (unmarried), for six months. Honorarium at rate of £25 each per quarter, with board, &c.

Birmingham and Midland Free Hospital for Sick Children.—Two Acting Physicians.

Birmingham and Midland Hospital for Skin and Urinary Diseases, John Bright-street, Birmingham.—Surgical Assistant for six months. Honorarium at rate of 52 guineas per annum.

Brighton, Hove, and Sussex Throat and Ear Hospital, Church street, Queen's-road, Brighton.—Non-resident House Surgeon for six months, renewable. Salary at rate of £75 per annum.

([illegible] Dispensary.—Vacancy on Medical Staff.

[illegible] **for Children and Dispensary for Women**, [illegible] Physician for six months. Honorarium of £25, with board, residence, &c.

Evelina Hospital for Sick Children, Southwark, S.E.—Surgeon to Out-patients. Also Pathologist. Salary 100 guineas per annum.

Hereford County and City Asylum.—Senior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and washing.

Hospital for Sick Children, Great Ormond-street, W.C.—House Physici[illegible]s. Salary £20, with board and residenc[illegible]gist and Bacteriologist, non-resident [illegible]r annum.

Liverpool [illegible] House Surgeon. Salary £100 per annum, with board, residence, and washing.

London Lock Hospital.—House Surgeon to the Female Hospital. Salary £80 per annum, with board, lodging, and washing.

Margaret-street Hospital for Consumption and Diseases of the Chest, 26, Margaret-street, Cavendish-square, W.—Pathologist.

Newcastle-on-Tyne Dispensary.—Visiting Medical Assistant. Salary £160, rising to £1[illegible]0.

New Hospital for Women, Euston-road, N.W.—Clinical Assistant (female) in Out-patient Department.

North-West Lo[illegible] Medical Officer, also [illegible] Salaries at rate of £[illegible] per annum, [illegible] washing.

Paddington-green Children's Hospital, London, W.—Surgeon to Out-patients. Also Pathologist and Registrar. Salary £50.

Royal Free Hospital, Gray's Inn-road, W.C.—Junior Obstetric Assistant (female) for six months. Board and lodging provided.

Royal Waterloo Hospital for Children and Women, Waterloo Bridge-road, S.E.—Surgeon to Out-patients.

Royal Westminster Ophthalmic Hospital, King William-street, West Strand, W.C.—Clinical Assistants for six months.

St. Bartholomew's Hospital.—Surgeon.

St. Mary's Hospital Medical School, Paddington, W.—Lecturer on Physiology. Salary £400 per annum.

St. Pancras and Northern Dispensary, 126, Euston-road, N.W.—Honorary Physician.

St. Thomas's Hospital.—Assistant Surgeon.

Sheffield Children's Hospital.—Lady House Surgeon. Salary £70 per annum, with board, lodging, and washing.

Township of Toxteth Park Workhouse and Infirmary, Liverpool.—Assistant Medical Officer. Salary £100 per annum, with board, washing, and apartments.

Victoria Hospital for Children, Tite-street, Chelsea, S.W.—House Physician for six months. Honorarium of £25, with board and lodging.

Wallasey Dispensary and Victoria Central Hospital, Liscard.—House Surgeon, unmarried. Salary £100, with apartments, board, and service.

Wolverhampton Union Workhouse, Heath Town, Wolverhampton.—Assistant Medical Officer (resident), unmarried. Salary £130 per annum, with apartments, rations, and washing.

Wrexham Infirmary.—Resident House Surgeon. Salary £80 per annum, with board, lodging, and washing.

The Chief Inspector of Factories, Home Office, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory Act at Withnell in the county of Lancaster.

Births, Marriages, and Deaths.

BIRTHS.

Dyson.—On Nov. 5th, at 25, Aldersgate-street, E.C., the wife of Malcolm G Dyson, F.R C.S., of a son.

Gairdner.—At Cairo, on the 8th instant, the wife of the Rev. William Henry Temple Gairdner, B.A., a son.

Stephens.—On Nov. 7th, at Elderslie, Hoylake, Cheshire, the wife of J. W. W. Stephens, M.D. Cantab., of a son.

Willcox.—On Oct. 10th, at Frogmore, St. Albans, the wife of W. H. Willcox, M.D. Lond., of a son.

MARRIAGE.

Atkinson—Hicks.—On Nov. 5th, at St. James's Church, Piccadilly, John Parkinson Atkinson, B.A., M.R.C.S., L.R.C.P., to Dorothea, youngest daughter of Charles Francis Hicks.

DEATHS.

Alexander.—On Nov. 3rd, 1903, at Ashford, Middlesex, Ella Harriette, widow of [illegible] Charles Archibald Alexander, M.B. Canta[illegible] Guards, aged 43.

Cradock.—On [illegible] residence, 52, Huskisson-street, Live[illegible] L.R.C.P.I.

Lawton.—On [illegible] 2 years, Herbert Alfred Lawton, M.D. Durh., L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., M. and D.P.H., and late Medical Officer of Health.

Nicholson.—On Nov. 8th, at the Grange, Totteridge, Sir Charles Nicholson, Bart., M.D., D.C.L., LL.D. Cantab. and Edin., aged 95.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

MOTOR CARS FOR MEDICAL MEN.

To the Editors of THE LANCET

SIRS,—In the letters that are appearing on the subject of motor-cars we only hear the rosy side of the question and I hope you will allow me to mention a few points on the opposite side, and I can speak from sad personal experience, having had a car and having given it up in favour of the despised horse

1 *Locality*—Cars may be, and probably are, very convenient for long distances between stopping places and long journeys, but when it comes to towns and suburbs they are in my opinion and in the opinion of other medical men to my personal knowledge most unsuitable Usually when making a visit the engine has to be stopped running, as it is impossible to tell how long one will be, and then started again, often giving rise to delay and trouble through some trifling fault, and it is not very conducive to one's good temper to be grinding at a handle in public thoroughfares at a machine which will not start, whilst if the groom or chauffeur starts it, or tries to, both master and man are wandering round endeavouring to find out the fault. With a cart or carriage one would be in the next house by the time the car is ready to go and both seated. If the engine is allowed to run whilst in a house there are the well known and unavoidable smell and noise.

2 *Cleanliness*—I will defy any motorists to keep clean and neat. Whilst running there is the dust, when either at home or on a journey some slight alteration is required—e g, slipping belts, sparking plug fouling short circuiting, or the hundred and one things that may require adjusting; then the quantity of dust, oil, and grease that finds its way on to one's clothes and hands, even through the best of gloves, is incredible and, until one tries to get it off, impossible to conceive and it is somewhat objectionable to go into a bedroom with the hands of an engine room artificer

[illegible] on [illegible] at [illegible] ils [illegible] s, [illegible] alf [illegible] ne one day, I received an urgent call about a mile away to a new and lucrative patient and could not get the engine to start, though it had been all right a quarter of an hour earlier, and when after giving it up as a bad job and having made myself as presentable as possible I took a passing cab to find a rival practitioner in attendance you will understand that there are disadvantages in a motor car.

6 *Physical and mental strain*—I found myself, and others have told me that they experienced it also, the mental strain of driving a car amongst traffic, specially at any rate of speed, and the constant vibration makes the hands tremble and shake Patients and their ailments are plenty to worry about without the extra anxiety of an engine driver.

7. As to the kind of car that is suitable. Electric cars are clean and expensive, but quite unsuitable to any work except in large cities. Steam cars, fairly clean but intricate, have been known to be consumed by fire in the high road. Petrol cars are dirty; noisy, difficult to start, and fairly cheap.

I am, Sirs, yours faithfully,

Nov. 9th, 1903. EQUES.

To the Editors of THE LANCET.

SIRS,—If "*Tramite Recta*" really contemplates habitually driving a motor-car on gradients of one in three (!) I can assure him that his providing the necessary material for a coroner's inquest is merely a matter of time He may do it 10, 20, or 100 times, but sooner or later his engine will stop going up hill, or his brake will fail, or his steering gear will give, or his wheel will touch one bank, shooting his car across the road going down. After any of these occurrences the only other conveyance he will require will be one that is driven very slowly and will in all probability contain several wreaths of flowers bearing sympathetic inscriptions.

I am, Sirs, yours faithfully,

Stratford on Avon, *Nov. 6th*, 1903 *HARRY LUPTON.*

A SERIOUS QUESTION.

To the Editors of THE LANCET.

SIRS,—Dr Robert Jones in his paper read before the Society for the Study of Inebriety on July 15th, 1902, and published in THE LANCET of Oct 25th, 1902, p. 1118, stated that "a still more striking fact is that the death rate from alcohol during the last 15 years has increased by 42 per cent in men and 100 per cent in women" One naturally asks what are the reasons for this great increase amongst women. I beg to suggest that one factor may be that many women at the approach of every menstrual period make a practice, although they are most temperate at other times and many of them pose as "teetotalers," of drinking for two or three nights in succession from half a quartern to one quartern of hot gin each night before retiring to rest, and I have heard it stated that many of the medical attendants of these women are in the habit of recommending this practice Whether this statement is true or not I do not know, but I believe it to be a fact that whether their medical men advise it or not this is the secret practice of many women and young girls even of 15 years old in the middle and lower classes. I suppose that the advantage of this drink is supposed to lie in the diuretic properties of the juniper spirit or oil with which it is flavoured, but could not some equally or more efficacious non-alcoholic drink be made known and generally prescribed?

I am, Sirs, yours faithfully,

Nov. 7th, 1903. A LAYMAN.

THE BRITISH MEDICAL BENEVOLENT FUND.

THE following is a second list of donations received in response to Sir William Broadbent's appeal —

	£	*s*	*d*		£	*s*	*d.*
Mr W. H Patmore Sheehy	10	10	0	Mr. E. B Payne	1	1	0
Dr. C. A. Lee	5	5	0	Mr. J. King Lewis ...	1	1	0
Dr. F. Parsons	5	0	0	Dr E. B Fiennell	1	0	0
Mr Wilson Eager	3	3	0	Dr. J. H. Blight	1	0	0
Dr. S H. Habershon (annually)	2	2	0				

The treasurer is grateful for the response already given to Sir William Broadbent's appeal. Unfortunately the amount of money received still falls far short of the requirements of the fund at the present time and unless the resources of the fund are largely increased the pressing claims which winter always brings will be very inadequately provided for Further subscriptions and donations are urgently needed and may be sent to the treasurer, Dr. S. West, 15, Wimpole-street, London, W.

ADVERTISING 100 YEARS AGO.

THE recent pronouncement of the British Medical Association regarding the appearance of the names of medical men in lay newspapers, referred to in a leading article which appeared in THE LANCET of Nov. 7th, p 1310, makes the following paragraph from the *Belfast News Letter* of 1810 of interest to-day —

> JOHN HOLMES, M.D,
>
> having completed his education in the various branches of his profession, takes the liberty of informing the public that he intends making Colerain the place of his residence, and as a medical practitioner respectfully solicits their notice.
>
> From the ample opportunities which he has had of acquiring an accurate and extensive knowledge of the many important improvements which of late years have been introduced into medical practice by the most eminent of our modern practitioners, he trusts he shall not be accused of presumption by recommending himself as duly qualified to discharge the serious duties of so important a trust with fidelity and success
>
> With much deference Dr. Holmes would intimate that he has paid more than ordinary attention to those affections which are known by the general epithet of fevers and that he still intends to cultivate that most important branch of his profession with the utmost care and industry. He also thinks proper to state that in order to render his knowledge as complete as possible he has dedicated no inconsiderable share of his time and attention to those studies which more especially belong to the province of the surgeon. Colerain, March 16th, 1810.

WANTED—A HOME.

To the Editors of THE LANCET.

SIRS,—I shall be glad if any of your readers can tell me of a home suitable for a girl, aged 15 years, who is suffering from spastic paraplegia. The child is helpless and of feeble intellectual development but is not imbecile. Her parents are in very humble circumstances but a small payment might be possible through charitable friends. Efforts to find a home have thus far been ineffectual

I am, Sirs, yours faithfully,

1, Ethelbert-crescent, Margate, Nov. 8th, 1903 F. E. NICHOL.

MAIZE OR INDIAN CORN AS A FOOD.

To the Editors of THE LANCET.

SIRS,—For some time I have at varying intervals tried maize flour or Indian corn as an article of dietary and I believe if only people could be prevailed upon to try it it would be found a valuable addition to our list of cereal foods Unfortunately, in England and Scotland Indian corn is associated with the feeding of poultry and when a prejudice has once been established it is difficult to uproot. People, and more especially the artisan classes, think this particular cereal is food only fit for hens Nothing could be further from the truth Maize in the form of finely milled flour is a pleasant and nourishing food. It is largely employed in America, South Africa, Germany, and now also in Ireland. Here let me emphasise the point that it is the fine meal I mean, for unless this is specially mentioned the dealer will supply the coarse-ground meal uncleaned and unfit for human beings. Indeed, so little is the fine meal known in England that I have been unable to obtain it in a large town like Leeds. The supplies I have hitherto had have come from Ireland *Comparing the cost with that of* flour I find they are about the same, but if maize came into more general use it should be much cheaper than wheaten flour Comparing wheat, maize, and oats as to their nutritive values one finds that in albuminoids the three agree closely. In starch maize is nearly as rich as is wheat and in this agent it is richer than oatmeal. In fat maize is as rich as is oatmeal and this is an important point in the feeding of the poor. Wheaten flour, as is well known, is poor in fat. The composition of the fat of maize is similar in quality to the fat of other cereals, consisting of glycerine and oleic, stearic, and palmitic acids, but it differs in the proportions. Maize fat contains a relatively large quantity of glycerine—namely, 6 46 against 2·8 for oatmeal.

Maize, in my opinion, would find its chief use in England as a porridge. In the form of porridge it has a pleasant sweetish taste and is liked by children. Its richness in fat can be proved by placing a spoonful of the porridge in water when the minute droplets are seen floating on the surface. Maize porridge is in taste very like a semolina pudding. The flour can also be made into cakes, and these are a change from wheaten bread, although one soon tires of this bread by itself. However, it is a variety and the more variety we can get in our food the better it is. At the present day we are getting too much tied down to the use of wheaten bread. I have no need to mention other ways of cooking Indian corn. These suggest themselves to every housewife. Let me say that in the shape of fancy foods people often pay fabulous prices for Indian corn.

I am, Sirs, yours faithfully,
Leeds, Nov. 7th, 1903. J. Gordon Sharp, .D. Edin.

THE WILLIAM CADGE MEMORIAL.

To the Editors of The Lancet.

Sirs,—We shall be obliged if you will insert the following final list of subscribers to the above memorial.

We are, Sirs, yours faithfully,
W. H. Day.
Norwich, Nov. 9th, 1903. Michael Beverley.

London:—
Sir Henry Thompson, Bart.
Sir Joseph Dalton Hooker, G C.S.I., C.B.
Sir Victor Horsley.
Mr. John Tweedy.
Mr. Edgcombe Venning.
Mr. Richard Barwell.
Mr. C. A. Ballance.
Dr. Sidney Ringer.
Dr. J. Hughlings Jackson.
Mr. Alfred Willett.
Dr. Reston Lewis.
Dr. H. Lambert Lack.
Mr. W. Douglas Harmer.
Dr. F. J. Harvey Bateman.
Dr E. L. Keye, New York.
Dr. H. H. A. Beach, Boston, U.S.A.
Dr. Gibson, Edinburgh.
Dr. R. Palgrave Simpson, Weymouth.
Mr. F. S. Goulder, Dudley.
Mr. W. Ranson, Ashburton.
Dr. Andrews, Norwich.
Dr. Crooke, Norwich.
Dr. H. Muir Evans, Lowestoft.
Dr. A. Marshall, Lowestoft.
Dr. H. Blake, Yarmouth.
Dr. John T. Skrimshire, Holt.
Mr. B. Maurice Hughes, Wymondham.
Mr. H. Back, Acle.
Mr. S. M. Hopson, Dereham.
Dr. John Bately, Gorleston.
Dr. C. B. Plowright, Lynn.
Mr. E. T. Prior, Loddon.
Mr. G. E. Deacon, Hethersett.

THE USE OF PETROLEUM.

To the Editors of The Lancet.

Sirs,—I shall be glad if any of your readers can inform me as to the nutritive value of petroleum administered internally and its mode of action. Is it simply a food, to be absorbed and utilised as such, or is its action purely antiseptic to pave the way and to improve the tone for the better digestion of normal food? Also, what is the relative nutritive value of the animal, vegetable, and mineral oils?

I am, Sirs, yours faithfully,
Nov. 9th 1903. C. W. S.

THE CIGARETTE CRAZE.

To the Editors of The Lancet.

Sirs,—In course of several thousands of inductions of anæsthesia I have found that in a certain percentage of cases—young men with no appreciable lung trouble or previous history of such—the inspiration of ether at once causes intense irritation, excess of secretion, and cyanosis. If the ether be pushed the patient after many long spasms is anæsthetised but remains a bad colour, and on auscultation "the air-way" down to the small capillaries seems partially filled with secretion and the patient "takes the anæsthetic badly." A similar state of affairs is found when the ether tension rises if the gas-ether method of induction be used. On investigating these cases I found that all of them had been heavy cigarette smokers and inhaled the smoke also.

Of late I have administered chloroform to all patients who confessed to the excessive use of the cigarette and have always found the irritation less, although on auscultating the fully anæsthetised patient one frequently finds moist crepitations audible over the bases of the lungs and occasionally in the axillæ and the front of the chest. These crepitations were not present before induction and are not found in normal cases unless there has been some previous lung trouble or irritation, so I think it is fair to assume that the respiratory tract has not (to put it mildly) been improved by the inhalation of the cigarette smoke.

I am, Sirs, yours faithfully,
J. Reginald Bentley, M.B., B.C. Cantab., &c.,
late House Physician, &c., Royal Berks Hospital,
Barrow, Hull, Nov. 5th, 1903. Reading.

QUACKERY IN HIGH PLACES.

A correspondent sends us a copy of an advertisement of a liniment which appears in one of the best known London papers. The advertisement states that the wife of the Commander-in-Chief has written to the proprietors of the nostrum in question to say that she finds it most excellent and that she incloses 2*s*. 9*d*. The Countess Roberts, through the manifold excellencies of her husband, has attained to a high place in society. We feel that she ought not to be entrapped by such a statement as "—— liniment cures rheumatism in five minutes." It is the credulity of people in conspicuous positions which leads the public to support so many charlatans. The army will follow Lord Roberts anywhere and it is not unlikely that the wives of the army may follow his wife. The Countess Roberts is rich and the 2*s*. 9*d*. is nothing to her, but to the wife of a soldier with a few pence a day 2*s*. 9*d*. is a large sum. Mrs. Tommy Atkins may be persuaded to imitate the example of the Countess Roberts and thus to pay 2*s*. 9*d*. for an application the equivalent of which could have been supplied at much less cost by a medical man or by a druggist on a medical man's prescription.

SPHYGMOGRAPHS.

To the Editors of The Lancet.

Sirs,—I should esteem it a great favour if one of your readers would inform me what sphygmograph, in his opinion, would be preferable for a country practitioner as I am rather doubtful what form to purchase. I am, Sirs, yours faithfully,
Nov. 10th, 1903. A Country Practitioner.

◆

Y. Z.—Our correspondent has forgotten to inclose his name and address.

Inquirer does not make it clear whether he is a medical man.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (16th).—London (2 p.m.), St. Bartholomew's (1.30 p.m.), St. Thomas's (3.30 p.m.), St. George's (2 p.m.), St. Mary's (2.30 p.m.), Middlesex (1.30 p.m.), Westminster (2 p.m.), Chelsea (2 p.m.), Samaritan (Gynæcological, by Physicians, 2 p.m.), Soho-square (2 p.m.), Royal Orthopædic (2 p.m.), City Orthopædic (4 p.m.), Gt. Northern Central (2.30 p.m.), West London (2.30 p.m.), London Throat (9.30 a.m.), Royal Free (2 p.m.), Guy's (1.30 p.m.).

TUESDAY (17th).—London (2 p.m.), St. Bartholomew's (1.30 p.m.), St Thomas's (3.30 p.m.), Guy's (1.30 [illegible]), Westminster (2 p.m.), West London [illegible] College (2 p.m.), St. George's (1 p.m.), [illegible] Mark's (2.30 p.m.), Cancer (2 p.m.), Metropolitan (2.30 p.m.), London Throat (9.30 a.m.), Royal Ear (3 p.m.), Samaritan (9.30 a.m. and 2.30 p.m.) Throat, Golden-square (9.30 a.m.), Soho-square (2 p.m.).

WEDNESDAY (18th).—St. Bartholomew's (1.30 p.m.), University College (2 p.m.), Royal Free (2 p.m.), Middlesex (1.30 p.m.), Charing Cross (3 p.m.), St. Thomas's (2 p.m.), London (2 p.m.), King's College (2 p.m.), St. George's (Ophthalmic, 1 p.m.), St. Mary's (2 p.m.) National Orthopædic (10 a.m.), St. Peter's (2 p.m.), Samaritan (9.30 a.m. and 2.30 p.m.), Gt. Ormond-street (9.30 a.m.), Gt. Northern Central (2.30 p.m.), Westminster (2 p.m.) Metropolitan (2.30 p.m.), London Throat (9.30 a.m.), Cancer (2 p.m.), Throat, Golden-square (9.30 a.m.), Guy's (1.30 p.m).

THURSDAY (19th).—St. Bartholomew's (1.30 p.m.), St. Thomas's (3.30 p.m.), University College (2 p.m.), Charing Cross (3 p.m.), St. George's (1 p.m.), London (2 p.m.), King's College (2 p.m.), Middlesex (1.30 p.m.), St. Mary's (2.30 p.m.), Soho-square (2 p.m.), North-West London (2 p.m.), Chelsea (2 p.m.), Gt. Northern Central (Gynæcological, 2.30 p.m.), Metropolitan (2.30 p.m.), London Throat, (9.30 a.m.), St. Mark's (2 p.m.), Samaritan (9.30 a.m. and 2.30 p.m.), Throat, Golden-square (9.30 a.m.), Guy's (1.30 p.m.).

FRIDAY (2[illegible] (1.30 p.m.), St. Thomas's [illegible] Cross (3 [illegible] (2 p.m.), [illegible] Gt. Northern Central (2.30 p.m.), West London [illegible] London Throat (9.30 a.m.), Samaritan (9.30 a.m. and 2.30 p.m.), Throat, Golden-square (9.30 a.m.), City Orthopædic (2.30 p.m.), Soho-square (2 p.m.).

SATURDAY (21st).—Royal Free (9 a.m.), London (2 p.m.), Middlesex (1.30 p.m.), St. Thomas's (2 p.m.), University College (9.15 a.m.), Charing Cross (2 p.m.), St. George's (1 p.m.), St. Mary's (10 p.m.), Throat, Golden-square (9.30 a.m.), Guy's (1.30 p.m.).

At the Royal Eye Hospital (2 p.m.), the Royal London Ophthalmic (10 a.m.), the Royal Westminster Ophthalmic (1.30 p.m.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (17th).—Pathological Society of London (King's College).—8.30 p.m. Mr. G. L. Cheatle: The Behaviour of Cancer in Nerve or Trophic Areas.—Prof. R. T. Hewlett: The Agglutination Reaction in Tropical and Asylum Dysentery. And other Communications.

Chelsea Clinical Society (Chelsea Dispensary, Manor-street, King's-road, S.W.).—8.30 p.m. Cases:—Dr. C. C. Gibbes: Cases of Cardiac Disease. Communications:—Dr. G. E. Pritchard: The Inheritance of acquired Characteristics.—Dr. T. B. Hyslop: The Examination of a Person alleged to be Insane.

WEDNESDAY (18th).—Royal Microscopical Society (20, Hanover-square, W.).—8 p.m. Papers:—Prof. J. D. Everett: Microscopic Resolution.—Mr. W. Wesché: The Mouth Parts in the Nemocera and their Relation to the other Families in Diptera.

Royal Meteorological Society (Institute of Civil Engineers, Great George-street, Westminster, S.W.).—7.30 p.m. *Papers*:—(1) Dr. H. R. Mill and (2) Mr. R. G. K. Lempfert: The Great Dustfall of Feb. 21st and 22nd, 1903, and its Origin.

Society of Arts (John-street, Adelphi, W.C.).—8 p.m. Sir W. Abney: Opening Address of the 150th Session.

THURSDAY (19th) —HARVEIAN SOCIETY OF LONDON (Stafford Rooms Titchborne street Edgware road W) —8 30 P M Dr D B Lees: The Treatment of some Acute Visceral Inflammations (Third Harveian Lecture)

[illegible] Apparatus [illegible] CHILDREN [illegible] ns will be shown by Dr J Taylor [illegible] H S Collier Dr G Car[illegible] Walker Papers —Mr A [illegible] —Mr T C Dent A Case [illegible] Pyloroplasty —Dr F Ca[illegible] Stenosis of the Pylorus

EPIDEMIOLOGICAL SOCIETY (11 Chandos street, Cavendish square W) —8 P M Council Meeting 8 30 P M Paper Prof W J Simpson: Some Remarks on the Epidemiology of Plague

LECTURES, ADDRESSES, DEMONSTRATIONS &c

MONDAY (16th) —POST GRADUATE COLLEGE (West London Hospital Hammersmith road W) —5 P M Dr Mansell Moullin: Malignant Disease of the Uterus

MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22 Chenies street W C) —4 P M Dr G Little: Clinique (Skin) 5 15 P M Dr A McFadyen The Present Position of Experimental Enquiry in Relation to Cancer

TUESDAY (17th) —POST GRADUATE COLLEGE (West London Hospital Hammersmith road W) —5 P M Mr Beddard: Practical Medicine (Third Lecture)

MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22 Chenies-street W C) —4 P M Dr A P Luff Clinique (Medical) 5 15 P M Dr R Jones How to Treat a Case of Insanity

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square Bloomsbury) —3 30 P M Dr Batten Diseases of the Cerebellum

GLASGOW [illegible] 8 P M [illegible] other [illegible] Treatr[illegible] Course)

WEDNESDAY (18th) —POST GRADUATE COLLEGE (West London Hospital Hammersmith road W) —5 P M Dr Robinson Pelvic Pain

MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22 Chenies street W C) —4 P M Mr J Cantlie Clinique (Surgical) 5 15 P M Mr J Clarke: On the Operative Treatment of Piles and Kindred Affections

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton) —4 P M Dr A Latham *Thoracic Aneurysm*

THURSDAY (19th) —POST GRADUATE COLLEGE (West London Hospital Hammersmith road W) —5 P M Mr Edwards Urinary Cases

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THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond street W C) —4 P M Dr Garrod: Diabetes in Children

NORTH EAST LONDON POST GRADUATE COLLEGE (Tottenham Hospital N) —4 30 P M Mr W *Edmunds: Surgical Diseases of Children (Second Lecture)*

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FI[illegible] London Hospital [illegible] laughter houses [illegible] (22 Chenies-street [illegible] (Throat) 5 15 P M [illegible] d Balneary Therapeutics

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(Taken daily at 8.30 a m by Steward's Instruments)

THE LANCET Office Nov 12th 1903

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain-fall.	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M
Nov 6	30 55	E		68	54	44	47	49	Overcast
7	30 50	E		62	52	42	44	45	Foggy
8	30 32	S		64	52	45	44	47	Cloudy
" 9	29 99	S W	0 01	65	57	46	51	52	Raining
" 10	30 13	S W	0·11	78	57	44	45	47	Overcast
" 11	30 28	N W		58	55	47	52	55	Foggy
" 12	30·25	S W		58	53	48	48	50	Overcast

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An Address

ON

THE IDEAL PHYSICIAN: HIS EARLY TRAINING AND FUTURE PROSPECTS.

Delivered to the Students of the Royal College of Surgeons in Ireland on Nov. 2nd, on the Opening of the Medical Session 1903–04,

BY, SIR LAMBERT H. ORMSBY, M.D. DUB.,
PRESIDENT OF THE COLLEGE.

GENTLEMEN,—About this time last year and in this place I had the honour and privilege, as President, of bidding you welcome on entering upon the study of one of the most arduous and yet most noble of professions. To-day I again bid you welcome, those particularly who are entering on the study of medicine as well as those who are resuming study. The latter I would ask to start with redoubled energy after their long and well-earned holiday and so give both a healthy stimulus and bright example to their junior fellow students.

It is the custom with some to condemn addresses and in many medical schools they are falling into abeyance. I am of opinion, however, that a short address introductory to the session about to commence is of great service to those beginning the profession, as it marks with emphasis the starting point of the student's career, and I would be very sorry indeed to see the custom given up here where it has existed for so many years. The selection of the topic of my address to day I can assure you was a great mental puzzle, anxious as I was to arrange my subject so as to say something interesting and suitable to all If I merely drew up a sermon full of fatherly advice for the first year students, telling them that if they wanted to succeed in the battle of life they must be zealous and industrious, it would in the abstract, be strictly true; still this oft repeated tale would be *anything but interesting to the senior students* who have frequently heard me and others on the same subject Then *I knew we should have a number of qualified brethren*, senior and junior, present, and they would hardly go to the trouble of listening to me through high-sounding platitudes with a sprinkling of poetry to make it read well in pamphlet form. I therefore select for my address to day the following subject:—"The Ideal Physician: His Early Training and Future Prospects"

To be an ideal physician should be the aim of every man who embraces medicine as a profession. Everyone is not gifted with the same qualifications for a successful career Some few indeed may be born with exceptional ability but at the same time endowed with a rough overbearing manner yet by sheer determination they may force their way into the front ranks of their profession But such disregard for the feeling of others and such lack of politeness must always tell against their success in the long run Others adopt this Abernethian style from ignorance. I regret to say it appears to be an age when young men are prone to pay but scant courtesy to their seniors, under the mistaken idea that having been born in a more enlightened age they could not possibly learn anything worth knowing from those who have gone before. This is a popular fallacy and the outcome of youthful presumption and want of experience and common sense, for the more a medical student or young practitioner learns the more he appreciates those master minds who have *been the pioneers of his profession. The early training of* the ideal physician, as for any other ideal, must be undertaken with very great care It is, in fact a preparation for a great and serious struggle, a most momentous battle A youth must start as a student determined to succeed Fix, then, in your own minds some successful model and ascertain the means by which he succeeded, whether by tact, industry, skill, or a combination of all these, and then strive with all your might to acquire the same qualities Take care in starting that you are equipped with all the necessary armour and weapons for the encounter upon which you have entered. Be industrious, punctual, cheerful, kindly, courteous to your seniors, respectful to your teachers, and prune off those small objectionable asperities which might hereafter be the means of retarding your progress. And above all avoid that sorry band of wasters and drifters whose ways and means are so well known to you all. Let your one aim and end be always to achieve the enviable reputation of a good physician and a courteous gentleman. As I stand here I see before me a body of stalwart young men, burning with the generous sympathies of youth, strong with robust qualities both mental and physical, standing in the shadow of this old and respected seat of learning, upon the brink of the arena into which they are so soon to enter. So let me *now briefly allude to your future prospects.* You will ask me, what are your future prospects? In answer I may mention the Navy, the Army, the Indian Medical Service, foreign appointments, ship surgeoncies, the Irish Poor-law medical service, and lastly, private practice. Of those I fear I shall only have time to make a brief allusion to three. Last year I spoke at length upon the favoured conditions of the home Army Medical Service as a career, and I am still in favour of this service, notwithstanding there are yet a few grievances in the Royal Army Medical Corps to be remedied. To commence with

THE NAVAL MEDICAL SERVICE.

This service is the oldest service of all and ought to be one of the most popular But it is not popular and you may ask me why Well, I will try to enumerate a few of the defects of the Royal Naval Medical Service up to six months ago and to point out certain grievances in the recent regulations which have been remedied.

Grievance No 1, late promotion—At present the average age of a surgeon entering the Naval Medical Service is 25 years; he serves until he is 37 years before he becomes a staff surgeon and 45 years before he becomes a fleet surgeon, and he may be selected for the higher branches at about the age of 52 years. No other branch of the navy has to wait so long to attain corresponding rank; comparison of ages with the executive or combative branch of equal relative rank will clearly show this. Surgeons, 25 years; staff surgeons, 37 years; fleet surgeon, 45 years; deputy inspector-general, 52 years. *Lieutenant, 21 years; lieutenant after eight years'* service, 29 years; commander, 33 years; and captain, 40 years. Under these conditions the naval medical officer may be placed in the position of having to ask leave from a man who is considerably his junior in the service. To make the service popular I consider promotions to staff surgeons should be after eight years' service and to fleet surgeons after 16 years' service. This change, I am informed on the best authority, is to be made in regulations which will appear in a very few weeks.

Grievance No. 2, foreign service.—It is urgently needed that some reform *should be made* as to the *regulation of* home and foreign service. At present a staff surgeon returning home after three years' foreign service (which may be in the unhealthy climates of the East Indies or West Coast of Africa for which he gets no extra pay) after six weeks' leave (that is only 14 days for each year spent abroad) is most probably appointed to either the home, cruiser, or Channel squadrons. These fleets have no fixed port and are continuously cruising about. Consequently the staff or fleet surgeon if married sees little or nothing of his wife and family and after from 18 months to two years of this so-called home service he is again sent abroad for another term of foreign service. To remedy this there should be a fixed regulation that every medical officer returning from a foreign station should *be entitled to a period of shore* or harbour service.

Grievance No. 3, compulsory half pay—This has by no means been done away with; the great objection is not so much the loss of annual income, which is bad enough, but also the loss of time. The time spent on half pay has to be made up before retirement

Grievance No 4.—Another grave injustice is that a number of medical officers wait patiently until they have completed 20 years' full pay service (the time spent on half pay having to be made up), this being the earliest period when they can retire with a pension But when this long-looked-forward-to time has arrived it sometimes happens that *the unfortunate medical officer is serving abroad* He is informed on applying for retirement that his services cannot be spared even if he offers to pay his own passage home and his successor's passage out He is therefore liable to be retained on a foreign station for a period of three years' longer.

Grievance No 5, control of sick berth staff.—The principal medical officers of naval hospitals have no power to deal with breaches of discipline on the part of the sick staff that serves under them. An inspector-general, who is supposed to rank with a rear admiral, before he can get a man punished has to report him to the executive authorities of the local depôt and much time is wasted before the charge is heard or the offender punished. Surely the sick bay staff ought to be under the control of the naval medical officer just as the men of the Royal Army Medical Corps are under the control of their officers in the same corps.

Grievance No. 6, medical guard.—It is the recognised custom in the present day where two or more ships are in harbour together for the naval medical officers to take it in turn day about to keep medical guard. This means that a medical officer of the ship having the medical guard has to remain on board his ship to be ready to go to any emergency case in any of the other ships in harbour. Although this is practically the custom and works admirably, still it is not as yet embodied in the King's regulations and the result is that some captains still insist on always having one of the two medical officers belonging to their ship on board, although the medical officer of the guard is close alongside and capable of being on board in five minutes on signal being made for him. To be kept on board every alternate day for the whim of an individual captain is very galling, more especially as it is only done in one or two ships in a fleet. To obviate this grievance it should be clearly laid down in the regulations that medical guard is to be recognised in all ships.

There are many other petty disadvantages which irritate the naval medical officer that a little re-arrangement could easily remedy without any loss of discipline or efficiency. For instance, there is no encouragement of individual responsibility at medical surveys. An inspector-general ranking as rear-admiral is forced to sit under the presidency of a post-captain or even a commander who is years his junior in service. Of course, I do not wish to deny that the captain should command his own ship, but I do think that if the status and position of the naval medical officer are to be upheld he should have entire control of the sick and the sick-berth staff and should be able to punish them for breach of discipline in their special work should necessity arise, the same as in the Royal Army Medical Corps. A new set of regulations has just been issued and some of the matters I have complained of have been remedied, but many grievances still exist which, if not removed, will act as a barrier to the entrance of efficient men into the service. The present Director-General, Sir Henry F. Norbury, K.C.B., has done more to improve the service than any of his predecessors. I know he has the interests of the service at heart and is only too anxious to see his branch brought into efficiency and popularity, but I have no doubt that when he suggests improvements he is stopped by the Treasury which will not sanction any improvement that costs additional money. The Government yearly expends millions on the building of warships intended to inflict death and suffering on our fellow men. How much more in the cause of humanity should they be willing to expend a few thousands on a branch of the service whose mission it is to prevent, or to cure, disease and to alleviate the suffering inflicted by shot and shell on their fighting men. If the distinguished Director-General, Sir Henry F. Norbury, fails to induce the Admiralty and the Treasury to amend these grievances by mild expostulation these authorities will be forced in the long run to yield because men will not go into a service where discontent and injustice are maintained. In the end the Admiralty will have to follow the example of the army and at once accede to the views of an energetic and independent civilian advisory board constituted on the same lines as the Royal Army Medical Corps but called in the navy the Medical Consultative Board. The Royal Army Medical Corps now gets plenty of well-qualified candidates but in the Naval Medical Service there is a deficiency of over 50 surgeons. But I hope before long to see all these grievances mentioned removed and good and efficient men once more induced to enter it. I would now like to say a few words about another service which has somewhat grown into disfavour.

THE INDIAN MEDICAL SERVICE.

I read in THE LANCET an official memorandum dated India Office, October 1903, in which will be seen certain alterations effected for the improvement of the service. First, I find by the new regulations that the pay of the Indian military medical officer is increased although the increase sanctioned is not very large. A lieutenant's commission will in future date from the day on which his course of instruction commences and he may be promoted to captain on completion of three years' full-pay service, the same as the Royal Army Medical Corps, but he will be required after 18 months' service to pass an examination in military law and military organisation. The unemployed pay of a lieutenant in India will be in future Rs. 420 a month instead of Rs. 350, while when placed in permanent medical charge of a regiment his pay will be Rs 500 in place of Rs 450. On promotion to captain if in substantive charge he will receive Rs. 550 in place of Rs. 450. After seven years' service there is an increase from Rs 600 to Rs. 650 and after 10 years' service from Rs. 600 to Rs. 700. The pay of a major after 15 years' service who is in substantive charge is increased from Rs. 800 to Rs. 900 and of a lieutenant-colonel from Rs. 1000 to Rs. 1250. A lieutenant-colonel who has 25 years' service will in future receive Rs. 1300 if in substantive charge and if specially selected for increased pay Rs. 1400. The pay of one surgeon-generalship is raised from Rs. 2700 to Rs 3000. In justice to the officers now serving it is hoped that the regulations will be retrospective as far as they are concerned and that the regulations will have a retrospective effect from the date of the increased pay under the recent warrant granted to officers of the Royal Army Medical Corps serving in India, to which charge I alluded in my address last year. Following the precedent set of the case of the Royal Army Medical Corps it is now provided that specialist pay at the rate of Rs 60 a month will be granted to officers below the rank of lieutenant colonel who may be appointed to certain posts, and another clause provides that extra furlough may be granted to officers desirous of pursuing special courses of study at the rate of one month's furlough for each year's service up to 12 months in all. There are other important improvements set out in this memorandum, but there are grievances and drawbacks still remaining. When these are remedied I believe the service will be popular again and many efficient young qualified men will be eager to enter it. The next and last service I have to allude to is nearer home. It is

THE IRISH POOR-LAW MEDICAL SERVICE.

Last year I thought I said all that the head of a college could possibly say to you on the subject. But 12 months have proved to me that if the Poor-law medical service officers are to be supported in their manly fight against injustice and dishonour it behoves all those in any position in the profession to speak in season and out of season against the gross treatment which is meted out day by day to our brethren whose unfortunate lot it is to serve in the Irish Poor-law medical service. The Right Hon. George Wyndham, M.P., the able Chief Secretary for Ireland, has since this time last year piloted a most successful Bill through Parliament for the "better union of hearts" and for the settlement of the land question and for the satisfaction and contentment of all parties concerned. But if I am asked what has been done for the Irish dispensary medical officer I regret to be obliged to say nothing. Now let me enumerate again the grievances and disabilities which an Irish dispensary medical officer labours under at the present time, as related to me by one who has been an Irish dispensary medical officer for over 30 years. His first and most pressing grievance is that in many instances the salary is not sufficient to pay the expenses of working the district. Then the law declares him qualified for superannuation but leaves him entirely in the hands of men who are a changing body, liable to be swayed by the transient influences of the moment and who, perhaps, resent a dispensary medical officer as being in the words of a popular M.P., a "blue-blooded official." When such is the feeling of a Member of Parliament towards our dispensary medical officers one can easily guess in what estimation he is held by the rank and file. The dispensary officer becomes sick and tired of the everlasting abuse showered upon his colleagues at the different weekly meetings of the boards of guardians throughout the country and the treatment of the Local Government Board is no better. They heap new duties on their medical officers and when for once a generous and reasonable board of guardians grants an increase of salary they will not sanction it. Then the mode of election is corrupt root and branch. Think for a moment of the position involved in a medical man having to solicit the votes of members of boards when he is fully conscious that the most inexperienced member of the profession who had local or political influence would beat the President of the Royal College of Surgeons for a dispensary or union if he were a candidate for one

The pressing grievances of the service are therefore narrowed down under six heads 1 Insufficient salaries, which should be raised to at least £200 a year 2 Travelling expenses A medical officer ought not to be compelled to pay the travelling expenses incurred in the discharge of his public duties No other service is asked to do so without payment 3 Annual holidays To amend dispensary rule 28 so as to give to medical officers the leave the Local Government Board intended as a matter of right they should have—viz, a full month's holiday in the year 4 Incidence of expense To repeal Clause 6 of the Local Government Amendment Act so as to permit the recoupment from Imperial sources of the full half of the salaries paid to medical officers and not to limit it, as it does now, to the salaries previously paid 5 Superannuation That superannuation to medical officers be paid on the civil service scale and that it should be mandatory and not optional 6 Mode of election This should be placed under civil service rules and each candidate should enter the service by competition after examination

The amelioration of the present conditions rests with yourselves Many of you will be shortly qualified, vacancies occur nearly every week, but I urge you in the strongest manner to refuse to enter a service which imposes such *degradation on its officials, for never before in the history of* Ireland has the service risen as one man to revolutionise old traditions by joining the Irish Medical Association and so enrolling recruits who before were afraid to utter one word of complaint lest dismissal should follow You ought to prefer to break stones on the roadside sooner than enter a service which employs you on starvation terms and the recreants who are now mean enough in face of such warning to compete for dispensaries at a lower salary than £200 a year deserve to be regarded as unworthy of the name of men If they are subsequently treated badly it is only the proper punishment of persons so far forgetful of the duty they owe to their profession and the respect they owe to themselves I am well aware of the responsibilities I incur as President of this College in speaking in such condemnatory terms of a service even though I believe it to be the worst in Europe *But I urge you to stick together Become members* of the Irish Medical Association Be determined and the Government must give way if the sick poor are to be properly relieved and the service is to be made efficient I would also impress on those of you who will soon be qualified the necessity of joining as members

THE ROYAL MEDICAL BENEVOLENT FUND OF IRELAND,

an object to which every practitioner should at once begin to subscribe It is in fact, a form of personal insurance which, like the widow's cruse of oil, will never fail to be of use and advantage None can tell when adversity will overtake them in the form of loss of money or post through ill health or death and it is comforting to know that through your being a subscriber to the Medical Benevolent Fund before such calamity overtakes you the committee will always give your *wife* and children preference Let the *first money* therefore that you earn after qualification be handed to the Royal Medical Benevolent Fund and lay up there a treasure which in need and distress will be at the disposal of those who are near and dear to you

Another piece of advice I will give you The moment you are a member of the profession join a

MEDICAL DEFENCE ASSOCIATION

It only costs 10*s* a year and may be of vast importance to you later in the practice of your profession The value of *insuring against attacks which are often made against* medical men by unscrupulous persons for the purpose of levying blackmail is well known And there is no doubt that if all members of the profession would join the Medical Defence Union many legal actions and many cases of threatening would be done away with A medical man in this city who had a personal charge levelled against him by a former patient was mulcted by a large amount in defending his character against an unfounded charge If he had been a member of the Medical Defence Union the case would have been taken up by its solicitor and defended by its funds Members of the profession are liable at any moment to be assailed by the attacks of evil disposed persons and it behoves all those who value their reputation to prepare for, and to insure against, such a contingency

ABSENCE OF STATE RECOGNITION FOR THE PROFESSION

We must also continue to fight against ignorance and misconception until the general masses are educated to understand the social position which the profession and its members ought to occupy One depreciating influence is the absence of suitable State recognition for the leaders of medicine and surgery In the constitution of our governmental system there should be (and it is *imperatively called for) the appointment of a Minister* of Health or Sanitary Science who should occupy a seat in the Cabinet only to be filled by a physician or a surgeon of eminence and ability, not bestowed upon some worn out practitioner when his energies are effete and his brains are past their work My suggestion may be utopian but if England intends to take a creditable place in the future among the great nations of the world she will set her house in order, for government in the present day and government a hundred years ago are very different matters Scientific medicine must and will take an exalted position in the world when the component parts of the great ship of State are properly constituted The profession of law with its legal peers and lord chancellors, the army and its military lords, and the Church with its spiritual peers must, in justice make room for their Cinderella sister—Medicine *Therefore, the Minister of Health and Sanitary Science* must be an appointment in the near future I presume that there is no one among us who will doubt my assertion that the entire community from the peer to the peasant stands indebted to scientific medicine and surgery Have not all our investigations from the earliest times been directed in the most unselfish manner for the preservation of man's best interests—viz, health and the alleviation of human suffering? Again, the Privy Councils of England and Ireland have been largely composed from time immemorial of lawyers, judges, military men, divines, and peers of the realm, but medical men have been omitted from the list of these supreme advisers *of the executive* Would anyone with a grain of sense give the reason of this? Why should the leaders of our profession not be entitled to be right honourables as well as many other men far inferior, it *may be, to them in birth, position, and scientific attainments?* On what grounds are we excluded as a class? *Simply, I would say, because we as a body have been over*modest in asserting our claims for public recognition as exponents of sciences that are yearly becoming more and more important to the well being of the community

I have mentioned the word "ideal" in describing a physician, let me tell you in a few words what I mean by the term The profession of a medical man is a noble one and should ennoble those who practise it, deepening the sympathies and idealising the life No man knows better the frailties of his *fellow* creatures than the practitioner—no man has more reason perhaps to think pitifully or severely or even contemptuously of mankind But there is no man more broad in his charity, more lenient in his judgments, than the ideal medical man He bears everything, yet he betrays no confidence In many families the medical man is held in as great love and reverence as the priest He is with them in trouble and in joy and from his lips issue the fiats of life and death He must bend his ear to catch the first wailing cry when the infant takes up the burden *of life* and *the last tired sigh* when the old man lays it down He has to wrestle with the great foe of humanity at every turn, to him the blanched mother may owe her fluttering life when giving birth to another, it is he who when friends are paralysed with fear of contagion, must face the hideous features of cholera, *typhus fever and small pox*, he must show a calm front to the demands made upon his vital energies and the exaggerated expectations formed of his power to aid, while science itself stands humbled and impotent in the presence of death With all his deep learning the ideal medical man is modest, with all his knowledge of the world he is tolerant he is wise as well as witty gentle as well as powerful a tower of strength to the weak, and ever on the alert to shield the reputation of a brother practitioner It is a life of splendid opportunities for good if lived as the ideal physician may live it and it is open to you all to aspire at least to that ideal

Grievance No 5, control of sick berth staff.—The principal medical officers of naval hospitals have no power to deal with breaches of discipline on the part of the sick staff that serves under them. An inspector-general, who is supposed to rank with a rear admiral, before he can get a man punished has to report him to the executive authorities of the local depôt and much time is wasted before the charge is heard or the offender punished. Surely the sick bay staff ought to be under the control of the naval medical officer just as the men of the Royal Army Medical Corps are under the control of their officers in the same corps.

Grievance No. 6, medical guard.—It is the recognised custom in the present day where two or more ships are in harbour together for the naval medical officers to take it in turn day about to keep medical guard. This means that a medical officer of the ship having the medical guard has to remain on board his ship to be ready to go to any emergency case in any of the other ships in harbour. Although this is practically the custom and works admirably, still it is not as yet embodied in the King's regulations and the result is that some captains still insist on always having one of the two medical officers belonging to their ship on board, although the medical officer of the guard is close alongside and capable of being on board in five minutes on signal being made for him. To be kept on board every alternate day for the whim of an individual captain is very galling, more especially as it is only done in one or two ships in a fleet. To obviate this grievance it should be clearly laid down in the regulations that medical guard is to be recognised in all ships.

There are many other petty disadvantages which irritate the naval medical officer that a little re-arrangement could easily remedy without any loss of discipline or efficiency. For instance, there is no encouragement of individual responsibility at medical surveys. An inspector-general ranking as rear-admiral is forced to sit under the presidency of a post-captain or even a commander who is years his junior in service. Of course, I do not wish to deny that the captain should command his own ship, but I do think that if the status and position of the naval medical officer are to be upheld he should have entire control of the sick and the sick-berth staff and should be able to punish them for breach of discipline in their special work should necessity arise, the same as in the Royal Army Medical Corps. A new set of regulations has just been issued and some of the matters I have complained of have been remedied, but many grievances still exist which, if not removed, will act as a barrier to the entrance of efficient men into the service. The present Director-General, Sir Henry F. Norbury, K.C.B., has done more to improve the service than any of his predecessors. I know he has the interests of the service at heart and is only too anxious to see his branch brought into efficiency and popularity, but I have no doubt that when he suggests improvements he is stopped by the Treasury which will not sanction any improvement that costs additional money. The Government yearly expends millions on the building of warships intended to inflict death and suffering on our fellow men. How much more in the cause of humanity should they be willing to expend a few thousands on a branch of the service whose mission it is to prevent, or to cure, disease and to alleviate the suffering inflicted by shot and shell on their fighting men. If the distinguished Director-General, Sir Henry F. Norbury, fails to induce the Admiralty and the Treasury to amend these grievances by mild expostulation these authorities will be forced in the long run to yield because men will not go into a service where discontent and injustice are maintained. In the end the Admiralty will have to follow the example of the army and at once accede to the views of an energetic and independent civilian advisory board constituted on the same lines as the Royal Army Medical Corps but called in the navy the Medical Consultative Board. The Royal Army Medical Corps now gets plenty of well-qualified candidates but in the Naval Medical Service there is a deficiency of over 50 surgeons. But I hope before long to see all these grievances mentioned removed and good and efficient men once more induced to enter it. I would now like to say a few words about another service which has somewhat grown into disfavour.

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Recrudescence is a different clinical condition. I regard it as an abortive attempt at a relapse. The fresh access of febrility is sudden, often alarming, but as a rule evanescent, lasting only three or four days at most. It occurs somewhat like this. The patient has been slowly recovering in strength, the temperature has been at or below the normal line for some few days, when an evening observation by the nurse discovers a temperature of, say, 102° or possibly 103° F., and the medical attendant is summoned. The constitutional symptoms are not commensurate with the degree of febrility, so much so that one at first seems sceptical about the thermometrical record and imagines that an error has been made. But on placing the thermometer again it is found that it still records the febrile temperature, that the skin is pungent, that the tongue is somewhat dry, and that the pulse and respiration are somewhat accelerated. The patient is again placed on his fever diet and regimen and in a few days the temperature falls to the normal line, the descending curve during the last 24 hours being often as precipitous as was the ascending one recorded on the evening from which the recrudescence dated. These recrudescences are most interesting clinical phenomena. They bring alarm in their train notwithstanding that our knowledge tells us that there is no great danger. But their chief interest possibly lies in the speculation as to their causation. I have most frequently noted them in those cases in which constipation was a marked feature during the decline of the fever. This constipation may continue into the apparently convalescent stage, and in order to counteract the distress which the loaded large intestine affords the practitioner has probably, and quite justifiably (if I may offer a criticism), prescribed an enema or a dose of castor oil. The evacuation which results is often followed by a sudden and abrupt rise in temperature. So frequent is this observation that many of my house physicians have already noted it and verified the accuracy of this clinical phenomenon. The actual cause or rationale of this recrudescence is not so easy of explanation. For my part I have always regarded it as due to a disturbance of the fæcal masses in the large bowel, by which peristalsis is increased in the whole of the intestinal canal and new toxins are liberated. The toxins produce a temporary or abortive febrility, the patient being practically immune owing to the recent attack of fever through which he has passed. One may compare it to the slight local irritation and constitutional disturbances which occur when the vaccine virus is inserted into the blood of a person already protected by previous inoculation.

Grave symptoms.—It is obvious to all of us that great difficulty must present itself in the subject of prognosis. The disease in one individual may apparently be running a mild course when the sudden onset of severe hæmorrhage places the patient in jeopardy. Another case may have passed through a severe initial attack and when recovery appears in sight a relapse occurs which terminates fatally. But so far as my observations go I would ask you to bear in mind three symptoms, any one of which occurring during the course of the fever should lead us to regard the case as one of considerable gravity. I refer to tremors, delirium, and a persistently high evening temperature (from 104° to 105°). Of course, I am disregarding for the moment the catastrophe of perforation. Muscular tremors, denoting as they do intense exhaustion, are also associated in my mind with deep ulceration of the intestine. This I have verified in a goodly number of post mortem examinations. It may be that the intense exhaustion and the muscular tremors are but indications of the severity of the intoxication and therefore of the consequent deep ulceration. But I am convinced that marked tremor is an indication of extensive destruction of intestinal tissue. Delirium also I regard as an unfavourable sign, especially when it occurs during the day as well as through the night. This is a comparatively rare symptom in our wards unless the case be a very severe one. It is recorded more frequently in German clinics and is one reason why our visitors from the continent regard the type of typhoid fever as seen in their cities as more severe than that in London. A persistently high evening temperature is also a symptom of gravity. Without going into figures I will only give you this experience—viz., that in patients who have presented at any date during the course of their illnesses a temperature of 105° and upwards the death rate is very high. Many (happily not all of them) die either during the primary fever or during a relapse to which they apparently are prone, be we as careful as we may.

A low reading of the temperature requires a few words. It is obvious to you all that if the index of the thermometer shall have been shaken down below "normal" temperature there can be no error in a high reading, whether it be 103° or 106°. Heat alone will cause the mercury to rise to this height, always supposing the instrument is in good repair, that it has been properly laid, and that the patient has not played any tricks with it. I am now thinking of the manipulation that a hysterical woman may perform. So I repeat high readings of the thermometer, though they may occasion us surprise and even alarm, may be regarded as correct. On the other hand, there may have been some fault in the observation which records a subnormal temperature.

But given an accurate reading of the thermometer which tells you that there has been an abrupt, almost precipitous, fall in the temperature during an attack of typhoid fever one should be on the look out for perforation or hæmorrhage. Severe diarrhœa may also produce a similar fall. The inquiry about the last condition will be quickly answered by the nurse or attendant. Six or more evacuations during, say, 12 hours would attract the remarks of the most careless [illegible]sy to diagnose; and beyond [illegible] of low tension, we would [illegible] upon the exclusion of the other two causes; for you must bear in mind that a hæmorrhage of a severe character even may be occurring in the ileum, in a site possibly seven feet away from the anus, and that it may not discover itself in the evacuations until 24 hours afterwards.

Perforation is not easy to determine, for many of the classical symptoms, such as the pinched, drawn face, acute tenderness, and a thoracic type of respiration, may not be present. But given a sudden fall in the temperature during the third week of fever and having excluded the other possible causes thereof, it behoves us carefully to consider whether perforation may not have taken place, more especially (and this is a point of some importance) if the pulse-rate falls in ratio to the temperature, if its tension becomes suddenly diminished and tends to dicrotism, and if these signs are followed by the phenomena of reaction or rebound to febrility. Then we may assume with some certainty that perforation has occurred and the patient should pass from our care into the hands of the surgeon with as little delay as possible.

Diagnosis of typhoid fever in its earliest stages is notoriously difficult, especially if the attack is a mild one, and most especially in young children. We are accustomed in cases presenting obscurity of diagnosis to fall back on the Grünbaum Widal reaction as an aid to diagnosis. There are in my mind three objections in this method of diagnosis. Firstly, it may fail in its indication even in true cases of enteric fever; secondly, the reaction may be present even though the case should not turn out to be enteric fever; and [illegible]ld always look for this [illegible] The opportunities for [illegible] at hand, at least so [illegible] is concerned, and in addition I strongly deprecate the training of young practitioners to depend on this line of diagnosis. The danger ahead of us is that we may produce a race of medical men who will only make a diagnosis by the help of a syringe, a pipette, and a microscope, and that those excellent characteristics of the older practitioner which have hitherto been the pride of British physicians—the clinical perception and practical knowledge of disease—may be lost in future generations. I would therefore tell you as my experience that one should suspect typhoid fever if there shall have been five days of continued remittent fever with the characteristic daily rise in the temperature curve, even though other symptoms be indefinite.

Treatment demands a few words in conclusion. The diet sheet is the most important factor. During the course of the fever we are accustomed to order beef-tea or other liquid proteid foods freely, but I exclude milk except in small quantities, as it tends to produce, especially if given alone, constipation and large bulky stools. I am also in favour of boiling green vegetables and rice with the animal broth or soup. taking the precaution of having the vegetable matter boiled to a pulp and subsequently strained so as to reject any husks or stringy particles. This bouillon may be given freely and in amount equivalent to half a pound of lean beef per diem. Salt, of course, should be added.

I have not been accustomed to prescribe any drug with a view to disinfect the intestinal canal. I have tried such treatment with salol and other supposed intestinal disinfectants, but so far without success. Nor do I wonder at this, for considering the area of infected bowel and its distance from the stomach it is obvious that any disinfectant which shall hold out any hope of success must be given in doses so large as to constitute in themselves sources of danger and of complications. In addition, after the tenth day and probably earlier, the patient is suffering, not so much from a local lesion or inoculation as from a constitutional disease—a septicæmia, in fact. But there is one method of medication which I have seen most successfully practised by my old friend Dr. John Harley and which we have generally adopted with satisfaction. I refer to the administration of grey powder. My experience is entirely clinical and I am speaking, therefore, only from a clinical point of view. I have found the best results accrue from the prescription of pulvis hydrargyri cum cretâ, two grains three times a day. This is for an adult; a child will require a relatively diminished dose. The effect of this treatment, which was introduced by Dr. Harley before the days of antisepsis, is to secure a regular flow from the bowels; it does not produce diarrhœa and, on the other hand, it obviates constipation. Whether the mercurial preparation has any antiseptic action on the bowel it is difficult to say. Possibly it has and if so its merit in this direction is enhanced by its administration from the earliest days of the fever.

One gentleman has asked, "What constitutes diarrhœa calling for special treatment?" My reply is that anything over six evacuations per diem calls for active measures. I would in this condition advise morphia by the mouth or a starch and opium enema. I am convinced that many of us are somewhat frightened at the use of opium. I am sure that it has saved a goodly number of lives, if only from its sedative action. And I would put it to you tersely, when I say to you "that the indications for opium as a rule outweigh those against it." The presence of albuminuria is its chief danger and indeed its imperative contra-indication.

St. Andrews Graduates' Association.—At a general meeting of the association held on Nov. 5th it was unanimously agreed that the association having fulfilled the objects for which it was instituted should be dissolved and that the balance standing to its credit should be equally divided between the British Medical Benevolent Fund and the Royal Medical Benevolent College, Epsom.

London School of Tropical Medicine.—The Craggs research prize for the best piece of original work don[illegible] the current ye[illegible] or past students of [illegible] been award[illegible] Castellani for his [illegible] to the etiol[illegible] ing sickness. Our [illegible] ber that [illegible] isolated a trypano- [illegible] with sl[illegible], having demon- [illegible] ence in the [illegible] fluid as well as [illegible] Dr. Traver[illegible] competed for the [illegible] awarded h[illegible] [illegible]

ABSTRACT OF

An Address

ON

THE DAWN AND RISE OF PHYSIOLOGY.

Delivered at the Opening of the Session 1903-04 at the Owens College, Victoria University of Manchester,

By WILLIAM STIRLING, D Sc, M.D. Edin.,
PROFESSOR OF PHYSIOLOGY AND DEAN OF THE MEDICAL FACULTY OF OWENS COLLEGE.

Professor Stirling began his address by entering a plea for the establishment of a lectureship in the history of medicine in the University of Manchester. The early history of physiology, he said, was so interwoven with that of medicine and speculative philosophy that it was impossible to study the one without the other. Recent investigations in Egypt had shown that more than 5000 years ago there were physicians and hospitals established under the Pharaohs. The recent work of Dr. R. Caton of Liverpool had helped to make them more familiar with the ritual and practice carried on in the old Grecian temples, more especially of that of Epidaurus in the Argolian Peninsula which was supposed to have been the birthplace of Asklepios himself. The temples were usually situated in some healthy locality well protected from the prevailing winds, near and yet sufficiently remote from towns, and they were also usually placed near a spring of water. They were at once sanatoriums and medical schools. The physicians, however, were a close corporation and their secrets were transmitted from father to son. Hippocrates, on the contrary, taught openly and was the first to free medicine from the bondage of the sacerdotal ritual. He looked for natural causes for disease. Aristotle might be regarded as the founder of comparative anatomy and comparative physiology. The foundation of the Alexandrian School marked an era in the history of physiology. Under the Ptolomies great encouragement was given both to anatomy and experimental physiology. Alexandria was one of the schools in which Galen studied. As long as the study of human anatomy was practised by dissection of the human body and experiments were made on animals the school maintained its high reputation. With the decline of both came the decline—gradual, but sure—of its fame as a school of medicine, until its final extinction, when the city was captured by the Saracens in 640. Even Cleopatra must not be forgotten, for she induced Mark Antony to transfer the famous library of Pergamos to its rival Alexandria after the burning of the great library of the museum when Cæsar's ships took fire in the harbour. The experimental physiologists in the early days of Alexandria were Herophilus and Erasistratus The former, who flourished about 300 B.C., was the first experimental physiologist. His experiments on animals, however, were not carried out on any systematic plan.

Alexandria was an admirable example of a great commercial city where the sciences flourished and great advances were made in human knowledge. It was a great mistake to suppose that art, science, and literature could not flourish in great commercial centres. All ancient history attested the fact and the recent foundation of new universities in the great centres of industries at the present day was a striking proof to the contrary. The first great scientific societies also were founded in Florence and in London. The next school that had a European fame was that of Salerno. St. Benedict founded the monastery of Monte Cassino in the sixth century, and some time thereafter at Salerno there rose an institution the fame of which lasted for several centuries. At first its teachers were chiefly clerics and there were also many Jews as *magistri*. It lay on the highway of the Crusaders on their way to and from Palestine. By the eleventh century its fame was so great that Duke Robert, second son of William the Conqueror, was stated to have sought the advice of its physicians on his way home from the Holy Land. He had a wound with a fistulous opening in the arm which did not heal. The halo of romance hung round the figure of Sybil, the wife of Robert, who was described as having sucked the wound while her husband was asleep.

It was supposed to be a poisoned arrow wound. Salerno was also distinguished as being the first *schola* to admit to its privileges and honours members of either sex Its practice and its precepts as recorded in the famous "Regimen" seemed conservative to a degree, so that its liberality in the admission of women to its honours was the more remarkable One Constantia Calenda achieved considerable fame Salerno was the first *schola* to insist upon candidates pursuing a definite course of instruction before they obtained their degree The examinations dealt with "verba" rather than "acta" Galen's "Therapeutics" and the first book of Avicenna, the "Aphorisms" of Hippocrates and the "Analytics" of Aristotle were the staple Before obtaining a qualification candidates were required to be 21 years of age They were required to study arts and medicine for seven years A would be surgeon was required to study anatomy for a year The oath was quite unlike the old Hippocratic one Everyone to whatever degree admitted, had to swear "that he would take no fees from the poor nor have any share in the gains of the apothecaries A book was put into his hand, a ring upon his finger, and a crown of laurel upon his head, when he was dismissed with a kiss from the learned doctors"

The rise and development of the earlier universities of Paris, Bologna, and others were then considered The work of Mondinus, the earliest work on anatomy to be illustrated by means of woodblocks, was compared with that of Vesalius The lecture was illustrated by lantern slides copied from the oldest writers on anatomy and physiology

THE ANÆMIAS OF INFANCY[1]

BY CLIVE RIVIERE, M D, M R C P LOND,
ASSISTANT PHYSICIAN TO THE EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL PHYSICIAN TO OUT PATIENTS AT THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST

IN the first two years of life anæmia of a slight grade not infrequently shows itself, mostly in association with rickets, but every now and then cases of more advanced anæmia present themselves and, on account of certain peculiarities with which these cases are associated, they have had a separate label assigned to them and generally go by the name of "anæmia splenica infantum" Whether these cases belong to a class by themselves, and whether they have any claim to be considered a specific blood disease, we will discuss later Let us first review them as they stand

I have tabulated the blood conditions found in the 13 cases which have come under my notice, but space does not permit me to describe their symptoms in detail, I can only give a short *résumé* of those features which they presented in common The clinical picture which they exhibit is closely similar in all the individual cases

A child most often between the ages of nine and 18 months, is brought for advice because it has been gradually losing colour and flesh and has become listless and apathetic Occasionally the enlarged abdomen or even the splenic tumour, is the first thing noticed The onset has been insidious there is always a history of digestive distur[illegible] child is nearly always hand fe[illegible] On examination the child [illegible] with a lemon yellow, waxy skin, it is poorly nourished and its muscles are exceedingly flabby and toneless There is nearly always rickets and that generally of a marked grade The heart is somewhat dilated and there is often a soft systolic murmur at the apex or a hæmic murmur at the base The abdomen is protuberant and tympanitic, the spleen is enlarged and firm, at times reaching nearly to the crista ilii, I have never felt a friction rub over it The liver is large and rather firm, generally reaching one or two fingers' breadth below the costal margin During the course of the illness the temperature shows irregular fluctuations, raised at night and normal or subnormal in the morning though periods of apyrexia may intervene The bowels are opened many times, sometimes seven or eight in the 24 hours, the stools are often greenish and offensive, occasional vomiting is not uncommon A hæmorrhagic condition in my experience is not common, even in fatal cases, only one of my own cases showing such, and that to a slight degree The condition recovers if slight, or if more severe improves under careful treatment, but tends to relapse and the child often lingers a considerable time till a complication, either broncho pneumonia or one of the infective fevers, leads to a fatal issue

This represents an outline of the condition, but within this several interesting points occur and must be separately dealt with First, the condition is distinctly more common among Jewish than other children, perhaps I should qualify this and say Polish Jews, as most of my cases, and indeed most of the East end Jews, belong to this nationality For this reason the disease is the more difficult to study as post mortem examinations are rarely to be obtained and the mothers are often with difficulty persuaded to leave their children for hospital in patient treatment It has been noted by some observers that twins are not infrequently affected, among my own cases neither twins nor, indeed, multiple cases in one family have occurred With regard to the grade of rickets present, this has generally been very marked and more especially has the cranial bossing been out of all proportion to any I have seen elsewhere and was present in marked degree in half my cases This has been before remarked upon by Dr J S Fowler[1] in a paper read before the British Medical Association in 1900 In some of my cases there was also associated with this bossing some craniotabes in the occipital region, and these two conditions occurred apart from any syphilitic taint In only one of my cases was congenital syphilis present Enlarged glands are described by many observers, in only two of my cases were they present and they appeared to exert no influence upon the proportion of lymphocytes in the blood nor on the course of the disease The disease is found in both sexes, in my own cases females preponderated in the ratio of 2 to 1, but it does not seem probable that this is more than an accidental difference Jaundice may occur during the course of the illness Fowler[2] records three instances among his cases In one of my cases it was described in the history I have since seen it in a case not included in my series; in this case it was obstructive in character and probably represents an accidental complication due to the gastro-enteric catarrh When we speak of the gastro enteric catarrh it brings us close, I think, to the etiology of the diseased condition in most of the cases We will therefore postpone its consideration for the present

The Blood

The results of the blood examinations made in my cases are shown in the accompanying table The counts were done with a Thoma Zeiss apparatus, the hæmoglobin was estimated with von Fleischl's instrument, and the differential counts were made from films stained with Ehrlich's triacid stain after fixing with heat

Red Cells —The red cells varied from 1,870 000 to 3,720 000 per cubic millimetre on first examination, the majority being just under 3 000 000 From this they rose to normal under observation in a few cases The colour index was always below the normal which is about 0 8 in infancy, a common figure was 0 5 or 0 6 When improvement took place the red count and the hæmoglobin generally rose together, leaving the colour index unaltered The red cells showed much variation in size very many cells smaller than normal and a few larger being present Less alteration in shape was observable [illegible] generally be seen even wit[illegible] formed a striking [illegible] did not appear to bear any relation to the proportion of red cells present The number falls noticeably as a case improves Of these nucleated red cells a large proportion, from 20 to 40 or 50 per cent., were megaloblasts A few microblasts were also present. The proportion of megaloblasts seemed to bear no relation to the severity of the case, nor does this proportion sensibly decrease or alter when improvement takes place Their numbers are then reduced in the same ratio as the normoblasts

Leucocytes —The number of leucocytes varied between 5000 and 38 000 per cubic millimetre in my cases. All numbers between these two extremes were represented except that they were mostly above the normal 10 000 to 12,000 per

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[1] A paper read before the Royal Medical and Chirurgical Society on Nov 11th, 1903

[1] Fowler Brit Med Jour, vol ii, 1902 p 694

[2] Ibid

TABLE GIVING THE RESULTS OF THE EXAMINATION OF THE BLOOD IN 13 CASES OF INFANTILE ANÆMIA.

No. of case.	Sex.	Age in months.	Date.	Red corpuscles.	Percentage of hæmoglobin.	Colour index.	Leucocytes.	Percentages of							Number of leucocytes counted.	Nucleated red cells per 100 leucocytes.	Percentages of varieties of nucleated red cells.			Remarks.
								Small mononuclears.	Large mononuclears.	Myelocytes.	Eosinophilous myelocytes.	Polymorphonuclears.	Eosinophiles.	Basophiles.			Normoblasts.	Megaloblasts.	Microblasts.	
1	F.	17	1901. April 12th.	2,680,000	38	0·7	22,000	57·5	8·0	8·0	—	26·5	1·0	—	100	5·0	—	—	—	Died on April 20th, 1901.
2	F.	14	June 8th.	2,950,000	40	0·7	5,000	44·5	13·0	10·0	—	32·0	1·0	—	200	5·5	—	—	—	Discharged with varicella; ? result.
3	F.	9	July 24th.	2,890,000	30	0·5	27,000	45·2	16·2	7·6	0·2	30·6	1·2	—	500	10·0	—	3·8	—	Died on Sept. 10th, 1901.
			August 6th.	3,180,000	30	0·4	10,000	29·5	16·0	21·5	1·5	28·5	3·0	—	200	20·0	—	4·5	—	
4	F.	18	,, 8th. (out-patient).	3,200,000	25	0·4	7,000	54·5	5·75	7·0	1·0	30·25	1·5	—	400	2·0	—	—	—	Patient lost sight of.
5	F.	14	August 10th.	—	—	—	—	39·6	14·6	5·0	0·4	39·4	1·0	—	500	6·0	—	2·0	—	—
			,, 12th.	2,890,000	35	0·6	37,000	—	—	—	—	—	—	—	—	—	—	—	—	
			Oct. 15th (out-patient).	5,857,000	66	0·6	27,000	54·7	8·2	3·4	—	33·3	1·29	—	500	5·8	—	—	—	
6	F.	8	Nov. 19th (out-patient).	1,895,000	20	0·5	12,600	18·0	15·2	4·8	0·4	59·2	2·4	—	250	2·4	—	—	—	Died in April, three weeks after leaving hospital; ? diphtheria.
		10	1902. Jan. 12th (in-patient.)	2,630,000	30	0·6	15,000	31·2	13·6	11·0	0·4	42·7	1·0	0·5	550	9·0	63·0	35·0	2·0	
			Jan. 29th.	3,680,000	50	0·7	14,000	43·7	10·0	6·0	—	38·3	0·3	1·7	300	8·0	91·0	4·5	4·5	
			Feb. 19th.	4,140,000	65	0·8	9,000	22·2	26·0	4·7	—	46·6	0·7	—	320	3·7	75·0	25·0	—	
			,, 26th.	4,430,000	55	0·6	12,000	35·0	33·0	3·7	—	27·0	0·57	0·9	350	3·7	23·0	77·0	—	
			March 6th.	4,820,000	60	0·6	10,000	45·7	3·5	0·96	—	38·7	0·4	0·8	519	0·4	50·0	50·0	—	
			,, 12th.	4,310,000	60	0·7	14,000	44·4	23·0	1·6	0·3	27·1	—	0·6	376	0·8	70·0	30·0	—	—
7	M.	15	Dec 23rd, 1901. (out-patient).	4,300,000	37	0·4	8,000	51·8	7·5	1·5	0·3	36·7	0·9	1·2	—	? 2 extruded nuclei seen.	—	—	—	Recovered.
8	F.	21	1902. April 30th.	3,580,000	25	0·4	8,000	52·7	22·0	1·0	—	23·3	0·7	0·3	300	1·3	75·0	25·0	—	—
9	M.	14	May 1st.	—	20	—	—	40·0	11·0	5·0	—	38·0	0·5	4·0	200	8·5	80·0	20·0	—	Died on May 26th; post-mortem examination.
			,, 12th.	3,500,000	25	0·4	33,000	40·6	13·25	3·5	—	39·5	1·0	2·0	400	15·5	64·5	32·2	3·3	
			,, 21st.	3,750,000	23	0·3	38,000	30·25	13·0	7·25	—	47·25	0·7	1·5	400	9·0	60·0	35·0	5·0	
10	F.	9	July 21st (out-patient).	1,870,000	15	0·4	17,000	39·0	13·3	7·3	5·3	32·7	2·0	0·3	300	13·0	64·0	13·0	23·0	—
			Oct. 16th (out-patient).	2,260,000	? 50	? 1·1	15,000	40·0	20·0	3·0	0·7	34·6	1·0	0·7	300	4·0	58·0	42·0	—	
			— (out-patient).	2,370,000	35	0·7	17,500	—	—	—	—	—	—	—	—	—	—	—	—	
11	M.	15	Sept. 11th.	3,560,000	40	0·5	? 6,000	42·0	10·8	16·4	1·0	29·0	0·4	—	250	13·2	49·0	42·0	9·0	—
			,, 18th.	5,650,000	55	0·5	22,000	57·0	13·0	4·8	1·0	21·8	1·8	0·5	40	6·5	46·0	46·0	8·0	
			,, 29th.	5,330,000	55	0·5	13,500	53·0	8·0	2·8	1·6	32·5	1·25	0·6	320	6·5	47·6	38·0	14·3	
			Oct. 29th. (out-patient).	4,550,000	? 60	0·6	10,000	47·0	12·6	2·0	0·3	35·4	1·4	1·0	350	4·3	53·0	47·0	—	
12	M.	13	Oct. 24th.	3,720,000	50	0·7	20,000	42·0	13·0	3·0	0·3	40·0	0·3	1·0	350	23·0	63·7	23·7	12·6	—
			March 20th, 1903. (out-patient).	4,910,000	60	0·6	12,000	—	—	—	—	—	—	—	—	—	—	—	—	
13	M.	31	Nov. 7th, 1902. (out-patient).	—	—	—	—	42·0	5·5	1·0	—	50·0	—	1·5	200	1·0	100·0	—	—	—
			Nov. 14th, 1902.	2,260,000	30	0·7	16,000	—	—	—	—	—	—	—	—	—	—	—	—	

cubic millimetre of healthy children The differential count in these cases presents considerable difficulty. First, among the non granular cells it is very difficult to make any useful division into large and small, as should be done, of course, *if we accept Ehrlich's conclusions as to their quite different* origin. As a matter of fact, in this condition there is every grade between the smallest and the largest, the difficulty being caused by the occurrence of large forms of lymphocyte difficult to separate from the normal large hyaline cell. For this reason I fear the division attempted in my table between them is purely arbitrary and it would perhaps lead to less error had they been grouped together. Another difficulty in some cases is in deciding between small myelocytes and polymorphonuclears, as transitional forms often appear which quite baffle classification. This probably accounts for the rather various myelocyte counts of different observers. The leucocytosis in these cases affects as much the lymphocytes as the polymorphonuclear cells, so that with an increase in absolute numbers they keep their relative proportions or thereabouts. It must be remembered that in infancy the proportion of lymphocytes is greatly in excess of that in adult life and they normally represent at least 50 per cent. of the leucocytes present This may be due to the greater activity of lymphatic structures in infancy and early childhood. The eosinophiles increase or remain normal in this diseased condition as a rule, so that the proportion to the other cells is little changed. Mast cells are found but the detection of these with the triacid stain is so unsatisfactory that I do not claim much accuracy for the percentages assigned to them in my table. Besides these normal cells, in which a general increase occurs, an abnormal visitor, the myelocyte, appears in proportions varying from 1 or 2 to 20 per cent , 4 or 5 per cent. being a common find. Occasionally these cells are found bearing large granules, eosinophilous myelocytes, and in one of my cases as many as 5 3 per cent of these appeared in the blood on one occasion.

And now, are we or are we not dealing with a specific blood disease? The best answer to this is another question. Is there any other form of marked anæmia recognisable in infancy? The answer I should make to that is—No. I have never seen it, have never found a description of such, and see no reason at present to believe in its existence. If cases of marked anæmia of quite another type do exist in the first two years of life they are very rare and must represent some specific blood change, for the common anæmia of infancy is that which progresses, when severe, to the picture of a so called "anæmia splenica infantum." May I here remark that the age of two years which I have fixed as the limit of infancy is, so far as anæmia is concerned, no arbitrary point of time as might at first sight appear, for above this age the infantile anæmias rapidly disappear and examples of the adult anæmias begin to be recorded.

The marked anæmias of obvious causation, such as congenital syphilis, show all the changes claimed by some as peculiar to anæmia splenica infantum. I have at the present time under observation an infant, aged four months, suffering from congenital syphilis of unusually severe type. It presents to observation an interesting double picture: its "obverse" shows a typical severe syphilis with baldness, *café au lait* skin, rash, snuffles, &c ; its "reverse" depicts an anæmia splenica infantum The spleen and the liver are enlarged, as we should expect; examination of the blood shows 1 590,000 red cells per cubic millimetre with 30 per cent. hæmoglobin, and 10,000 white cells per cubic millimetre, the differential count of which is as follows: polymorphonuclears, 30·4 per cent.; small mononuclears, 35 per cent ; large mononuclears, 11 per cent ; eosinophiles, 5 per cent.; *myelocytes, 17 per cent; and eosinophilous myelocytes,* 1 6 per cent. There are 3·2 nucleated red cells to every 100 white cells and of these more than a third are megaloblasts Johann Loos[4] examined 16 cases of anæmia due to congenital syphilis with a similar result. All showed the blood changes characteristic of the so-called "anæmia splenica infantum," and Charles Luzet[5] describes similar changes in cases of anæmia following epidemic diarrhœa.

I would opine, then, that anæmia in infants, when sufficiently severe, always presents the peculiarities seen in these cases, the peculiar appearances noted in the blood and the enlargement of the spleen and the liver; or, to transpose it, that "anæmia splenica infantum" spells merely severe anæmia occurring in infancy, its peculiar characteristics being due to the "infancy" factor rather than the "causation" factor. If this is so we should expect to find all grades of anæmia from the slightest passing insensibly into the more *pronounced condition; and this I hold that we may do*—every grade in the anæmia, every grade in the splenic enlargement, and every grade in the blood peculiarities from one myelocyte and one erythroblast in a differential count up to the large percentage of both found in the more advanced cases The blood changes depend on the age of the child, not on any peculiar reaction to a specific causation. It must be admitted that though every grade may be found it is not so easy in practice to produce cases in intermediate stages, for this reason—either the anæmia clears up rapidly or it rapidly reaches an advanced stage, and once there a vicious circle, presently to be described, is set up and the patient remains for months in the condition described as anæmia splenica infantum. It is difficult to say at what stage the nucleated red cells, myelocytes, &c., appear in the blood, though I believe the anæmia must be fairly advanced before this occurs. Cases occasionally appear in which fairly marked anæmia is found without these blood peculiarities and such cases may be brought forward by some and contrasted with certain cases of so-called anæmia splenica infantum in which the anæmia is only slight but the blood contains nucleated red cells and myelocytes, to prove the specific character of these changes. I think the real explanation is that these first cases have not yet reached the stage at which the blood peculiarities begin and the cases with which they contrast them are anæmias which have been severe but are then recovering, the peculiar blood appearances remaining long after the anæmia has reached a quite mild grade.

And now, having denounced the specific causation of the condition, we are left to grapple with its etiology. I have already claimed indirectly that many causes may produce its peculiarities, being merely those of severe anæmia in infancy, *and it seems probable that the proportions of those various* factors which go to make up these peculiarities vary somewhat according to the causation at work. Indeed, it may be possible at some future time to determine this causation by slight variations in the symptoms present. I have mentioned syphilis as a cause but this, though occasionally present, is certainly not accountable for the bulk of the cases. I have already alluded to the gastro-enteric catarrh accompanying and preceding these cases and this is, in my opinion, the prime cause of severe anæmia in infancy and this cause can generally be traced back one step further—namely, to injudicious feeding Of course the diarrhœa and vomiting will, by those who regard the disease as a specific anæmia, be considered only as part of the disease or as common complications thereof. I admit that once established the anæmia, being a great causative factor of intestinal catarrh, *tends to keep this going. Each reacts upon the other and* this is that "vicious circle" to which I have alluded above; but I hold that in most cases some catarrh can be shown to exist before the anæmia commences. Once this vicious circle is established it is difficult to prevent the downward progress of the case and it is this, I think, which tends to make rather a sharp line of demarcation between these cases of severe anæmia and the slighter grades in infancy; once a certain point is reached recovery is very difficult and they remain a long while *in statu quo*, the ready prey to those complications which so often hurry on the fatal issue. On the other hand, if this point is not reached they tend to recover rapidly and so the stages between are not largely represented clinically.

Among my own cases gastro-intestinal disorders formed an almost constant factor and they generally preceded the disease by a considerable interval Only one of my cases had been breast-fed throughout; the others had been so fed generally for the first few months, just long enough to bridge over the time at which marasmus so commonly occurs. Occasionally they had not been breast-fed at all. In all cases the subsequent feeding had been of a most undesirable nature. Among the Polish Jews, from whom more than half my cases come, breast-feeding is the rule and when this fails, as, fortunately for them, it seldom does, they have even less idea of hand feeding than English mothers in the same class of life. This is sufficient, I think to account for the excessive proportion of Polish Jews among my cases, but to it may be added the fact that slight grades of anæmia also are very common among these children and seem to be very readily produced In the first few months of life gastro-intestinal catarrh leads to marked wasting, but in the later months of the first year, when the disease under consideration tends to appear, marked wasting less commonly shows itself than does rickets with poor nutrition and flabby muscles, so that these anæmias may be taken to correspond in later months to the marasmus of early infancy. In the early months the injured intestinal glands are unable to take up nourishment and the child starves; in the later months they have learned their function in this respect and take up not only nourishment but in addition toxins formed from the altered food substances. That rickets can be a cause of anæmia, or, indeed, of anything other than mechanical deformities, I cannot persuade myself to believe, being itself but a series of symptoms—a reaction of certain tissues to some cause or causes underlying it. That one of these causes—namely, gastro-enteric catarrh—may, at the same time that it causes rickets, also lead to marked anæmia, and that an anæmia of such a kind as has been described under the title "anæmia splenica infantum," I believe and hold. The rickets, in my opinion, in these cases runs parallel to the anæmia. The fact that the anæmia may occur without rickets and that rickets is not necessarily associated with marked anæmia proves that neither depends on the other, nor can their causation be altogether identical.

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[4] Johann Loos: Wiener Klinische Wochenschrift, 1892 No. 20.
[5] Luzet: Revue des Malades d'Enfance, 1891, p. 199.

And now, how does the intestinal catarrh act as a systemic poison? Intestinal toxins have been conjured up to explain so many varying conditions, and their appearance is so trite and convenient as a causative agent that it is with some shame and with many apologies that I drag them forward. If I could give you a table of their analysis—if I could show them on a plate—it would be very gratifying to me and very edifying to the Fellows of this society; but although this may not be done yet we cannot afford to ignore their formation. In cases of acute gastro-enteritis in infants no one would have the hardihood to deny an absorption of toxins from the intestinal canal; when such a condition of toxin formation and absorption goes on insidiously over a long period of time a different train of symptoms will be produced, a slow poisoning of the tissues, leading—why not?—to marked rickets and severe anæmia, the so-called anæmia splenica infantum. The organisms causing acute summer diarrhœa have yet to be definitely decided upon. Shiga's bacillus[6] and various members of the coli group have been claimed as such, and it seems probable that more than one organism, given favourable conditions, is capable of causing the symptoms of this disease. Similarly, in chronic catarrh, set up in the first place by unsuitable food, it is probable that the growth of organisms, differing, perhaps, according to the food supplied, may serve to keep it going, and that the products formed by their growth in these food substances, being absorbed, will cause a progressive poisoning of the human host. Once a suitable culture medium is prepared for them in the intestine there is no lack of organisms, either already present or introduced in food through the disordered stomach, to flourish upon it. Another possible source of poisoning remains to be mentioned—namely, toxins formed as the by-products of disordered digestion in these cases. And now, though we may not believe that we are dealing in anæmia splenica infantum with a primary blood disease, though we hold that those peculiar cells the occurrence of which is described above are readily called forth into the blood in infancy, still there must be a *modus operandi* under which they appear; they are not there without cause, and since we believe that an intestinal toxæmia is that commonly at work it is interesting to attempt on those grounds some explanation of the changes observed. The views of Ehrlich as to the origin and destination of the blood cells seem to be those most widely accepted. It will therefore be convenient to base a working hypothesis on those views.

We have supposed a toxin formed in the intestinal tract either by the action of micro-organisms on the undigested food-stuffs or as a by-product of disordered digestion. This, by its local action, will cause diarrhœa and vomiting and by the stimulation of intestinal lymphoid tissue will wash into the blood that increase of lymphocytes which commonly accompanies a gastro-intestinal catarrh in children. The poison circulating in the blood stimulates the bone marrow; by an active chemiotactic reaction an increased supply of polymorphonuclears and eosinophiles takes place, causing a leucocytosis, perhaps with a view to helping in the formation of antibodies to the poisons in the blood; but after a time this leucocytosis fails relatively, and to keep up the demand only partially formed granular cells, the myelocytes, antecedents of the polymorphonuclears, appear in the blood. If this failure of leucocytosis is a fact, it should not be possible to cause a polymorphonuclear leucocytosis in one of these cases. I am not sure about this point. One of my own cases in an attack of pneumonia showed an increase of leucocytes generally but no relative increase (even a slight decrease) in polymorphonuclears. The leucocytosis having failed to overcome the poison, and the same being still formed, a destruction of red cells takes place, the spleen being enlarged partly to dispose of the refuse of these and the dying leucocytes.

That an increased destruction takes place seems to be supported by the following facts: 1. The presence of erythroblasts in the blood, suggesting an attempt on the part of the marrow to keep up the supply. The megaloblasts present probably depend merely on the age of the patient, these being normally present in the marrow of infants. 2. The altered proportions between the young cells (large mononuclears and myelocytes) and the old cells (the polymorphonuclears) seem to point to increased destruction of the latter. 3. The alterations in size and shape of the erythrocytes may be due to a degeneration preceding their death. It might be argued, on the other hand, that these changes may be brought about by a poisoning of the blood-forming organs resulting in their inability to supply adult cells to the blood and so allowing immature forms to enter the circulation. If the increased destruction were great it might cause some increase in the iron content of the organs, especially of the liver if it occurred in the portal circulation, as one might expect in an intestinal toxæmia. If the destruction were in the general circulation, on the other hand, there might be no demonstrable increase of iron content in the abdominal viscera. In the only fatal case I have had in which a necropsy was permitted I got Dr. W. H. Hurtley to estimate the iron in the liver, the spleen, and the kidneys. He employed two methods for comparison and found in the spleen 0·01585 per cent, or 0·01818 per cent.; in the liver 0·01527 per cent., or 0·01566 per cent.; and in the kidneys 0·022 per cent., or 0·00287 per cent., or 0·0036 per cent. of iron as the result of three experiments with the two different methods. Dr. William Hunter[7] among 20 collected analyses of normal organs found the iron content for the adult an average of 0 078 per cent. for the liver and 0·171 per cent. for the spleen. The percentages in the child seem to correspond closely with these among the few analyses in infants I have been able to find. We see, therefore, that the percentages in my case of anæmia were low and, even allowing for an increased bulk of liver and spleen, do not point to any excess of iron in these organs such as occurs in the liver in pernicious anæmia Does this mean that blood destruction plays no important part in this disease? I think not.

Let us glance at the condition in pernicious anæmia. In that disease Dr. Hunter has clearly shown that the blood destruction occurs in the portal circulation and the poison, intestinal in origin, as also the products of its action, the iron, &c., never get beyond this point, but are dealt with by the liver before they reach the general circulation. But we have advanced the theory of an intestinal toxæmia in these anæmias of infancy also; how does it differ from that described above? Obviously in this, that in them the poison reaches the general circulation. The myelocytes and increased polymorphonuclears clearly point to a direct action through the blood stream on the bone marrow. We must thus suppose that the toxin, though entering the portal circulation, as in the case of pernicious anæmia, is not destroyed by the liver, but finds its way into the blood stream wholly or in part and there exerts its action on systemic structures. The blood destruction if such exists, occurs in the general blood stream and its products are scattered broadcast instead of being seized and stored in the liver, as in pernicious anæmia. On the other hand, it seems quite likely that a deficient formation as well as a blood destruction is at work in this condition. That the blood-forming organs, and especially the bone marrow, are disturbed in this affection we have evidence in the unusual distribution of the leucocytes, and the relative deficiency of the hæmoglobin content of the red cells seems to point to the same and suggests a likeness to chlorosis in which a deficient production in all probability takes place, whether a dilution of the plasma is also present or not.

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[6] Duval and Bassett: American Medicine, Sept. 13th, 1902; Centralblatt fur Bakteriologie, &c., Dec. 22nd, 1902.

[7] Hunter: The Lancet, Sept. 22nd (p. 555) and 9th (p. 608), 1883

Three severe blood conditions in infancy have received recognition at various times in the past—anæmia splenica infantum, *anæmia splenica pseudo leukæmica of von Jaksch*, and leukæmia The first we have considered; when we come to a consideration of the other two we are met at the outset by a *great difficulty—namely, the very imperfect* blood examination made on the cases described

Let us take leukæmia first, and by this term we mean spleno myelogenic *leukæmia, for it is this variety that the* infantile anæmias resemble What grounds are there for [illegible] it [illegible] number of cases have been described, but in almost all on quite insufficient evidence, and apart from one or two cases, in which the matter was more thoroughly proved by post mortem examination, one would be strongly inclined to discredit the occurrence of the disease at all in the first two *years of life*

The most complete case I can find is one described by von Jaksch[8] in 1889 In this case, that of an infant, 14 months old, there was a progressive increase of leucocytes up to 192,000 per cubic millimetre at the time of death At the necropsy the organs showed typical leukæmic changes and these were confirmed by microscopic examination No differential count was made Then comes a case recorded by Stilling,[9] that of an infant aged 12 months, in which the organs showed definite leukæmic changes on the post mortem table No blood examination was made A third case is that recorded by Hochsinger and Schiff[10] in an infant aged eight months, it developed tumours of the skin, which microscopically showed a typical leukæmic infiltration It appeared to be a mixed splenic and lymphatic leukæmia, but no post mortem examination was obtained Middleton's[11] case, that of an infant aged 16 months, showed a leucocyte count of 370 000 per cubic millimetre (no differential count being made), but post mortem no naked eye leukæmic changes in the organs were found though microscopically the capillaries were found stuffed with leucocytes representing perhaps, an early leukæmic infiltration Dr H D Rolleston and Dr A O Latham[12] have described the necropsy on a child 18 months old whose organs showed a similar change, but they seemed loth to consider it a case of leukæmia and on other grounds a diagnosis of lymphadenoma was made In all the other cases I have been able to trace there has been some omission which has weakened their claim to be considered instances of this disease In Morse's[13] case, so often quoted no post mortem examination was made and there is, to my mind, nothing about the condition of the blood which clearly separates it from other cases of grave anæmia in infants The myelocytes, it is true, rose to 21 4 per cent, but one of my own cases showed a myelocyte count of 21 5 per cent and a larger eosinophile count than his Perhaps I ought to have called this a case of leukæmia but I could see no clear reason for doing so in the absence of a post mortem examination Another of my cases which has improved considerably under treatment showed 16 per cent of myelocytes These represent all the cases I can find in infants under two years of age in which a claim for leukæmia was made In children between three and four years old, an age somewhat beyond the limits of those anæmias with which this paper deals, a few cases also of leukæmia, both spleno [illegible] re and some [illegible] which must [illegible] he year 1890 von Jaksch[14] described some cases which he burdened with the somewhat cumbersome title of "anæmia infantum pseudo leukæmica, and these he separated from leukæmia on the one hand and from splenic anæmia of infants on the other They were cases in which a leucocytosis occurred out of proportion, he thought to cases of so called "splenic anæmia," but in which the post-mortem lesions of leukæmia were missing

To recapitulate shortly the changes found in our cases of "splenic anæmia"—we have considerable anæmia, enlargement *of the spleen* and the liver, and generally, advanced rickets The blood shows a low red count with a still lower colour index The leucocytes are moderately increased and a *differential count among them shows myelocytes* in fair numbers and many nucleated red cells, both normoblasts and megaloblasts The cells normally present keep near the normal proportions of infancy

Now how do these cases differ from those described by von Jaksch as anæmia splenica pseudo leukæmica? Von Jaksch himself sums up the difference on three lines (1) the smaller leucocyte count, (2) the absence of progressive increase of leucocytes, and (3) the presence of marked rickets. The leucocyte counts in his three cases at their highest were respectively 54,000, 114,000, and 36,000 per cubic millimetre The latter two of these cases recovered and the count fell in one case from 114,000 to 10 000 per cubic *millimetre in three weeks and in the other case from* 36 000 to 12 500 per cubic millimetre in six weeks In face of this fall and of the way in which the interval between the high and low counts is bridged [illegible] surely the large leucocyte count [illegible] as a distinction between these ca[illegible] cases described above If any [illegible] should be very glad to learn at what number of leucocytes per cubic millimetre they would place the line of demarcation between them As for the progressive increase of *leucocytes, this may occur in fatal cases of all sorts* and is not peculiar to von Jaksch's cases Death depends upon persistence of the morbid condition, except when due to complications, and the leucocytosis runs parallel with this

With regard to rickets, no very definite conclusion can be drawn All my patients except one had rickets, most of them marked rickets, and I am disposed to regard the condition as a result of the same cause that produces the anæmia rather than as itself contributory in any way to the causation of the disease The case in which there was no rickets differed in no *respect from the other cases* either in history or symptoms, moreover, in one of the patients in von Jaksch's three cases had rickets is mentioned, so that this disease, since it is not always present in the one condition and may be present in marked form in the other, can be taken neither to explain the one nor its absence to distinguish the other Morse affirms the presence of rickets also in nearly all authentic cases of leukæmia which has some bearing on what follows

It may be accepted, I think, that the difference between the cases described by von Jaksch as "anæmia splenica pseudo leukæmica' and the cases of anæmia with enlarged spleen described above is one of degree only and not of kind

And now the question arises In what respect, if at all, do these cases of anæmia splenica differ from those of leukæmia mentioned above?

First we do not find that the blood condition in these cases of leukæmia quite corresponds with what we should expect to find if we reason from the grounds of the same disease in the adult In the adult we have an average of about 300 000 white cells per cubic millimetre, and of these about 30 per cent are myelocytes, moreover, there is a definite *increase of eosinophiles and mast cells Now in* healthy infants the leucocyte count is somewhat higher than in adult life and a leucocytosis is admittedly very readily set up and yet in these cases of leukæmia what do we find? Only 192 000 per cubic millimetre in von Jaksch's case at the highest and only 48 000 in Morse's case, whereas in older children quoted by Cassel and Baginsky at eight and nine years *respectively there is no such failure in this respect*, the leucocytes being 500 000 and 986 000 per cubic millimetre respectively This alone, in the absence of a post mortem examination throws considerable doubt on Morse's case and the very moderate myelocyte count of 21 4 per cent. among these seems to confirm it. In Middleton's case on the other hand, there were 370 000 leucocytes per cubic millimetre, a much more respectable number In the other cases, unfortunately, the leucocytes were not counted—merely recorded as increased More unfortunately still we miss the advantage of a differential count in all but Morse's doubtful case, for seeing the readiness with which myelocytes appear in the blood of infants (in diphtheria, &c) and also the case with which an eosinophilia is in them set up we should expect to see a very striking percentage of these two classes of cell in leukæmia. In Morse's case, as we have seen, there are only 21·4 per cent. myelocytes, a number which may be reached in fatal cases of anæmia splenica infantum and only 0 6 per cent. of eosinophiles, which represents no definite increase at all in such a comparatively small leucocyte count. In Rolleston's doubtful case the myelocytes numbered 20 per cent. and the eosinophiles 1·6 per cent., but we do not know what absolute increase this represents as no blood count was made. In neither Middleton's case nor in von Jaksch's case was a differential count made but the latter informs us that there was no increase of eosinophiles. So that in those cases recognised as leukæmia in which a blood examination was made we find that the blood does not bear the characters we should have expected under the modifying influence of infancy.

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[8] Von Jaksch: Wiener Klinische Wochenschrift, 1889 Band II Ss 435, 456

[illegible] 1889 [illegible] S 475

[illegible]

[illegible] Ss 400, 414

Once more where do these cases of leukæmia differ from cases of splenic anæmia and von Jaksch's anæmia already described and where does the line of demarcation come, if such exist? That their appearance is strikingly similar is illustrated by the difficulty the older observers had in separating the two conditions; indeed, many of the splenic anæmias were described under the heading of leukæmia. Von Jaksch considers that the conditions can be separated clinically on several grounds.

1. He says that the liver is more enlarged in leukæmia than in splenic anæmia. What do we find on examining the facts? In von Jaksch's own case of leukæmia the liver was only just palpable below the ribs and after death it weighed 500 grammes, with a spleen of 430 grammes; in my own fatal case of splenic anæmia, in which a post-mortem examination was obtained, the age of the child was the same; the liver weighed 405 grammes, compared to a spleen of only 112 grammes—i.e., in my case of splenic anæmia the liver weighed nearly as much absolutely and relatively to the spleen much more than in his case of leukæmia. In Hochsinger and Schiff's case the liver was larger, reaching below the umbilicus; in Middleton's case the liver is definitely mentioned as *not* enlarged; in Stilling's case it is said to be rather large but no weights are supplied; in Morse's case it came two fingers' breadth below the costal margin, so that the enlargement of the liver as a point of diagnostic importance between the two diseases appears to be of very little worth.

2. The second point von Jaksch states is that the eosinophiles are increased in leukæmia but diminished or absent in anæmia splenica. This increase in leukæmia is certainly what we should expect, but we have already seen that in leukæmia infantum they seem to be *not* necessarily increased, and in von Jaksch's own case he definitely states that no increase occurred. On the other hand, there is a fair percentage (generally about 1 per cent.) working out to a slight real increase, or at any rate no diminution, in the other disease as illustrated by my own cases.

3. His third point is that anæmia is a more important feature among the cases of so-called anæmia splenica infantum than among cases of leukæmia in infants, but I do not think that this distinction is of much value. One of my patients died without definite complications with a blood count of 3,750 000 red cells per cubic millimetre and 23 per cent. hæmoglobin, another with 3,180,000 red cells per cubic millimetre and 30 per cent. hæmoglobin; while in von Jaksch's own case of leukæmia the red cells fell to 2,310,000 per cubic millimetre before death, in Middleton's case they were 3,300 000 per cubic millimetre, and in Morse's supposed case they were 2,900,000 per cubic millimetre, so that there is really nothing to be said between the grades of anæmia in the two conditions.

And now comes the only distinction which appears of importance—the only line, as far as I can perceive, which can be drawn between the two diseases, and it is this: in leukæmia the organs are found after death to be infiltrated with leucocytes; in anæmia splenica, on the other hand, they are not. Can this barrier be passed? Can we conceive that perhaps this, too, only represents a grade of disease, that anæmia splenica infantum is merely leukæmia which has never reached the stage at which infiltration of the organs occurs and that leukæmia merely represents an acute and advanced phase of the less serious-looking disease? I would advance the suggestion that we can. I cannot help thinking that cases will be found bridging over the gap between severe anæmia and leukæmia of infants—cases in which an infiltration of the organs is beginning to take place at the time of death—in which, though no alteration is observed in the organs by the unassisted eye, yet the microscope reveals the early beginnings of that change which in a more advanced grade causes the distinctive lesions of leukæmia. Are not Middleton's and Rolleston's cases illustrations of this commencing infiltration?

If we accept these contentions which I have laid before you to what do we commit ourselves? 1. That *severe* anæmia in infants commonly presents the picture of so-called anæmia splenica infantum or of anæmia splenica pseudo-leukæmica and that the causation of such severe anæmia is generally an absorption of intestinal toxins. 2. That if the condition is *more* severe, probably from a somewhat more acute poisoning, the picture of leukæmia infantum is produced—i.e., that leukæmia in infants is nothing more than the most advanced example of a morbid condition represented in its pre-leukæmic stages by the conditions known as anæmia splenica infantum and anæmia splenica pseudo-leukæmica of von Jaksch.

So far it looks easy, but other issues must be reconciled. Some may object that leukæmia is a very fatal disease, whereas recovery takes place from the slighter cases of anæmia splenica. This should not disturb us. Children react very differently to various diseases than do adults, and because leukæmia runs a well-recognised course and is almost certainly fatal in later life there is no reason why the same should obtain in infancy. The mortality, moreover, be it noted, is by no means low among marked cases of splenic anæmia (so-called). More than half of the patients among my own cases are already dead and others are likely to follow. I can only record two recoveries as yet among my 13 cases.

The next point we are met with is the comparative frequency of leukæmia, or rather its antecedent anæmias, in infancy, and this is what we should expect if its causation is not specific. It represents the natural reaction of the blood-forming organs in infancy to various poisons, and in this respect may be compared to broncho-pneumonia which is also commoner in infancy than in adult life and is the result in the infantile lung of the inroad of many different organisms.

And now we have broken the ice of the next somewhat startling conclusion to which our arguments have necessarily led us—namely, that leukæmia in infancy is not a specific disease. Something needs to be said on this head. Naturally the slighter causes of anæmia in infants would not be expected to lead to a leukæmic condition; it is to the serious anæmias only that it is closely related. These serious cases, I would suggest, are always intestinal in origin and if the poisoning is severe enough a leukæmia may be the result. Obviously there is something peculiar about this poison; it must be produced continuously over a long period of time and it must be capable of escaping the vigilance of the liver either directly or by entering the blood through the lymph stream. In health the liver has the power of absorbing poisons carried to it in the portal circulation and of returning them to the intestine in the bile. The poison of pernicious anæmia seems to be caught in this way and exerts its influence on the blood in the portal circulation only.

On the other hand, it seems probable that many poisons are capable of evading this action of the liver, as is exemplified by cases of acute gastro enteritis in infants. Here the symptoms of a general toxæmia are rapidly established and it seems certain that similar symptoms may be caused by the action of more than one organism in the intestine. If this is so in cases of acute poisoning I think we are bound to admit that in the chronic poisoning which leads to anæmia or leukæmia no specific organism need be pressed into service but many may be capable of causing it. This contention becomes more difficult when we turn to leukæmia in the adult. Here we see none of those slighter forms, none of those pre-leukæmic stages from which recovery may take place; it is either "neck or nothing." This fact makes it evident that the causation in adults is considerably narrowed, that but few organisms can form poisons capable of originating the disease, and that a peculiar environment is necessary for their growth. The disease is rare. Moreover the blood-state is for the adult, though not for the infant, something quite peculiar and specific; it is no less than a return to the condition of an infantile anæmia. How can this be explained? We have dismissed the specific character of the blood changes in infantile anæmia as untenable, though we have nevertheless claimed that an intestinal toxæmia is the common cause of the condition—of the severe cases and leukæmia probably the only cause. But if the blood changes are not specific and depend merely on the "infancy" factor, how can these same changes be brought about at the call of a diseased condition in adult life?

For an explanation of this let us turn for illustration to another disease of infancy the peculiarities of which are exhibited less frequently in adult life—namely, broncho-pneumonia. It must be understood that I use broncho-pneumonia as a convenient illustration only and do not claim it as a parallel to the disease I am discussing. I am well aware that the occurrence of broncho-pneumonia in infancy depends largely on the physical peculiarities of the infantile lung and is therefore not directly comparable to a tissue reaction such as that we are discussing. At the same time the illustration may be closer than at first sight appears, since the prevalence of the "leukæmic" anæmias in infancy may also depend to some extent on a physical factor—the infantile intestine in place of the infantile lung.

Acute broncho-pneumonia is essentially a disease of infancy and can be caused by any of several organisms—pneumococcus, streptococcus, staphylococcus, diphtheria bacillus, influenza bacillus, &c. The pneumococcus, as we know, is by far the commonest cause. It is often present in the throat in health and only awaits certain conditions favourable to its growth to set up the disease. To adults the pneumococcus is a much less formidable enemy and if it does gain an entry causes, not broncho-pneumonia as in infancy, but a somewhat different morbid condition—namely, croupous pneumonia. But broncho-pneumonia also occasionally occurs in adult life, though it is a disease of infancy. The pneumococcus does not cause it but the influenza bacillus, a very rare cause in infancy, in adult life readily sets up a typical broncho-pneumonia.

Let us apply the above facts to illustrate what may occur in leukæmia. The leukæmia of adults though it displays certain noticeable differences, bears a close resemblance in its blood changes to leukæmia and the severe anæmias of infancy and may be considered to be, I think, a return to an infantile condition. This condition of blood is comparatively common in infancy, representing the natural reaction at this early age, and like broncho-pneumonia might be caused by the poisons of many different organisms (intestinal), of which probably one (like the pneumococcus in broncho-pneumonia) is more commonly active than others. After infancy is passed the tendency to this blood reaction is passed also, but still the condition may occasionally be set up in adult life. Like broncho-pneumonia fewer organisms (possibly only one) may, developing in the intestine, be able to cause it in later life and that perhaps a different one (compare adult influenzal broncho-pneumonia) from that which commonly sets it going in infancy (compare pneumococcal broncho pneumonia). Thus, though leukæmia (including the pre-leukæmia anæmias), being only the natural reaction to various poisons, may not be considered specific in infancy, yet in adult life it may become specific in that the blood changes are quite peculiar when compared with other adult blood conditions and its causation is so narrowed down as to be practically solitary.

I would, then, sum up my conclusions as follows:—

1. That anæmia from any cause in infancy if severe enough gives rise to the peculiar symptoms grouped under the headings "anæmia splenica infantum" and "anæmia splenica pseudo-leukæmica" of von Jaksch.

2. That, consequently, these are not specific blood diseases but owe their peculiarities merely to the "infancy factor" and that they represent merely different stages of the same condition.

3. That the common cause of severe anæmia in infants is gastro-intestinal catarrh, leading to the absorption of toxins either from the growth of micro-organisms or possibly from the formation of poisonous by-products of digestion.

4. That leukæmia of infants is not a separate disease, but merely a still more advanced stage of this anæmia—that is, that the difference between them is one of degree and not of kind.

5. That leukæmia of adults is a return to the condition of an infantile anæmia and that, being rare, its causation is probably so narrowed down as to be practically specific.

In conclusion I would like to express my thanks to my colleagues at the East London Hospital for Children for their kindness in supplying me with opportunities for studying those cases which came under their care.

I feel also that an apology may be expected from me by you, gentlemen, for having placed before you so much theory to-night and so few new facts. If it is expected I offer it in all heartiness; at the same time I cannot but feel that an attempt, however inadequate, to reason from facts already accumulated and to build up a working hypothesis upon them should have as much claim to your consideration as the mere accumulation of those facts themselves. If we could believe that leukæmia in infancy merely represents a severe grade of so called splenic anæmia and that leukæmia in adults is a return to a condition of infantile anæmia it might, I venture to think, bring us a step nearer to the comprehension of this interesting disease.

Devonshire street, W.

A CASE OF MULTIPLE LIVER ABSCESS.

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THE following case of multiple liver abscess appears to me worthy of being placed on record for the following reasons: 1. The comparative rarity of the site of the larger abscess and the somewhat infrequent nature of the smaller. 2. The apparent absence of dysentery as a forerunner. This is seemingly no uncommon occurrence in the Sudan where I believe that in cases of hepatic abscess a history of dysentery is rarely obtainable. 3 The possibility that the affection of the liver was antecedent to a dysenteric attack which was cut short by the fatal issue of the case. 4. The great rapidity of the course of the disease and the absence of symptoms pointing to the full gravity of the condition. 5. That a fatal result followed exploratory puncture, a very rare event to judge by reports given in the literature of the subject. 6. There was some question as to the real nature of the pathological condition.

In the month of June, 1903 I was called in consultation to see a medical officer of the Egyptian army, a surgeon of repute with an extensive knowledge of tropical surgery, a point of importance in the case, as will be seen. He had been ailing for three days and the facts to be noted in the history given me were as follows. The patient was a strongly built man, 29 years of age, though he looked older, of dark complexion, a very typical Celt, extremely temperate, accustomed to plenty of exercise, and with a record of four years' medical work in Egypt and the Sudan. He had never suffered from malaria, enteric fever, dysentery, or, indeed, any serious malady. At a later date I learned that a year previously his blood had been examined for the hæmamœba malariæ with a negative result, but that eosinophilia was present at that time. He had never, however, had any symptoms pointing to an infection by metazoal parasites. He was always most careful to avoid taking chill, constantly wearing a cummerbund and possibly carrying his precautions almost too far, as he rather burdened himself with clothing. Immediately prior to his illness he had been overworked. In addition to his ordinary duties, which were sufficiently arduous, he had been studying hard for an Arabic examination and in consequence had been unable to take his accustomed recreation in the shape of golf or riding. For some little time he had been looking fagged and it is worthy of note that a few days before he became really unwell he had been attending a case of slight dysenteric diarrhœa in the house in which he himself lived and slept. At the time he fell ill a case of bad enteric fever was also under his charge. It should also be mentioned that just prior to his illness his nose had been cauterised with chromic acid for a [illegible] condition of the mucous membrane. On the [illegible] h he first complained he had [illegible] very cheerful and lively—in fact, he seemed to be in excellent spirits. He partook of a good deal of iced, non-alcoholic drink and stated afterwards that he felt it very cold on the stomach and feared it might have given him a chill. The following morning he felt seedy, complained of nausea, flatulence, and some pain in the epigastrium. He had no diarrhœa but his temperature was about 100° F. He was seen by his brother officer, Captain Sterling, and regarded as a case of gastric catarrh, nothing abnormal being found on physical examination. He was dieted and given a mild aperient, but passed a restless night and next day was no better. He suffered from pain in the back and abdomen, a feeling of general discomfort, and his temperature still remained somewhat elevated, tending to rise towards evening. So he continued for another day, obtaining some relief from hot fomentations to the epigastrium and at his own request being given small doses of opium which secured him some rest. He would not keep to his bed but remained in his room and felt unfit for any work. His bowels were moved and nothing special was noticed about the stool—no trace of blood or mucus, no loss of colour, and no offensive odour.

I saw him for the first time on the morning of the fourth day of his illness (June 10th) and found him with a temperature of 101°, not looking very ill but rather distressed and anxious and much bothered with belching and the heat. On inquiry I elicited the fact that he had a feeling of discomfort about the right shoulder-blade, which, however, was less than it had been. His complexion was rather muddy, his conjunctivæ were not jaundiced, his tongue was fairly clean —a "milk tongue"—and not flabby, his abdomen was somewhat distended, and there was distinct tenderness on pressure over the epigastric region but no sense of resistance to the palpating hand. There were no enlargement of the liver or spleen, no hepatic friction, and no dilatation of the stomach. Indeed, all that a careful examination revealed was a certain harshness of the breath sounds over the base of the right lung, which had been detected by Captain Sterling on the previous day. There were no accompaniments. The urine was free from blood, pus, or albumin, but on standing deposited numerous crystals of urate of ammonium. No leucin or tyrosin was found. He had become a little costive but was given a small dose of calomel followed by Carlsbad salts and his stools in no way differed from the normal. It was felt that he was suffering either from a gastritis or a hepatitis or both combined, though at first the question of a commencing attack of enteric fever was considered. This was soon discounted by the state of the tongue, the general condition, the absence of splenic enlargement, and the prominence assumed by the liver symptoms. The patient evidently feared the formation of a liver abscess for he at once expressed a hope that such might not develop and the fear of it soon dominated his mind, though otherwise he was cheery and very patient and hopeful.

It was proposed to substitute an ice-bag for the hot fomentations but the patient preferred the latter and the application of mustard leaves over the painful area. Leeches were not available or they would have been employed. He was put upon an alkaline treatment, was given a carminative mixture and anti-curdling powders, and kept strictly to a milk diet. For two days there was little change in his condition and what there was tended to show improvement. His nausea and pain diminished. The feeling of discomfort in the shoulder disappeared, his flatulence became less marked, his appetite improved, and save for persistent insomnia he did not feel very unwell. The sleeplessness greatly troubled him and he insisted each night on getting a little opium. Sulphonal was tried but did not agree with him and increased his restlessness. Bromide had no effect. He was examined twice daily but no change could be detected, the lower edge of the liver being at the costal margin in the nipple line, the upper border remaining unchanged, while there were no increase of tenderness and no feeling of resistance in the epigastrium nor any hepatic increase there. A nurse was in attendance and he derived much comfort from repeated spongings. Thereafter, however, and synchronous with a commencing pallor of the stools, an enlargement of the left lobe of the liver was detected. The increase had come on very rapidly and caused a distinct fulness in the epigastrium while there was resistance to the palpating hand. A certain amount of cutaneous œdema due to the counter irritation added to the appearance of fulness. The question of the occurrence of abscess had all along been kept in mind and now a surgeon, Dr. J. B Christopherson from Omdurman, was at once summoned. He concurred in the opinion that pus had probably formed in the liver and it was decided to make an exploratory puncture and to proceed if necessary to evacuate the abscess. The patient, however, though his general condition was very good—he had been able to take and to relish some chicken-tea and jelly—was anxious-minded. He had himself noticed the swelling in the epigastrium and fully appreciated its significance. For this and other reasons, one of which was that it was hoped he might get a good night's rest before anything was done, it was resolved to defer further action till the following morning. The patient passed a very fair night and on the morning of the 15th stated that he was feeling much better. His temperature had fallen to 100° and his pulse to 92 and he felt so well that he was able to write two important letters There was a further increase in the size of the left hepatic lobe but there were less tenderness on palpation and no pain.

Although the patient expressed perfect confidence in his surgeon and gave permission for anything to be done which might be considered necessary he was very nervous and his pulse was not so strong as could have been desired. He was accordingly given some brandy and about 11 A M. was ready for operation. Captain Sterling administered chloroform which the patient took well and as soon as he was fully under the influence of the anæsthetic Dr. Christopherson inserted a hollow needle attached to a syringe at a spot opposite the ninth left costal cartilage and about one and a half inches internal to it. The point of the needle was directed slightly upwards and inwards. At first a little blood-stained serum was obtained and then a small quantity of thick greenish pus. Some of this, which must have been from the wall of the abscess cavity, was afterwards examined by me and the amœba dysenterica was found to be present No other organism was encountered. I may add here that the blood was also examined and no malarial parasites were found. A differential leucocyte count was not performed, which in the light of the fact that the patient's blood had previously shown eosinophilia is much to be regretted. The quantity of pus obtained was so small that Dr. Christopherson thought it advisable to make two other punctures close to the first. On one occasion a little pus came away; the other puncture only yielded blood-stained serum. It was clear that an abscess was present but it was thought well to make a fourth puncture about the middle line in the epigastric region, directing the needle a little downwards and to the left to discover if the abscess cavity approached nearer the surface there than it appeared to do in the first spot examined. Blood alone was obtained.

Everything was in readiness for the necessary evacuation of the pus but the patient's condition suddenly became extremely alarming. His pulse at the wrist almost vanished, his respirations were laboured, and he began to get cold. There were no loss of colour in the lips and no dilatation of the pupils and the condition appeared to be solely one of nerve shock. This was further evidenced by a severe trismus of the lower jaw setting in. All thought of further operation had to be abandoned for the time being and every effort directed to improving the general condition, fortunately with good results. Ether and brandy were given subcutaneously, heat in the form of hot bricks was applied to the feet, the jaws were forcibly separated, and in a short time the patient had revived. The distressed mental condition was evidenced by his anxious inquiries regarding the operation before he was well out of the chloroform, as he kept urging us to make haste and to finish. Once conscious he rapidly picked up and about 12 45 P.M. when I left him he was much better, his pulse having regained tension while he was comfortable and free from pain. It was unanimously agreed, however, that nothing further of an operative kind could be attempted till there was a greater improvement in the general condition.

Captain Sterling, Dr. Christopherson, and the nurse remained in attendance upon him but at 3 P.M. I was hastily summoned and found that he had again collapsed; he was sighing heavily, tossing his arms about, his pulse was almost imperceptible, and his body was bathed in cold perspiration. It was feared that there might be hæmorrhage into the peritoneal cavity but his lips were of a good colour and there was no abdominal distension. He was perfectly conscious and said that he had no pain but his voice could not be raised above a whisper. Regarding the condition as a recurrence of nerve shock, a diagnosis fully borne out by the absence of any evidence of hæmorrhage post mortem, we treated it by raising the foot of the bed, administering champagne and strychnine, giving hot coffee by the mouth and hot water as a rectal injection, applying a hot bag and a mustard leaf to the præcordium—in short, stimulating as much as possible. Transfusion apparatus was got ready but was not required, for he rallied rapidly and was soon able to state that he felt much better, though as before he expressed fear regarding the hepatic condition. He continued to improve towards evening, became quiet and restful, and took nourishment freely. Towards night he began to wander a little but when I last saw him at 9.30 on the evening of June 15th his condition was such as to give one hope that the operation might yet be successfully carried out. His temperature, however, had begun to rise. Unfortunately, the hope was not realised, for about 11 P.M. he began to get excited, a reaction set in, his temperature ran up to 106°, and though his two medical attendants did all in their power to save him he collapsed and died quietly about 1.30 A.M.

Post-mortem examination.—Permission for a necropsy to be performed had to be obtained from a distance and in consequence the examination had to be conducted somewhat hurriedly and had to be hastily concluded. It was performed on June 16th (12½ hours after death). The abdomen and a portion of the thorax were examined. The body was well nourished and muscular. Post-mortem rigidity was marked. Marks of the sinapisms were present on the epigastrium and in the right half of the left hypochondriac region. Four needle punctures were visible on the skin, one in the middle line in the epigastric region and three close together about one and a half inches from the left costal arch and about the level of the ninth left costal cartilage. The abdomen was somewhat distended. On opening in the middle line a small quantity of blood, about one drachm, was found lying immediately under the subcutaneous tissue in the region of the needle puncture in the middle line. The first organ seen was the liver, the left lobe being enlarged and prominent. The intestines were distended with gas. There was no blood or fluid in the peritoneal cavity. No evidence of peritonitis was present. A few flakes of recent blood stained lymph were found on the surface of the liver at the site of the triple puncture; there was evidence of an attempt at the formation of adhesions. Strong recent adhesions were found between the upper surface of the right lobe and the diaphragm. An area of adhesions was also found low down and behind the right lobe. On tearing through the latter about two drachms of greenish-brown pus escaped. The liver was removed.

Examination of the liver.—The surface was smooth and the capsule was somewhat adherent. It was dull chocolate-brown in colour. In consistence it was soft and like firm putty, pitting readily under the finger-tips. Two natural sulci were present, one on the under surface of the right lobe near the root of the gall-bladder and the other in the anterior border of the right lobe, forming a notch. Near the junction of the posterior and inferior surfaces of the right lobe and well to the right was an area of recent erosion which when closed by adhesions had formed an abscess about one inch by one and a quarter inches deep, from which the pus previously mentioned had escaped. Its walls consisted of friable liver substance which had been rapidly disintegrating and were covered with flakes of thick greenish and greenish-brown pus. On section the liver tissue of the right lobe presented the aspect of a subacute hepatitis. It was soft, friable, and of a chocolate brown colour. No bile staining and no internal abscesses were present. The greater part of the anterior surface of the left lobe was of a slaty-grey colour. Palpation over this area elicited fluctuation and on section a large tropical abscess, a typical so-called idiopathic abscess, was disclosed. Between six and eight ounces of pus escaped. It was largely of an anchovy-paste colour but contained masses of thick greenish pus which also lined its walls. The three needle punctures communicated with the abscess cavity which measured roughly four inches by four inches and to the right was sharply cut off by the division between the two hepatic lobes. The cavity was about half an inch from the surface of the liver and its walls, save on the right side, were very friable. The pus was not offensive, having only a slight sickly odour.

The stomach, which was empty, lay under, and was concealed by, the left hepatic lobe. There were no adhesions present nor was the stomach diseased save for a slight gastritis evidenced by congestion of the mucous membrane. The spleen was slightly enlarged and congested. The splenic pulp was friable. No other morbid condition was present. It was a "febrile" spleen. The small intestine was not opened but appeared to be normal when viewed externally, as did the upper part of the large intestine. The mucous membrane of the lower part of the large intestine and the rectum was distinctly injected. A considerable number of small patches of acute congestion were present which may have been the very early stage of a commencing dysentery or may have been due to the rectal injections of hot fluid. No ulceration, slimy mucus, or blood was present. Specimens of the contents of the bowel from the rectum and of the pus from the abscess cavity were examined but amœbæ were not found. The examination had perforce to be delayed till the following day so that possibly, if present at all, they had broken down and become unrecognisable. There were no perforation of the diaphragm and no communication of any abnormal kind between the thorax and the abdomen. No pus was present in either pleural cavity.

Remarks.—As has been mentioned, the case was of interest clinically from the shortness of the course of the illness considering the great pathological changes found post mortem. Further, the symptoms during life were not proportionate to the severity of the disorder, a state of things by no means rare in cases of abscess of the liver. The question of latent dysentery had to be considered but, as stated, the stools at no time contained blood, mucus, or pus and indeed gave no clue to the liver trouble until the latter became so marked as to be unmistakeable. Dr. Christopherson is inclined to regard the condition as having been pyæmic in nature, infection having occurred through the nose. He saw the case several times before being called in to operate and had been treating the nasal condition. Thus his suggestion is well worthy of consideration but I am unable to regard it as at all probable. True, the mere fact that there was no local inflammatory focus at the supposed seat of infection goes for nothing but I submit that the symptoms, the result of the pus examination, and, above all, the post-mortem findings were opposed to pyæmia. Dr. Christopherson was unable to be present at the post-mortem examination. Had he been so I think he would have concurred with Captain Sterling and myself that the picture presented by the left lobe of the liver was that of a typical tropical abscess such as is usually associated with the presence of the amœba dysenterica. The amœba was present but too much stress cannot be laid on this point, as the organism may merely have found a suitable nidus in the pus. The presence of a second abscess, or rather superficial erosion, does not specially favour the pyæmic hypothesis. Indeed, Captain Leonard Rogers, in his articles on Amœbic Dysentery in India,[1] makes special mention of several cases of abscess forming between the liver and diaphragm and producing superficial erosion as mentioned in the *Calcutta Medical College Records*. In the light of what is stated in the second of these articles it is unfortunate that the small intestine and the upper part of the large intestine were not more thoroughly scrutinised. As mentioned, the examination had to be hurriedly performed and still more hurriedly completed, while the importance of examining these portions of the bowel was not at the moment appreciated. Viewed externally, however, the whole intestinal tract appeared to be perfectly healthy. As stated, marked areas of congestion were found in the mucous membrane of the descending colon, the sigmoid flexure, and the rectum. Were these due to the hot rectal injections or were they evidences of the earliest stage of a commencing dysentery secondary to the abscess of the liver?

Councilman and Lafleur, quoted by Captain Rogers, have shown that the amœba dysenterica can pass across the peritoneal cavity from the bowel to the liver *viâ* the lymphatics on the under surface of the diaphragm. Is it possible for this process to be reversed and for the bowel to be infected secondarily to the liver? The point seems to be worth raising, though the probabilit [illegible] place appears slight when on [illegible] dency of the intraperitoneal [illegible] of things might explain certain cases of hepatic abscess apparently unassociated with dysentery, the infection having taken place by *the mouth and the stomach*.

As regards the fatal and lamentable issue there can be little doubt that the cause of death was nerve shock. No large vein had been punctured nor is it likely that any important nerve had been damaged. The shock was central. Had the patient not been a medical man well acquainted with the dangers of the necessary operation and dreading it exceedingly, I believe, and my belief is shared by the other medical men in attendance, that no fatal result would have occurred from the simple punctures. As a rule, exploring needles can be driven through the liver substance in almost any direction with absolute impunity and usually with benefit if the condition be inflammatory. Here is an example of the inevitable exception which would have been even more distressing than it was had not the post-mortem examination revealed the fact that the liver was in such a state that eventual recovery was in all probability impossible. The disintegrating process was too acute, rapid, and widespread.

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[1] Brit. Med. Jour., Sept. 20th, 1902, and June 6th, 1903.

One other point may be raised. Did a metazoal parasite play any part in the pathology? There was no sign of any such, no fluke or other worm being seen with the naked eye or microscopically, but the previous eosinophilia has to be borne in mind, and if it does nothing else I think the record of this case goes to show that in any doubtful tropical illness, especially if it be abdominal, the fæces and the blood should be carefully and frequently examined and a differential leucocyte count should be made whenever and wherever feasible.

I am much indebted to Captain Sterling for permission to make use of my notes on this case.

Khartoum.

A CASE OF LINSEED POISONING.

By J. O. HOLLICK, M.B. Durh., M.R.C.S. Eng., L.R.C.P. Lond.

The following symptoms were produced in a patient of mine from the internal administration and the external application to a mucous surface of the seeds of linum usitatissimum, the common linseed or flax.

The patient, a robust man, five feet ten inches in height, and weighing 14 stones, consulted me on May 19th, 1903, for an inflamed and protruding internal hæmorrhoid which had recently come down as a result of sitting on a damp carriage cushion. The pile had become strangulated by the external sphincter and was giving him very severe pain. I ordered him to bed and as he had already applied anodyne ointments and lotions without obtaining relief, also directed that a hot linseed-meal poultice be applied to the inflamed and painful hæmorrhoid. This was done at about 3 P.M. and within four hours afterwards the patient experienced the following symptoms, which I have recorded in his own words.

"To commence with, I experienced a peculiar sensation in the throat and mouth, as though they were lined with velvet, the throat contracting considerably; there was a scaly feeling in the skin of the hands and feet. The skin all over my body, but more particularly on the thighs and legs, went 'anserine,' having the appearance as though a small bladder of water surrounded each hair at its root; the skin changed to a colour between that of red and purple; after this the irregularities on the skin became more pronounced. My face was discoloured and there was a rush of blood to my head. This discolouration of skin was accompanied by irritation. My hearing was affected. I went very deaf and I was also unable to see well. My heart was beating very forcibly and rapidly and I had a strong hysterical feeling. I counted my pulse and timed it to be 120 per minute. I felt on the border of delirium. My chest seemed restricted, particularly at the lower part. These symptoms lasted about three-quarters of an hour and on diarrhœa supervening they were very much mitigated. I then had an attack of vomiting, the vomit being of a dark colour, although I had taken nothing but milk foods for the past 48 hours. After this the symptoms gradually passed off, the velvety feeling at the throat and mouth being the last to disappear. On two previous occasions I had been 'poisoned' by linseed. On the first occasion I was walking through a field in the East of England where labourers were engaged in the operation of stacking the linseed and I ate a few of the seeds. Within three or four hours afterwards I experienced symptoms similar to those narrated above, only to a less degree. I ate about 12 seeds only and the duration of the symptoms was from two to three hours. About two years afterwards I ate two lozenges of 'linseed and liquorice' and the same symptoms were again experienced."

The patient sent for me at 8.30 P.M. and as he resided some distance out in the country I did not see him until 9 P.M.—i.e., two hours after the commencement of the symptoms. He was then in a state of collapse, with quick and feeble pulse, a feeling of nausea, and with cyanosed condition of the face and extremities. His respiration was quiet and the diarrhœa had ceased but he had a marked condition of cutis anserina. He lay curled up on his side in bed and was very prostrate; he at once told me that he had been poisoned by linseed as recognised from his previous experiences. He was given an ounce of brandy in hot water and hot bottles were placed to his feet and body; he passed a good night and on the next day was in normal health again.

The ordinary linseed meal as sold in the shops is obtained by expressing the oil from the seeds and powdering up the marc which remains. The oil is found in the kernel of the seed and in the envelope or testa of the seed is found mucilage only. The fixed oil contains palmitin, stearin, and a glyceride of linoleic acid ($C_{16}H_{28}O_2$), the last in much the greatest quantity. It was probably owing to the presence of the last product in small amount in the linseed meal and its becoming absorbed into the system which gave rise to the symptoms recorded above, the patient evidently exhibiting in an extraordinary degree an idiosyncrasy to the action of the drug. Finding no mention of a similar case in any of the text-books on toxicology and forensic medicine I thought the publishing of the above case might be of interest to the profession and should be glad to hear if any other practitioner has had a similar experience.

Knowle, Warwickshire.

UNUSUAL CASE OF INTESTINAL OBSTRUCTION.

By DUNCAN MACARTNEY, M.A., M.D. Glasg.,
SURGEON TO THE CANCER HOSPITAL, GLASGOW; ASSISTANT SURGEON TO THE WESTERN INFIRMARY, GLASGOW.

At the present stage of our surgical development every case of intestinal obstruction which is operated on successfully is of interest, and if it should happen to possess characteristics apart from the more common forms of obstruction from without as by bands, kinking, tumours, &c., the interest is all the greater. There seem to be fashions in surgery as in other domains of human effort. It used to be the vogue to look out for, and to describe, calculi of wondrous size and shape. Then we pondered on the various modes of closing hernial apertures and where best to leave the sac or its stump. Now the appendix and intestines with their surgical possibilities are receiving their turn. Obstruction from within the bowel of such severity as to lead to abdominal section is comparatively rare. The large majority of the cases of intestinal obstruction that have fallen to my care have been due to bands, contractions of the mesentery making acute kinks in the bowels, or an inflamed gland anchoring a knuckle of bowel, the appendix, or Meckel's diverticulum, and so producing a constricting factor to bring about the obstruction. It might be said, further, that if tuberculous disease of the abdominal glands did not exist we should have very few opportunities of practising intestinal surgery for obstruction.

Treves gives a threefold list of causes of this condition according to the nature of the obstructing agent. "1. Rounded or regularly-shaped bodies that may be considered capable of passing readily through the intestines: pebbles, stones, coins, &c. 2 Sharp pointed bodies and substances of irregular shape that may readily catch in the mucous membrane, or are of an outline that would favour their becoming fixed in the alimentary passage. Such are pins, needles, hooks, plates carrying false teeth, *pieces of bone*, pieces of metal or of porcelain, nails, screws, and other such substances, many of which have been found in the intestine or have passed through it. 3. Indigestible materials of small size which are apt to accumulate until they form huge masses. Indeed, the largest foreign substances found in the alimentary canal have been of this character. They are composed of husks of the oat, vegetable fibres, *grape skins*, or of hairs, or of wool, or of yarn ...... the foreign substance when not passed *per vias naturales*, is apt to remain lodged in special parts of the tube—viz., the stomach, the duodenum, *the lower end of the ileum*, the cæcum, or the rectum."

The case which I have to report illustrates the above quotation in that the obstructive agents belonged to the second and third groups of foreign bodies blocking the canal at the lower end of the ileum.

A woman, aged 42 years, was admitted into Ward No. 21 of the Western Infirmary, Glasgow, on Dec. 23rd, 1901, suffering from symptoms of intestinal obstruction. This was during the Christmas recess when Professor Sir William Macewen was on holiday and I was doing duty for him. The patient stated that she had always enjoyed very good health. There was no history of puerperal fever or of appendicitis. She was married but had no family and had menstruated regularly. She was of a constipated habit and required medicine to get the bowels to move. The motions were never tape-like or streaked with blood but were hard and round like small stones. For some three or four months previously she had been losing flesh and weight without any apparent cause. At the beginning of the period referred to she had an attack of vomiting and obstructive symptoms which lasted for 24 hours the cause of which she did not know. On admission the patient was extremely collapsed and had cold extremities and was almost pulseless. Her temperature was subnormal. She was emaciated and there was marked abdominal distension but no special tenderness; any resistance present was situated towards the left side. Nothing abnormal was felt by rectal examination. Per vaginam the os was found to be large and low and there was some thickening of the right lateral ligament. She had been in her usual health until the morning of the 22nd, when she was suddenly seized with severe and colicky pains in the abdomen, which were worse near the umbilicus and towards the left side. (The seat of obstruction was on the right side near the ileo-cæcal valve.) The pain increased and shortly afterwards she commenced to vomit; the vomit was green at first, then brown, and finally like matter which should come by the bowel with a very foul odour and taste. This vomiting had been continuous since the commencement. There had been no motion of the bowels since the 20th. She had been given castor oil and other purgatives by her attendant, Dr. Douglas Brown of Partick. Enemata had produced no result. Prior to her admission Dr. Brown administered a hypodermic injection of morphia to relieve the pain. Urine had been passed freely.

When I was called to her she was in a state of extreme collapse, almost pulseless, and with the pinched face so well known in such abdominal cases. It seemed a hopeless case, but whatever chance there was for her lay in operation and this was decided on. A mixture of chloroform and ether in equal parts was administered which she took rather badly, the breathing being laboured, the face bluish most of the time, and the pulse extremely feeble. The abdomen was opened in the middle line from the umbilicus downwards. When the peritoneum was divided coils of small intestine presented themselves much distended. Inserting the hand I searched quickly in the ileo-cæcal region, then towards the other flexures of the colon, and finally in the pelvis. (As a rule, in cases of intestinal obstruction collapsed small intestine is found there and it forms a good starting-point in the search for the source of obstruction.) I found no collapsed bowel there and returned to the ileo-cæcal region and on more careful examination, by bringing the parts to the wound, found a few inches of ileum in its normal state just above the valve. Where the normal bowel below and the dilated portion above joined there was a cylindrical plug nearly three inches in length, the upper part, soft and pultaceous, resting on a base of hard, irregular shaped bodies lying on each other like the sticks on a crow's nest. By careful manipulation and [illegible] hard bodies I managed to move [illegible] valve into the colon, the softer, [illegible] owing by the action of the intestines alone. In the manipulation the serous lining at one small point was torn, not by the body within penetrating, but from the tension. A couple of fine Lembert's sutures were inserted for fear of any bad result. Had the patient been possessed of any reserve of strength I should have cut in and removed the cause of obstruction, but time was of vital importance and the nearness of the seat of obstruction to the colon determined the mode of procedure which was the quicker. The wound in the abdomen was sewed up and the usual dressings were applied. She was taken to bed with a very poor pulse and in an extremely exhausted state.

For two or three days she remained in a very weak state but gradually she began to mend and made a perfect recovery. Her temperature was subnormal for three days after the operation. When the bowels moved the excreta were carefully examined and a dozen small bones were found with a large number of raisin-skins. The patient denied having eaten chicken, rabbit, or anything likely to have contained bones of this kind. The bones were sent to Dr. J. F. Gemmill at the anatomy rooms of the university who gave me a photograph of them and stated that they were: one first phalanx of the fourth toe of a not very large common fowl; one second phalanx of the third toe; two third phalanges (right and left) of the second toe; one second phalanx of the outer toe; two third phalanges (right and left) and two fourth phalanges (right and left), of the outer toe; part of fibula; and scale from the back of the ilium.

Before the patient was dismissed she volunteered corroborative information that her husband and herself had two days before her illness dined off a chicken (feet and all), having for dessert a piece of "Scotch cake"—her term for what is more familiarly known here as "currant-bun" The ingestion of the chicken's feet marks a departure in domestic economy that is not likely to be followed by the laity at large and need not even point a moral.

Glasgow.

A BRIEF EXPERIENCE IN ABDOMINAL SURGERY.

BY B. G. A. MOYNIHAN, M.S. LOND., F.R.C.S. ENG.,
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DURING seven consecutive weeks I had under my care in hospital and private practice a succession of abdominal cases that for number and variety are perhaps deserving of record. The mere enumeration of such a series illustrates vividly the enormous increase that has occurred in the last few years in the work that the surgeon is called upon to do.

The following is a summary of the operations. There were four cases of intestinal obstruction, all due to growth in the

TABLE I.—*Operations upon the Stomach.*

Date.	Sex and age (years).	Disease.	Operation.	Result.
1903. July 20th.	F., 35	Hour-glass stomach.	Gastro-enterostomy.	Recovery.
" 21st.	M., 56	Tumour of the pylorus; chronic ulcer.	"	"
" 21st.	F., 27	Chronic gastric ulcer.	"	"
" 25th.	M., 30	Chronic ulcer of the duodenum.	"	"
" 25th.	M., 42	Carcinoma of the stomach and the transverse colon.	Gastrectomy; colectomy	"
" 26th.	M., 52	Malignant disease of the stomach and the liver.	Exploration.	"
August 2nd	M., 46	Carcinoma ventriculi.	Gastrectomy.	Death.
" 6th	F., 42	Chronic ulcer; severe hæmorrhage	Gastro-enterostomy.	Recovery.
" 10th.	M., 39	Duodenal ulcer; hæmorrhage.	"	"
" 19th.	F., 27	Chronic gastric ulcer.	"	"
" 22nd.	M., 25	"	"	"
" 27th.	M., 34	Chronic ulcer; old perforation.	"	"
" 27th.	F., 33	Chronic stenosis at the pylorus.	"	"
Sept. 7th.	F., 50	Chronic ulcer; perigastritis.	"	"
" 10th.	F., 32	Chronic ulcer; dilated stomach.	"	"
" 10th.	F., 52	Chronic ulcer; universal adhesions.	"	"
" 10th.	M., 26	Dilated stomach; pyloric stenosis.	"	"
" 14th.	M., 58	Malignant disease of the pylorus, colon, and liver.	"	Doing well.

large or small intestine. Of these two recovered and two died. There were 18 operations upon the stomach, four for malignant disease, with one death, and 14 for simple diseases with no death. There were six cases of abdominal hysterectomy, five for fibroid and one for double ovarian disease with implication of the uterus. There were two ovarian cysts, one with a twisted pedicle. There were three cases of ventrofixation and colporrhaphy; there was one case of myomectomy for pedunculated fibroid; and one case of extra-uterine gestation. All these cases recovered. There were nine operations upon the gall-bladder and bile passages. Among these were two cases of duodeno-choledochotomy with cholecystectomy, there were three cases of cholecystectomy, and three cases of cholecystotomy. All these patients recovered. There was one exploratory laparotomy, in which gall-stones and advanced malignant disease of the liver were found. This patient, a feeble old woman, died in three days. There were two cases of removal of the appendix for recurring appendicitis; both patients recovered. There was one case of appendicostomy (Weir's operation) done for the purpose of flushing the large intestine affected with muco-membranous inflammation. The patient recovered. There were three cases of colectomy; in one the sigmoid flexure was removed for growth, a loop of small intestine adherent to the growth was also removed; in the second about three feet of the ileum. the cæcum, the ascending and a portion of the transverse colon were removed for malignant disease; in the third a growth was removed from the transverse colon. All these patients recovered. A portion of the transverse colon was also removed with the malignant growth in the stomach in one case. There were one case of Talma's operation (epiplopexy) for ascites and one case of inguinal colotomy. These patients recovered. This makes a total of 52 operations, with four deaths, all the deaths being in malignant cases. For the privilege of admitting many of the hospital cases I am indebted to Mr. E. Ward. Tables I., II., III., and IV. show the most important cases.

TABLE II.—*Operations upon the Gall-bladder and Bile-ducts.*

Date.	Sex and age (years).	Disease.	Operation.	Result.
1903.				
July 24th.	F., 39	Cholelithiasis.	Duodeno-choledochotomy; cholecystectomy.	Recovery.
,, 29th.	M., 51	,,	,,	,,
August 4th.	F., 47	Chronic pancreatitis, fat necrosis, cholelithiasis.	Cholecystotomy.	,,
,, 19th.	F., 54	Carcinoma of the gall-bladder; deposits throughout the liver.	Exploratory laparotomy.	Death.
,, 21st.	F., 48	Gall-stones.	Cholecystotomy.	Recovery.
,, 27th.	F., 35	Cholelithiasis; hydrops of the gall-bladder.	,,	,,
,, 27th.	F., 28	Cholelithiasis.	,,	,,
Sept. 3rd.	F., 20	Cholecystitis; chronic pancreatitis.	Cholecystectomy; drainage of the hepatic and common ducts.	,,

TABLE III.—*Operations upon the Pelvic Organs.*

Date.	Age (years).	Disease.	Operation.	Result.
1903.				
July 26th.	32	Tumour of ovary	Ovariotomy.	Recovery.
,, 27th.	49	Fibroid.	Hysterectomy.	,,
August 1st.	33	Double ovarian and uterine growth.	Hysterectomy: ovariotomy.	,,
,, 8th.	28	Prolapsus uteri.	Ventrofixation; perineorrhaphy.	,,
,, 8th.	30	Extra-uterine gestation.	Removal.	,,
,, 13th.	42	Multiple fibroids.	Hysterectomy.	,,
,, 16th.	35	Fibroid.	Myomectomy.	,,
,, 20th.	48	Myoma uteri.	Hysterectomy.	,,
,, 22nd.	39	,,	,,	,,
,, 22nd.	39	Prolapsus uteri.	Ventrofixation.	,,
,, 22nd.	64	,,	,,	,,
,, 29th.	26	Ovarian cyst; twisted pedicle.	Ovariotomy.	,,
Sept. 4th.	37	Multiple fibroids.	Hysterectomy.	,,

TABLE IV.—*Operations upon the Intestines.*

Date.	Sex and age (years).	Disease.	Operation.	Result.
1903.				
August 5th.	F., 23	Colitis.	Appendicostomy.	Recovery.
,, 18th.	F., 34	Carcinoma of the cæcum and the ileum.	Colectomy, end-to-end suture.	,,
,, 24th.	M., 54	Carcinoma recti.	Inguinal colotomy.	,,
,, 28th.	F., 47	Carcinoma of the sigmoid, adherent small intestine.	Colectomy and enterectomy; end-to-end suture.	,,
Sept. 10th.	F., 50	Carcinoma of the hepatic flexure.	Colectomy, end-to-end suture.	,,

Leeds.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

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NOTE ON GUAIACOL CARBONATE IN THE TREATMENT OF MEASLES.

BY DAVID MONTGOMERIE PATON, L.R.C.P., L.S.C.S. EDIN., L.F.P.S. GLASG.

FOR some years I have used guaiacol carbonate in the treatment of measles with such beneficial results that I feel I can now recommend the remedy to the profession. The idea was suggested to me by the results obtained by its use in bronchial catarrh with fever. For the purposes of treatment I divide bronchial catarrh into two classes—one with fever and the other without rise of temperature. For the first, unless arising from influenza, I find guaiacol a specific and it is many a day since I have had to order an expectorant or other like mixture for a case of bronchial catarrh with fever. For the catarrh without fever it is regrettable that no such specific exists and that the usual treatment has to be administered. The action of the drug on a feverish bronchial attack is to lower the temperature rapidly and to reduce the case to one of an ordinary character without fever. Seeing how successful the treatment had been in such cases a trial of it was made on the catarrhal conditions associated with measles. From the very first it was a success and the rapidity and thoroughness of the recovery were very marked. This was due to the complete abortion of the usual respiratory troubles, so that while the patients had measles, some very severely, with temperatures between 104° and 105° F., they had nothing else, and when the temperature fell to normal they were practically well and in no case have sequelæ been seen.

The following case is an example of what it is capable of doing. The patient was seven years of age, a poorly-grown, delicate, catarrhal subject with hypertrophied tonsils and post nasal trouble. He had just returned from a trip to the northern ports and had brought the measles infection home with him. He had been sent away for the trip to get rid of a persistent catarrh with cough which had troubled him for some months. The prodromal symptoms lasted for four days and he was put on the guaiacol treatment when the rash appeared. The case was a fairly severe one, the temperature being over 103°, but in two days it was all over and in two days more he was up and about the room as well as he ever was. Not only had he no bronchial catarrh (and he has already had two attacks of broncho-pneumonia), but the catarrh which had so long troubled him disappeared and he emerged from the illness in better health than he has ever had.

The treatment seems to have no modifying effect on the measles itself, but it limits the case to measles and that alone without leaving any of the usual sequelæ. For vomiting, which rarely occurs, a little bismuth may be added to the guaiacol and to that again a little Dover's powder if required for diarrhœa. The treatment is begun when the diagnosis is made and continued in full doses till the temperature has fallen to normal, a reduced quantity being given for two days longer to make sure of the result. The dose is calculated at one drachm per diem in powders of ten grains every three hours for adults and children in proportion. The powder is readily taken by children and all the more so if an equal amount of powdered sugar is added. No unfavourable symptoms have ever been seen during its administration which could in the slightest degree be attributed to the treatment, in no case has it failed to abort the bronchial catarrh, and there have been no deaths.

Melbourne.

A CASE OF OBSTINATE DYSPEPSIA FOLLOWED BY PERSISTENT HICCOUGH.

BY JAMES GILROY, M.B., C.M., L.F.P.S. GLASG.

ON Jan. 7th, 1903, I was called to a man, aged 60 years, suffering from severe vomiting and intolerance of food or drink. He told me that as he had not felt well he had gone to Harrogate for a change from here but that he returned much worse than when he left. I ordered poultices to be applied to the stomach, bismuth mixtures, hypodermic injections of morphia, ice to suck, and champagne at intervals. My attendance lasted until Jan. 28th and latterly the stomach-tube was used for lavage. The vomited material was at times quite black and for some eight to ten days I had great apprehensions owing to the supervening of a persistent hiccough. It seemed to defy everything. Hyoscyamus and pressure on the phrenic nerve gave only temporary relief. I found, however, that it was amenable at once to the ordinary doses of tincture of jaborandi with a little spirit of nitrous ether. Whether this points to a uræmic origin I must leave to others to decide. I can only say that the patient was never drowsy. Sleep was the one thing he could not get. Since the above date the patient has passed through a similar attack from Sept. 6th to Oct. 15th. He is now convalescent but the jaborandi again did excellent service in arresting hiccough.

Waterbeck, Dumfriesshire.

NOTES OF A CASE OF PARALYSIS OF THE UPPER EXTREMITIES, PROBABLY DUE TO DIPHTHERIA, ACCOMPANIED BY A RASH (SEPTIC).

BY R. E. P. SQUIBBS, M.R.C.S. ENG., L.R.C.P. LOND.

THE patient was a girl, aged three and a half years, and was first seen by me on August 7th, 1903. She had always enjoyed fairly good health and the family history was good but she had lost two brothers in infancy. Three weeks before the present seizure she had returned from the seaside and had appeared to be well up to August 4th, but on questioning the mother I found that the child had seemed different from usual and slightly ailing. She was said to have fallen on August 5th as if in a fainting fit. Her condition on the 7th was as follows. She was unable to move her upper limbs, the left arm being even more helpless than the right and the first to be affected. The temperature in the axilla was 99 8° F. The child was slightly sick. Her skin was moist and flushed. I gave her some sodium salicylate and ordered the joints to be wrapped in cotton-wool, on which some castor oil was to be poured. On the 8th the temperature in the axilla was 100°. There was no power of movement in the upper limbs but sensation seemed to be unaffected. The child had passed a restless night and there was a well-marked flush upon the chest. An enema was given as the bowels were confined. On the 9th the temperature in the axilla was lower. There seemed to be more ability to move the arms. There was a well-marked scarlatiniform rash over the chest and abdomen. On the 11th there was a well-marked scarlatiniform rash over the chest, back, arms, and thighs. There was no sore throat. There were much restlessness and sleeplessness and the bowels were constipated. The patient took a fair amount of liquid nourishment; she cried out if her arms were moved but she could move the fingers of the right hand. I gave small doses of bromide of potassium. On the 18th the rash had disappeared and the patient felt better. Both arms were still paralysed and attempted movement caused her to cry out. The right arm was improving. On the 24th the patient had much improved except for the paralysis of the left arm and paresis of the right arm, though she could move the fingers and wrist. This day I met in consultation Dr. Lewis W. Marshall who formed the opinion that this was a case of neuritis following diphtheria, the rash being of a septic nature. He also recommended the use of strychnine and iron in small doses. By Oct. 16th, using electricity and tonics, I had succeeded in a great measure in restoring the power of the right upper limb but I regret to say that the left arm is almost completely useless, as the patient is only able slightly to move the wrist and the fingers.

Nottingham.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Prœmium.

MANCHESTER ROYAL INFIRMARY.

PSEUDO (?) ANGINA PECTORIS OCCURRING IN CASES OF MITRAL STENOSIS.

(Under the care of Dr. GRAHAM STEELL.)

THE two following cases have been under observation from time to time at the Manchester Royal Infirmary for several years. For the notes of them now published we are indebted to Dr. M. Stanley Wood, house physician.

CASE 1.—This patient is a woman, 22 years of age. She had attacks of rheumatic fever at five years of age, at 15 years, and again at 19 years. She often suffered from "pains in the joints and sore throat" as a child and has been "short of breath" on exertion as long as she can remember. She had "swelling of the feet" during the last rheumatic attack and several times since. On auscultation a very constant presystolic murmur is heard at the apex of the heart. The history of her anginal attacks is as follows. She first complained of pain in the "region of the heart" at 11 years of age. She has had pain somewhat frequently since that time but only in the region of the heart until five months ago, when the pain commenced to shoot up to the left shoulder and then down the arm on the left side. One month ago the pain commenced to shoot up to the left side of the neck and face. She has not been quite free from "pain round the heart" for two months. The leading features of an anginal attack are as follows. The pain usually begins from 7 to 9 P.M.; it comes on gradually and is preceded by an attack of dyspnœa. It first commences in the region of the heart and is described by the patient as "cramp of the heart." This pain gradually assumes more of a "dragging" character than one of constriction; at the same time "shooting, tingling" pains begin to pass to the left shoulder and down the left arm, sometimes to the elbow only, sometimes to the ring finger and little finger. The right shoulder and arm have never been affected. During recent attacks the pain has also passed up to the left side of the neck and face, the pain here being similar to that in the arm, of a "shooting, tingling" character, at the same time the parts affected feeling as though "asleep." After a moderately severe attack of pain there is tenderness on pressure from the first to between the third and fourth dorsal spines. Superficial tenderness starts below in the middle line about two inches above the umbilicus; it extends upwards on the left side to the neck and lower part of the face. There is no superficial tenderness on the right side. At the back there is a narrow area of tenderness extending from the second dorsal spine outwards to the back of the left shoulder and down the inner side of the left arm as far as the elbow. Below this from the sixth dorsal spine another narrow area with ill-defined lower border passes to join the superficial tenderness in front. An area which is not tender is thus mapped out extending behind from the second to the sixth dorsal spine and bounded in front by the anterior axillary line. The pain passes away gradually, usually leaving the patient towards 1 or 2 A.M. At the same time the breathing improves. During the attack the patient is flushed and is obviously in great pain, and her breathing is difficult. The temperature is not raised and a sphygmogram taken during the attack shows no change.

CASE 2.—This patient is a woman, aged 24 years. She had chorea at 13 years of age and rheumatism at 19 years. She had "always" complained of "shortness of breath." Her feet became "swollen" 18 months ago. On auscultation a markedly constant presystolic murmur is heard. The history of her anginal attacks is as follows. She first complained of "pain round the heart" three years ago and has had repeated attacks since. The pain shoots down both arms and to the left side of the head. The leading features of an anginal attack are as follows. The pain begins more or less suddenly in the evening, lasts a few hours, and goes away gradually. The patient is always "short of breath" during the attack. The pain commences by a feeling of "tightness round the heart," followed by a "dull dragging pain"; it then shoots upwards more commonly to the left, sometimes to the right shoulder; from here the pain shoots down usually to the ring finger and little finger of the left hand but sometimes to all the fingers. More rarely the pain passes to the left side of the neck and face but never to the right side. More rarely still the pain goes to the right shoulder and down to the ring finger of the right hand. The pain is of a "shooting" character here and intermittent. After a fairly severe attack of pain there is tenderness on pressure from the first to between the third and fourth dorsal spines. Superficial tenderness commences below in the middle line at the level of the seventh costal cartilage and passes upwards and outwards on the left side. It is bounded above by the left clavicle. At the back the tenderness commences at the level of the second dorsal spine and is bounded below by the ninth dorsal spine; it passes outwards to join with the tenderness in front. There is also a narrow area of tenderness extending from the second dorsal spine to the back of the right shoulder but not into the right arm; on the left side the tenderness extends down the inner side of the arm as far as the elbow. During the last few attacks the patient has had she has complained of severe headache over the left eye. During a very severe attack the pulse-rate increased to 160 but dropped back to 72 in the course of an hour. The nitrites have been administered but little benefit has resulted. Only morphia gives relief. The striking similarity of these accounts given by patients unknown to one another is of much importance, the distribution and character of the pain being almost the same in both cases.

Remarks by Dr. STEELL.—Angina pectoris has long been associated pathologically with changes in the coronary arteries interfering with the due supply of blood to the heart muscle. During recent years patients—young and female—presenting the typical signs of mitral stenosis have been under my care in the Manchester Royal Infirmary who have complained of pain bearing so close a resemblance to angina pectoris that it seems unreasonable to withhold from the same symptoms the same name. In atheromatous disease of the aorta with aortic incompetence angina pectoris in typical perfection is common enough, but in such cases—in my experience without exception—the coronary arteries are involved, their orifices being commonly caught, as it were, in the disease and greatly narrowed. If angina pectoris do indeed occur in cases of mitral stenosis in young and female subjects the fact seriously weakens the dogma that angina pectoris implies narrowing of the coronary arteries in one form or another. Preconceived ideas in the matter have, I doubt not, prevented me recognising the genuineness of anginal symptoms in cases of mitral stenosis previously and it is perhaps the accidental circumstance of having two cases of the kind in the wards at the same time—in patients in different wards and having no opportunity of collusion—that has forced me to reconsider my belief in the matter.

Another fact with regard to the pain of heart disease that has recently likewise forced itself upon my attention is the very frequent complaint of præcordial pain by the young subjects of dilatation of the heart as a result of rheumatic myocarditis. This variety of pain is altogether different from angina pectoris and in no way suggests it. The actual pain seems to be less severe and acute than angina and not to be paroxysmal but nevertheless it is a source of very great distress to the sufferers. There is no arm pain and the pain is referred directly to the præcordium. I have long been familiar with this variety of pain and in the wards designated it—I think after the teaching of an old master—"cardiac pain" to distinguish it from "angina pectoris." The subject of referred visceral pain and the direct sensitiveness of the viscera is one too large to be entered upon here. The cases bear out on the whole the observations of Dr. J. Ross, Dr. J. Mackenzie, and Dr. H. Head on referred pain. In both cases a marked feature was the persistence of the presystolic murmur and the absence of systolic murmur. "In cases of this kind referred pain is not usually present." Moreover, the following segments associated with the aorta would seem to have been implicated: Inferior laryngeal segment corresponding to the transverse part of the arch; the first, second, and third (fourth?) dorsal segments, and, perhaps, in some measure, the third and fourth cervical corresponding to the ascending arch. The supra-orbital headache in the second case, again, would point to the influence of the second and third dorsal segments. The auricle "refers" to the fifth, sixth, seventh, and eighth (ninth?) segments and the pain and tenderness in this distribution is not surprising. It is the pain "referring" to the aortic segments that, in the cases narrated, is anomalous. I would mention only the statement of Nothnagel that of 1500 cases of valvular disease of the heart "there was but a single case in which angina pectoris occurred in connexion with mitral stenosis" (Osler: "Angina Pectoris").

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The Behaviour of Cancer in Nerve Areas.—The Estimation of Bile Salts in the Urine.—The Agglutination Reaction in Tropical and Asylum Dysentery.

A MEETING of this society was held on Nov. 17th, at the Pathological Laboratory, King's College, Dr. R. T. HEWLETT being in the chair.

Mr. G. L. CHEATLE said that there were two points to which he would wish to call attention with regard to the Behaviour of Cancer in Nerve Areas. The first of these was the relation which rodent ulcer had in its spread to underlying muscles He showed a series of photographs and demonstrated that rodent ulcer when spreading tended to map out certain muscles. The second point was that rodent ulcer did not tend to spread in an area which was anæsthetic. He showed a series of photographs in which although the ulcer had spread rapidly into the areas which were not anæsthetic yet it had remained stationary in the area of skin which had been rendered anæsthetic by the destruction of the nerve

Dr O. F. F. GRÜNBAUM gave a description of a Method of estimating Bile Salts in the Urine. He said that the difficulty of testing for bile salts in the urine was considerable except by the test employed by Matthew Hay which consisted in sprinkling flowers of sulphur on the surface of the urine. If the flowers of sulphur sank bile salts were present, this being due to the diminished surface tension. No other bodies except bile salts gave rise to any marked diminution of surface tension. He therefore considered that if the surface tension could be measured it would give a quantitative result of the amount of bile salts present. After trying various methods he found the following successful. The number of drops of normal urine coming from a graduated *pipette, which was fitted with a specially drawn quartz* needle so as to be readily cleaned, was counted and found to be 123 Sodium glycocholate was now added so that the urine contained 1 part in 10,000 The pipette now delivered 140 drops. When two parts of sodium glycocholate were added to 10,000 of urine the pipette delivered 154 drops, and in this way a table was constructed so that the number of drops coming from the pipette gave the quantity of bile salts present in the solution.

Dr. HEWLETT communicated a paper upon the Agglutination Reaction in Cases of Dysentery. After a review of the literature he said that he had tested a number of cases of dysentery for the agglutination reaction upon a strain of the bacillus dysenteriæ which he had received from Professor Flexner. The results [illegible] the cases of dysentery with one [illegible] reaction, while two or three cas[illegible] reaction. The case of dysentery which reacted was of the amœbic type, so that the reaction seemed to be contradictory though there might have been a double infection. Two fresh cultures of the bacillus dysenteriæ, a "Shiga" *and a "Flexner" strain respectively, having been received* from Professor Flexner, Dr. Hewlett had made further tests. The results were much more promising. Of four cases of dysentery three reacted markedly and the fourth slightly; an amœbic case did not react at all. Two cases of *asylum dysentery also reacted well. It was noteworthy that* these cases reacted with the Flexner strain only and not with the Shiga strain.

CLINICAL SOCIETY OF LONDON.

Myositis Fibrosa.—Measles with Coma.—Pernicious Anæmia with Unusual Features.

A MEETING of this society was held on Nov. 13th, Dr. FREDERICK TAYLOR, the President, being in the chair.

Dr. F. E. BATTEN read a paper on a case of Myositis F[illegible] the pathological examinat[illegible] aged six years, the second o[illegible]was healthy at birth but when nine months old the mother noticed that the back was becoming curved and the legs could not be straightened. The contractions gradually increased and when six years old he was in a rigid flexed position, so that any attempt to extend the legs brought the trunk into a sitting position. The head was drawn down to the right side by extreme contraction of the right sterno mastoid and the recti abdominis muscles were greatly contracted and of cartilaginous hardness. The upper and lower extremities were also contracted in a flexed position. There was no evidence of any disease of the nervous system All the muscles in which the contraction was not extreme reacted to a weak faradic current. No *relaxation of the contracted muscles occurred when the* boy was placed under chloroform. The pathological examination of the nervous system revealed nothing abnormal. With regard to the muscles, the right sterno-mastoid was almost completely converted into tendinous material and fully one-half of the recti abdominis muscles was tendinous. In the muscular portions of these muscles and in the other muscles of the body examined there was a very considerable amount of fibrous tissue between the individual muscle fibres. Many of the muscular fibres were atrophied and muscle showed *considerable fatty degeneration* in places. The question of *etiology* was then considered but no factor could be found to account for the disease. The close relationship of the disease to myositis ossificans was discussed and it was mentioned in support of this view that the great toes were shorter than the second, third, and fourth toes in this case. The question whether the tendon which formed so large a portion of certain muscles was a new formation or only a relative increase owing to the contraction of the muscle was then dealt with and Dr. Batten favoured the view that there was but a relative increase owing to the contraction of the fibrous portion of the muscle. The paper was illustrated by lantern slides and drawings.

Dr. G. NEWTON PITT communicated a case of Measles with Coma. The patient, a male, aged 19 years, in good health, was taken ill on March 10th, 1899, and the eruption developed on the next day. His temperature was high, reaching on one occasion 105° F., but he was not seriously ill until the 15th, when he became *violent and noisy, and on the 17th* he became collapsed and comatose. His tongue was not dry, the rash was well developed, the pulse was 110, and the temperature was 103·4°. On the 18th the temperature and pulse fell. There was more or less coma for four days but he made a good recovery. For many months his memory was defective. The development of coma in measles was a *rare event. It might be due (1) to toxæmia*; (2) to meningitis when the cause was either ear trouble or tubercle; (3) to thrombosis often leading to hemiplegia; (4) to disseminated encephalitis; or (5) to anterior poliomyelitis or disseminated myelitis which was often associated with delirium and coma at the onset. Cases which illustrated some of these causes were quoted. It was interesting to note that out of 200 cases of hemiplegia in children 11 had started in an attack of measles. Some of these were thrombotic in origin. Dr. Pitt did not regard his case as one of toxic origin but due to a local encephalitis which cleared up entirely, leaving only the temporary amnesia He referred to two cases under the care of Mr. E. O. Kingsford. One patient was a child, six years old, who a few days after the onset of an apparently mild attack of measles became comatose and remained so for nine days but who *gradually recovered, the only trace of mischief being a* slight incoördination of the fingers of the right hand. Another case was that of a girl, aged seven years, who recovered excepting that she remained permanently deaf. A similar case was recorded by Dr. Dawson Williams; the patient recovered *after ten days of coma* but a spastic condition of the limbs persisted due to disseminated encephalitis. —Dr. ALEXANDER MORISON alluded to the case of a girl, aged ten years, in whom the temperature was not very high and the rash not abundant; bronchitis supervened with a comatose condition and the child died. Such a case seemed *to justify the popular belief that cases with a full eruption* ran a most favourable course —Dr. SIDNEY P. PHILLIPS could recall many cases of measles in children associated with coma but not in adults. He presumed that the condition of the urine was normal. He would not attach much impo[illegible]greed with D[illegible] the coma in[illegible]possible to distinguish between an encephalitis and a thrombosis; the former was, in point of fact, attended by thrombosis of the smaller vessels.—Dr. WILLIAM HUNTER had seen coma associated with scarlet fever in which there was a probability that encephalitis had occurred.—Dr. PITT, in reply, remarked that pathologically encephalitis was no doubt a diffuse thrombosis but clinically the two conditions were separable.

Dr. WILLIAM PASTEUR communicated a case of Pernicious Anæmia. The patient was a well-built man, aged 24 years, who had had to leave work three weeks before on account of weakness and breathlessness. On admission he was suffering from profound anæmia, with sallow muddy complexion, and *there was some oozing* of blood *from* the gums. His teeth and mouth were in good condition and had never given him trouble. The heart was slightly enlarged and there were hæmic murmurs. The spleen was not enlarged. Sight had failed gradually since the onset of his illness. He was found to be suffering from severe double hæmorrhagic neuro retinitis with patches of exudation. There was frequent sickness throughout his stay in hospital. The temperature rose slightly in the evening but only once reached 100° F. The blood exhibited marked oligocythæmia but without high colour index and there was well-marked leucopenia with *relative* lymphocytosis, the leucocytes numbering only 2600 per cubic millimetre ten days before death, which occurred exactly seven weeks after the attack of faintness. No megaloblasts or poikilocytes were observed at any time. Sections of the liver gave a marked Prussian blue reaction. The spleen gave a slight reaction and the testis a very marked one. Chemical analysis showed that the amount of iron yielded by the liver was more than six times the average and that it exceeded the amount obtained from the spleen. The case presented several unusual features, notably the absence of nearly all *the blood changes commonly present* in the pernicious anæmia *of Addison. The short duration* of the illness and the intensity of the fundus changes were also unusual features. The profound hæmolysis revealed by the chemical examination of the organs afforded the only strong argument in favour of this case being classed as one of true pernicious anæmia.—Dr. HUNTER said it would have been interesting to have known the state of the bone marrow in this case as the blood changes were not those usually associated with the true Addisonian form of pernicious anæmia. The absence of poikilocytosis was particularly an unusual feature. The great rapidity of the case, its sudden onset, and the nature of the blood changes would rather incline him to place the case among that group of anæmias of septic or traumatic origin.—Dr. NORMAN DALTON referred to a similar case of a man in whom there were great oligocythæmia and also a definite septic focus in the shape of a fistula leading from the gums to the palate. A noteworthy point in connexion with the case was that when the sepsis was detected there was a sudden rise in the number of leucocytes.—Dr. PASTEUR replied that he was unaware of any septic trouble in his case and said that his diagnosis was based more especially on the post-mortem findings in the liver and the spleen.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Pathological and Microscopical Specimens.—Intestinal Obstruction.

A MEETING of this society was held on Nov. 12th, Mr. RUSHTON PARKER, the President, being in the chair.

Mr. F. T. PAUL showed: 1. A large Tumour of the Parotid Gland removed from a woman, aged 62 years. The tumour had been present for 25 years. On microscopical examination it was found to have become carcinomatous. 2. Sections of a rare variety of Carcinoma of the Breast, characterised by rapid necrosis and ulceration; it was of a very malignant type. 3. Two specimens of the pylorus which had been removed by operation; one was a fibrous stricture and the other was a malignant one.

Mr. G. P. NEWBOLT showed a specimen of Malignant Disease of the Prostate from a man, aged 63 years. A polypoid excrescence projected into and blocked the neck of the bladder.

Dr. K. A. GROSSMANN exhibited: 1. Specimens of Tænia Solium obtained from a dog. He demonstrated its structure by means of lantern slides and showed that it differed in several respects from the human parasite. 2. Microscopic specimens of a Pigmented Excrescence from the Pupillary Region of the Calf.

Mr. R. W. MURRAY exhibited a section obtained from the Breast of a female patient, aged 55 years. The clinical signs and naked-eye appearances pointed to a carcinomatous condition but microscopical examination revealed a large number of giant cells and no definitely carcinomatous structure, so that a diagnosis of tuberculosis had been made. —Mr. MURRAY also exhibited a portion of Intestine which in the course of an operation for short-circuiting the gut he had occluded at either end and retained within the abdominal cavity. Two years after this operation the portion of intestine so occluded was enormously distended with offensive muco-purulent fluid and led to the death of the patient.

Mr. J. DOUGLAS CRAWFORD showed (1) a specimen of a large Cystic Goitre removed from the thyroid isthmus; and (2) two small Lateral Lobes of a Prostate enucleated for Urinary Obstruction.

Dr. W. T. D. ALLEN showed a specimen of Ulcerative Endocarditis which was associated with Tuberculosis of the Cerebral Meninges and the Lungs.

Dr E. E. GLYNN exhibited (1) a specimen of Pontine Hæmorrhage, and (2) specimens illustrating Fat Necrosis in the Omentum.

Sir WILLIAM M. BANKS showed an Enchondroma removed by operation together with a portion of the scapula from which it had originated.

Mr. PAUL read a note upon a case of Intestinal Obstruction due to a Large Gall stone successfully removed from the upper part of the ileum The patient was a woman, aged 62 years, who was suddenly attacked with vomiting and intestinal obstruction. Three days later she had copious fæcal vomiting and a flat abdomen. A diagnosis of obstruction high in the intestine was made which was thought to be probably due to a gall stone because of a history of previous symptoms She had never had typical attacks of gall stone colic but had complained for a considerable time of a dull pain in the right hypochondrium She made a rapid and complete recovery.—Mr. W. THELWALL THOMAS mentioned two cases of a similar nature in neither of which had there been previous jaundice. He stated that in the published cases the obstruction had been found most commonly in the ileum, indicating ulceration primarily into the duodenum. Ulceration into the colon was rare.—Mr. NEWBOLT showed a large biliary calculus which he had removed some months before from the same portion of the intestinal tract and which had also caused complete obstruction.

Dr. GLYNN described two specimens of Secondary Diffuse Carcinomatosis of the Spleen and discussed the microscopic appearances.

The following members took part in the discussions: The PRESIDENT, Mr. PAUL, Dr. W. ALEXANDER, Mr. F. C. LARKIN, Dr. F. H. BARENDT, Mr. THELWALL THOMAS, Dr. W. B. WARRINGTON, Dr. A. S. F. GRUNBAUM, Dr. N. RAW, Mr. HAMILTON, Dr. H. BRIGGS, and Mr. K. W. MONSARRAT.

The following card specimens were exhibited:—

Mr. THELWALL THOMAS: (1) A Piece of Cedar-wood Pencil, one and a quarter inches long, removed by Suprapubic Cystotomy; and (2) a specimen of Cystic Mastitis.

Dr. GLYNN: A specimen showing Rupture of a Caseous Bronchial Gland into the Trachea causing Asphyxia.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Some Surgical Operations in General Practice.—Cæsarean Section.—Removal of the Prostate and Prostatic Urethra.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Nov. 6th, Mr. C. RICHARDSON, the President, being in the chair.

Mr. J. STEWART related the following cases: Case 1. Disease of the Hip-joint in a child, aged 11 years. There were a sequestrum of the acetabulum, erosion of the cartilage of the head of the femur, and putty-like material extending down the shaft for five inches. Excision was performed and recovery ensued. Case 2. Double Femoral Hernia in a female, aged 21 years, both of which were operated upon at the same time. The left presented the curious condition of a sac within a sac separated by fluid. A radical operation was performed with a good result. Case 3 Pott's Fracture of the Ankle in which the inner malleolus failed to unite. Subsequent division of the fibula below the seat of the fracture and suturing of the inner malleolus to the shaft were performed with a good result. Case 4. Papilloma of the Bladder in a man, aged 64 years. Suprapubic cystotomy was performed and a sessile growth covering a space of the size of half a crown was removed with a perfect result. Case 5. Curettage of the Uterus in a patient, aged 24 years. Complete suppression of the urine supervened with hiccough, diarrhœa, and death on the fifth day. Case 6 Very Acute Appendicitis (Fulminating) in a man, aged 21 years. The acute symptoms subsided. The appendix was removed at the end of six weeks. Complete recovery followed. Case 7. Fulminating Appendicitis in a girl, aged 16 years, which was caused by a blow over the appendix, resulting in a small tear, exactly over one of two concretions. On concretion was of the size of a pea and the other was of the size and shape of an almond. The appendix was removed on the third day. Severe hæmorrhage from the lower angle of the wound (in which was a gauze drain) occurred on the fifteenth day. Complete recovery ensued.—Mr. B. G. A. MOYNIHAN and Mr. R. LAWFORD KNAGGS discussed the cases and Mr. STEWART replied.

Dr J. B HELLIER read a paper on the Modern Operation of Cæsarean Section by the Conservative Method. He showed two patients on whom it had recently been performed. Both mothers and both children were saved He sketched the development of the operation and dwelt on the confidence with which it might be undertaken when the patient came under care before labour had commenced.—The PRESIDENT and Dr. F. A. DE T. MOUILLOT discussed the paper and Dr. HELLIER replied.

Mr. MOYNIHAN read a paper upon a series of 12 cases of Suprapubic Removal of the Prostate and of the Prostatic Urethra for Senile Enlargement of the Prostate. The first operation was performed in September, 1901, and was accidental. During the stripping of the prostate the separation of the gland proceeded very rapidly and almost without warning the whole gland came away with the urethra The patient recovered well from the operation and was now, and had always been, perfectly well. He passed urine in an absolutely normal manner. 11 similar cases had been operated upon deliberately since; there had been one death, in a very feeble old man with advanced cystitis. The largest prostate weighed six and a half ounces. In four cases a stone had been removed as well as the prostate. The details of the operation and of the after-treatment were fully described.—Mr. **STEWART**, Dr. J. **IRVING**, and Mr. **LAWFORD KNAGGS** took part in the discussion and Mr. **MOYNIHAN** replied.

The following cases, pathological specimens, &c., were shown:—

Dr. E. C. **CROFT**: Large Urinary Calculus from a Female Bladder.

Dr. C. M. **CHADWICK**: (1) Unusual Enlargement of the Spleen associated with Cardiac Disease; (2) Enlarged Spleen in a Child; and (3) two cases of Graves's Disease.

Mr. H. **LITTLEWOOD**: (1) A patient operated on for Hydatid of the Spleen (Bond's method); (2) a patient operated on for Enlarged Thyroid; (3) Parts from Tubal Gestation; (4) Ovarian Cyst with a Twisted Pedicle; (5) Fibroid of the Uterus and Cervix (weighing seven pounds) removed by Abdominal Hysterectomy; (6) two specimens of Perforated Gastric Ulcer; and (7) Encysted Hydrocele of the Testis.

Dr. T. **CHURTON**: (1) A case of Splenic Leukæmia; (2) a case of Splenic Anæmia; and (3) a case of Splenic Anæmia with Cirrhosis of the Liver (Banti's disease).

Mr. **MOYNIHAN**: A series of specimens of Complete Prostatectomy.

Mr. H. **SECKER WALKER**: Some Ophthalmic Specimens.

Mr. W. H **BROWN**: (1) Enterectomy and Colectomy in the same patient; (2) a Growth of the Cæcum; (3) a series of Appendices; and (4) Congenital Tumour over the Sacrum.

Dr. T. **WARDROP GRIFFITH**: (1) Some cases of Rodent Ulcer treated by the X Rays; and (2) two cases of Lichen Planus.

Mr. G. P. **ANNING**: A case for Diagnosis (? Hydrocephalus).

ROYAL ACADEMY OF MEDICINE IN IRELAND.

PATHOLOGICAL SECTION.

Cytology of Serous and Sero-fibrinous Effusions.—Exhibition of Specimens.

A **MEETING** of this section was held on Nov. 6th, Dr. H. C **EARL**, the President, being in the chair.

The **PRESIDENT** delivered an address on the Cytology of Serous and Sero-fibrinous Effusions. He described the methods of obtaining and making microscopic preparations of the cells from effusions and related the results which Widal and others obtained by cytological examination of effusions from the pleura, pericardium, and peritoneum, of articular fluid and of hydrocele fluid, as well as of the cerebro-spinal fluid. He considered that the diagnostic value of a predominance of lymphocytes in a pleural effusion as a sign of the tuberculous nature of the effusion was very great but that the results of examinations of pericardial and peritoneal effusions were not sufficiently numerous or sufficiently consistent to warrant any precise conclusions at present. He further considered that cytological examinations of fluids from joints and from hydroceles had given results of some diagnostic value and that an increase of cells with predominance of lymphocytes in the cerebro-spinal fluid was in cases of meningitis of considerable value as denoting the tuberculous origin of the affection.

Mr. **ARTHUR H. BENSON** and Dr. W. **LANGFORD SYMES** showed a Tumour removed from the Apex of the Orbit of a woman, aged 48 years. Three and a half years previously she had received a blow in the eye from the head of a calf which she was feeding. Two months after the injury the sight began to fail and at the time of the operation vision was wholly gone from atrophy of the optic nerve. The eye was proptosed and very defective in motion. The growth, which entirely surrounded the nerve, occupied the entire apex of the orbit and the globe sat in a depression on its anterior surface, but was quite free from attachment to it in any place. The very slow growth of the tumour and its very slight malignancy were remarkable, but the point of greatest clinical interest was the loud respiratory bruit which could be heard with a stethoscope placed over the globe, both inspiration and expiration being easily heard. The bruit was also to be heard, though to a much less degree, over the sound eye. There was no vascular bruit to be heard. Since the removal of the tumour nearly four months ago there has, according to the patient's account, been no recurrence and she wears an artificial eye. Dr. Symes found the tumour to belong apparently to the sarcomata but with a peculiar locular or alveolar arrangement.

The **PRESIDENT** exhibited a Brain with Small Aneurysms on Various Cerebral Arteries.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on Nov. 13th, Dr. Joseph Groves, the President, being in the chair.—Dr. Sidney Davies (medical officer of health of Woolwich) read a paper on the Sources of Infection in Tuberculosis based on an examination into 50 deaths of children under ten years of age certified as due to tuberculosis or meningitis, and 173 notified cases of phthisis in his district from July, 1902, to June, 1903, and the Registrar General's annual summaries. Of the 50 deaths of children 13 were due to simple meningitis and 37 to tuberculosis, and from a table showing the history, surroundings, &c., of the tuberculous cases it appeared that in 31 the infection could be certainly or probably traced to some member of the family or household, and in two to the milk, while in four the cause remained unknown. As regards adults the question was beset with difficulties owing to the insidious onset, the slow and uncertain progress of the disease, and the possibility of an indefinite number of successive exposures to infection, some of which the individual might resist while succumbing to others. After classifying his cases according to age, sex, and the localisation of the lesion he remarked that the Registrar General had contrasted the great reduction, amounting to 50 per cent. during the past ten years, in the mortality from peritoneal tubercle with the much smaller decline in the deaths from tuberculous meningitis which closely followed the general mortality from phthisis. The former decline was most marked in London and district where the milk-supply had been brought to a greater or less extent under municipal control and afforded strong evidence of the connexion between abdominal tuberculosis and an in[illegible] l infection took place in t[illegible] e public-h use, and the [illegible] were infected in the home only, while the probable sources among the adults in his tables were—home, males 14, females 11; workshops, males 27, females two; public-houses, males 40, females three; and undetermined, males 48, females 28. The workshops, however, of the Royal Arsenal were so lofty and spacious as well as suitably ventilated as to approximate to work in the open air. As to the public house there were two factors to be considered, the saturation of the sawdust-sprinkled floors with expectoration, more or less of it always that of consumptives who often passed hours there when unable to work, and the tendency of alcoholic excess to induce tuberculosis, from which, indeed, the majority of habitual drunkards ultimately died and which accounted for the extraordinary mortality among barmen, though in their case due perhaps rather to their constant exposure to infection, especially when sweeping the floors. Brouardel had insisted strongly on this connexion between alcohol and tuberculosis, which was confirmed by the returns of the Registrar General.—Dr. A. Newsholme described the steps being taken in Brighton to minimise the danger of infection in the public-house but expressed his belief that there were far greater dangers in the workshop than Dr. Davies seemed to think and urged the necessity for damp and dustless cleaning. It was, however, in sanatoriums only that the precautions could be satisfactorily taught. Tuberculosis from milk was not always or necessarily mesenteric but might be first manifested in the lungs, as Nocard had shown glanders to be even when introduced directly into the stomach.—Dr. F. J. Allan agreed as to the great danger of spitting in workshops but considered that it was scarcely less in warehouses and offices. With children it was not easy to distinguish between simple and tuberculous meningitis and the latter might be through tonsillary infection with dust as likely as with milk.—Dr. E. F. Willoughby referred to Brouardel's classical instance of 23 clerks in one office succumbing to tuberculosis in 11 years after the disease had been introduced by one of them but fresh cases ceasing to appear after he had spittoons provided and the rough floor planed and waxed and mopped with damp cloths instead of being dry-swept and the air full of dust when the clerks entered in the morning.—Mr. G. Milson supported from his own experience the remarks of Dr. Newsholme and Dr. Allan, and Mr. Shirley F. Murphy spoke as to the question of milk control and boiling. The reduced phthisis among women might, he thought, be partly due to better living through the cheapening of the chief articles of food.—Dr. F. G. Crookshank asked for an explanation of the fact that 25 per cent. of the deaths in lunatic asylums were due to phthisis, though the dements who formed the majority of cases rarely expectorated at all. The lungs were, however, by no means constantly the primary seat of infection as was commonly supposed, for most necropsies on acute cases at the Hospital for Consumption and Diseases of the Chest at Brompton pointed to the mesenteric glands being first involved.—Dr. Symons wished that such investigations could be carried out by medical officers everywhere on uniform lines. Nowhere had there been such a reduction of overcrowding and at the same time of phthisis as at Bath, and Dr. Christopher Childs referred to the experiments of Cornet and others as to the infectiveness of cough spray and of coughing and loud speaking as means of diffusing infection.

Pathological Society of Manchester—A meeting of this society was held on Nov. 11th, Dr. E. S. Reynolds, the President, being in the chair.—Dr. R. T. Williamson showed specimens of the Brain from a case of Intense and Persistent Headache. Paralytic symptoms and optic neuritis were absent. There were no signs of disease of the thoracic or abdominal organs and the urine was normal. The necropsy revealed dilatation of all the ventricles of the brain with fluid; no tumour or abscess was present. Dr. Williamson also showed microscopical and macroscopical specimens of a Brain Tumour in the White Matter of the Cerebral Hemisphere (centrum ovale) The symptoms were those of hemiplegia of gradual onset and finally motor aphasia and word deafness. Headache and vomiting were absent at first; no optic neuritis was present at a late period of the illness. The growth consisted of a connective-tissue stroma in which were imbedded tubules and small cyst-like cavities lined with cylindrical epithelial cells closely resembling those lining the central canal of the spinal cord and the primitive neural tube of the embryo.—Dr. R. G. Rows gave a lantern demonstration of Cavities in the Cord of Vascular Origin. In the first case there was an extreme degree of hyaline degeneration of the walls of the vessels, which not only interfered with the flow of blood but also obstructed to a large extent the chief lymph paths of the spinal cord—viz , the perivascular sheaths in which there are no walled lymphatic vessels but the lymph flows through its interstitial spaces in an ascending stream. A chronic œdema was thus produced which led to the formation of cavities around the vessels by distending the interstitial spaces of these sheaths and by causing an atrophy of the nervous and neuroglial structures by interfering with their nutrition. In the second case micrococci were found in the posterior root ganglia and there was an acute vascular change following the toxic infection, which in some places had led to rupture and hæmorrhage and in others to the formation of cavities around the vessels by an acute œdema, which again had distended the interstitial spaces of the perivascular sheaths. In neither of these cases was there any sign of proliferation of the neuroglia, owing in the first case to malnutrition and in the second case to a paralysing, by the toxins, of its power of reacting to an irritant. In a third case similar cavities were seen in the cortex and white matter of the brain of a girl who had died in the condition of status epilepticus.—Dr. I. Walker Hall communicated the results of a research on the Purin Bodies of the Fæces. He found that with small and medium quantities of purin bodies in the food there was no increase in the amount of purin bodies excreted. When large quantities of foods rich in purin were taken or purin bodies themselves were ingested the fæcal purins were augmented. Hypoxanthin and xanthin were well absorbed but guanin and adenin were to a great extent excreted. There was, however, a distinct personal factor in regard to the absorption of the purin bodies.

Forfarshire Medical Association.—A meeting of this society was held on Nov. 5th, Dr W. Graham Campbell, Vice-President, being in the chair.—Mr. D. M Greig showed a patient five months after excision of the entire rectum and part of the sigmoid flexure by the trans-sacral route for Epithelioma. The patient was a man, about 37 years of age, who had had symptoms for about a year before operation. The result was very satisfactory and it was pointed out how much better and more comfortable this patient was with an artificial anus in the upper angle of the sacral wound than he could have been with the artificial opening in the iliac or lumbar regions.—Dr. W. E Foggie showed three patients (two in one family) suffering from Pseudo hypertrophic Paralysis. In one patient there was a marked enlargement of the tongue and in addition there was some hypertrophy of the lower lip that was suggestive of commencing facial involvement. It thus formed one of those transition cases that were used by Erb in his argument for the inclusion of all forms of idiopathic degeneration under one common clinical name—progressive muscular dystrophy. As regards treatment any good that had been obtained had resulted from systematic muscular exercises.—Dr. J. Mackie Whyte demonstrated Kronig's method of percussing the apices of the lungs on a patient on whom he also showed Litten's sign. Several diagrams were shown of this method of percussion in diseased chests.—Dr. C. McVicar showed a female patient, aged 61 years, nine months after excision of the right knee-joint with firm union. He described the disease as having been very advanced, affecting ligaments, cartilage, and bone. Firm union was not obtained until four months' rest in bed after the operation and now the patient was free from pain and able to walk with ease. Comment was made on the firm union resulting in a patient of such advanced age and with this result he compared those obtained in old persons who had come under his care for intracapsular fracture of the neck of the femur. In one case he obtained bony union only after seven months' treatment. He showed two specimens obtained post mortem from similar cases which showed no attempt at bony union, in one after being seven years in bed. He also showed a specimen of similar fracture which occurred in a man, aged 82 years, who died a month later. Post mortem recent hæmorrhages were found in the neighbourhood of the joint but no callus formation was present. He thought that these cases illustrated the utter futility of treatment by splints of intracapsular fractures of the neck of the femur in old people probably due to the difficulty in steadying the upper fragment. These patients should simply be made comfortable for a month or so and if able for operation the head of the femur might then be excised.—Mr. Greig considered that excision of the head of the femur was accompanied by such an amount of shock as usually to contra-indicate interference in old people.

Dermatological Society of London.—A meeting of this society was held on Nov. 11th, Dr. T. Colcott Fox being in the chair.—Dr. J. H. Sequeira showed: 1. A woman, aged 56 years, with Multiple Rodent Ulcers on the Face. The history was that 30 years ago she had had under the left eye a growth diagnosed as a molluscum and of the size of a pea. This was excised and afterwards cauterised many times but it had grown until at the age of 44 years it gradually died away. Ten or 12 years ago another sore appeared in the neighbourhood of the left eye which had spread and broken down into an ulcer during the last three or four months. There were at the time of exhibition another large ulcer on the nose of 12 months' duration, another on the right upper eyelid of two months' duration, an ulcer on the chin, and others on the right cheek, all of about ten months' duration. There was also a papillomatous condition round the alæ nasi from which the patient averred the ulcers always developed. The case was interesting on account of the extreme rapidity of spread as well as on account of the multiplicity of the growths. 2. A man, aged 58 years, showing a very good example of Lichen Planus in which the individual papules spread centrifugally so as to form rings. The eruption was first noticed 15 months previously and affected the arms and the legs.—Dr. A. Whitfield showed a man who had for two years at least been affected with Typical Lymphadenoma. In June, 1903, he had begun to develop itchy papules over the arms, the buttocks, and the legs. There was also a large patch of pigmented scarring where similar papules had been on the right breast. The newest lesions appeared to be urticate in nature and these on subsiding left hard infiltrated papules and finally insignificant scars. The diagnosis offered was pseudo-leukæmic prurigo and this was accepted by all the members.—Dr. E. G. Graham Little showed: 1. A case of Prurigo

(Hebra) in a youth. aged 19 years, the eruption having begun only one year previously and the mother being certain that he had had no previous skin eruption. 2. A case of Dermatitis Herpetiformis in a woman who was six months pregnant and in whom the eruption had existed for four weeks. The history showed that she had had a previous attack three days after her last delivery. 3 A girl, aged 17 years, with a very typical eruption of the small Follicular Syphilide all over the back and the limbs but especially over the gluteal regions.—Dr. J. M. H. MacLeod showed a male infant, aged 11 months, who had been affected with Grouped Comedones of the Chest since his seventh month. The lesions were very numerous and developed into red papules and then into pustules, finally leaving a little scarring on resolution. No local application had been made to the chest in the way of a liniment since birth.

LARYNGOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on Nov. 6th, Dr. P. McBride, the President, being in the chair.—Sir Felix Semon, in opening a discussion on the After-treatment of Intranasal Operations, said that he should limit his remarks strictly to intranasal operations, entirely excluding those performed for disease of the accessory and naso-pharyngeal cavities. Local anæsthesia, such as the use of cocaine, was to be preferred to general anæsthesia in the great majority of operations as it was essential for the patient to be sitting upright so that the operator might see clearly. With regard to adrenalin he was under the impression that since he had used it he had heard more frequently from patients of the occurrence and persistence of hæmorrhage than in previous times. For the prevention of adhesions the advantages and disadvantages of plugging were referred to, the opinion being expressed that plugging was apt to produce considerable irritation, to cause local anæmia of the injured parts, and thereby to prevent healing With the view of diminishing (though it did not actually prevent) inflammatory reaction, a spray consisting of three grains of cocaine and half a drachm of boric acid in six ounces of water was recommended to be used three times daily. For the prevention of secondary hæmorrhage firm plugging should be avoided, as it did not with certainty prevent it, as such hæmorrhages might, and often did, occur when the tampon was removed on the day after operation., If there were no reason to expect considerable hæmorrhage he used no plugging but ordered the boric acid and cocaine spray previously indicated. If the wound were at all extensive a strip of cyanide gauze soaked in a solution of hydrogen peroxide was introduced with the view of preventing subsequent hæmorrhage. If bleeding occurred the patient should be directed to apply cold-water compresses over the nose. The advice that the patient should inspire deeply with closed mouth and slightly expire with open mouth would also be found very useful. In some cases, of course, powerful styptics and energetic plugging by means of Belloc's cannula were indispensable. Meddlesome interference, such as washing out, cauterising of granulations, insufflations, and similar procedures, was deprecated as being usually superfluous and sometimes even prejudicial to healing. If there were risk of the formation of adhesions the cicatricial bands should be divided by cutting instruments (not with a probe) and a piece of gutta-percha paper should be introduced into the nose.—Mr. H. T. Butlin, Dr. R. H. Scanes Spicer, Dr. StClair Thomson, Mr. E. Cresswell Baber, and others took part in the discussion.

HUNTERIAN SOCIETY.—A meeting of this society was held on Nov. 11th, Dr. F. J. Smith being in the chair.—Mr. Harold L. Barnard opened a discussion on Appendicectomy. He thought that the great dangers to be [illegible] before the appendix was divided. Catgut was preferable to silk and he particularly deprecated the use of large silk. Appendicectomy might be performed either as an interim operation or during the acute attack. In the former case he objected to deferring the operation until after the second attack as acquiescing in a mortality of from 10 to 30 per cent. of all cases; operation after the first attack was the practical rule and saved from 7 to 10 per cent. of the patients; operation after one attack of appendicular colic was the ideal operation and would save nearly the total mortality. When appendicectomy was performed during the acute attack Mr. Barnard advocated it in the first 24 hours of the first attack, but he was not so confident that it should be done in the first 24 hours of second or third attacks, for [illegible] were less. I[illegible] be avoided [illegible] any prolonged search for the appendix. In general peritonitis, since the damage was already done, he did not think that it mattered much whether the appendix were removed or not.—Mr. James Berry pointed out how important it was to avoid section of nerves in abdominal incisions since this led to atrophy of muscle and consequent ventral hernia. He thought that fine silk possessed many advantages over catgut and few disadvantages.—Dr Ernst Michels advocated making the incision through the sheath of the rectus. He remarked that patients liable to appendicular colic often improved in health after removal of the appendix.—Mr. G. L. Cheatle, Dr. W. H B. Brook (Lincoln), Mr. Hugh M. Rigby, and others also discussed the paper.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—An ordinary meeting of this society was held in the Medical Library of University College Bristol on Nov. 11th, Mr. J. Paul Bush, being in the chair.—Mr. T. Carwardine showed specimens of Mammæ in Ovarian Dermoid and a Prostate removed by the suprapubic method.—Dr. E. W. H Groves, Dr. P. Watson Williams, Mr. C A. Morton, and Mr. W. Roger Williams remarked on the specimens.—Dr. J. O. Symes showed microscopic specimens of Trypanosomes in human blood.—Dr. E M. Skerritt and Dr. F. H. Edgeworth spoke on the specimens.—Mr. A. W. Prichard read a paper on the Subsequent History of a case of Pylorectomy and showed specimens.—The President, Mr. Morton, Mr. Carwardine, Mr. Roger Williams, and Mr. G. Munro Smith remarked on the case.—Dr. J. Michell Clarke read an account of a case of Hereditary Syphilis and showed microscopic specimens from the spinal cord which was affected [illegible] consecutive degeneration of [illegible]ts; also of a case of Glioma [illegible] the cord of whom was found a cavity (hydromyelia) in the lower cervical region.—Dr. Walter C. Swayne read a paper on a case of Cæsarean Section.—Mr. Roger Williams read a short paper on Subungual Exostosis.—Dr. J. L. Firth remarked on the paper.

PATHOLOGICAL AND CLINICAL SOCIETY OF GLASGOW.—A meeting of this society was held on Nov. 11th, Mr. A E. Maylard, the President, being in the chair.—Dr. Donald Fraser discussed a case in which Cerebral Hæmorrhage occurred in a patient who had been recently operated on for appendicitis. Before the operation he had shown symptoms of cerebral disturbance amounting almost to mania. Eventually he was sent into a lunatic asylum. The condition was regarded as of septic origin—thrombosis followed by hæmorrhage. The region of the brain principally affected was the frontal lobes.—Dr. James Hamilton read notes of a case of Hydronephrosis in a young man. The specimens were demonstrated by Dr. John Anderson.—Dr. W. B. Inglis Pollock read a paper on Tuberculous Iritis and demonstrated specimens.—Dr. J. M Munro Kerr demonstrated a specimen of Retroperitoneal Dermoid Tumour removed by Vaginal Cœliotomy. It was a thin-walled cyst with the usual contents of a dermoid. It lay behind the peritoneum but in front of the rectum and quite free from it. The uterus, the ovaries, and the Fallopian tubes were normal.—A large exhibit of microscopic and naked-eye specimens and skiagrams was also on view during the meeting.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 6th, Dr. R. E. Scholefield, the President, being in the chair.—Mr. G. Bellingham Smith read a paper on Menstrual Pain. He said that from the point of view of treatment cases might be divided into two main classes—namely, those in which the pain preceded by some days the menstrual flow and those in which the pain occurred about the time of onset of the flow. The cases that would not be benefited by division or dilatation of the cervix fell under the first heading, while those which would derive benefit from this operation came within the second class. In cases where other measures gave no relief, the ovaries not being diseased, and it was deemed advisable to perform oöphorectomy, then removal of one ovary was useless even if the pain were on that side alone, as after removal of that ovary the pain would go to the other. He mentioned a case where after removal of both ovaries the patient returned to ask for the right kidney to be taken away as the pain was as bad there as it had formerly been in the ovaries.—The President, Dr. T. O. Meggison, and Dr. J. H. Keay discussed the paper.

FOLKESTONE MEDICAL SOCIETY.—A meeting of this society was held on Nov. 6th at the Victoria Hospital.—The President (Dr. T. Eastes) showed a case of Ankylosis of the Elbow-joint; Mr. A. Wylie a case of Post-hemiplegic Chorea in a young child; Mr. W. F. Chambers a case of Gumma of the Hand; Mr. W. W. Linington a case of Tabes Dorsalis in a man, aged 27 years; and Dr. W. J. Tyson two cases of Congenital Cataract in patients 16 and 18 years of age respectively.—Dr P. G. Lewis read notes and showed a specimen of Embolism of the Superior Mesenteric Artery of a woman, aged 46 years, in whom 20 inches of the small intestines had been affected. The aorta at the origin of the superior mesenteric artery showed a localised ulcerated surface of the lining membrane. The remaining part of the aorta was normal.

Reviews and Notices of Books.

Disease of the Pancreas: its Cause and Nature. By EUGENE L. OPIE, M.D., Associate in Pathology in the Johns Hopkins University. London and Philadelphia: J. B. Lippincott Company. 1903. Pp. 359. Price $3.

THIS work is written mainly from the point of view of etiology and pathology and the clinical aspect is only lightly touched upon. Few conditions present greater difficulties of diagnosis than the various forms of pancreatic disease; but with an increased knowledge of their etiology, their nature, and their relation to other diseases, doubtless their recognition will be facilitated.

The etiology of pancreatic diseases presents problems which have long remained unexplained. This is partly due to the fact that lesions of the organ seldom occur as primary or isolated conditions but are usually consequent upon changes in the duodenum, the liver, or the bile passages. Dr. Opie brings evidence to show that both acute hæmorrhagic pancreatitis and chronic interstitial inflammation may be produced by biliary calculi. Pathological changes in the gland have emphasised the importance of certain gross anatomical and histological features and for this reason especial stress has been laid on the normal structure of the organ. The chapter devoted to the Anatomy of the Pancreas and its Variations is consequently a long one. It is shown that the pancreas is subject to greater variation in size and shape than are other important glandular organs—for example, the ducts of the gland vary widely in their conformation and in their relation to one another and to the common bile duct. Diagrams are given demonstrating the varying relations of the duct of Santorini to the duct of Wirsung and by means of which the differences in the arrangement of the anastomosis of the ducts are clearly shown.

In the chapter upon Histology attention is directed to the islands of Langerhans. Dr. Opie has himself made a close study of these bodies and maintains that certain facts may be considered to be established. He finds that these "islands" are composed of cells of epithelial type, having the same origin as those which form the acini. Ramifications of the pancreatic duct do not penetrate the interacinar islands, while, on the other hand, these bodies have an intimate relation to the vascular system. The function of these structures has been the subject of some speculation and strong evidence has been afforded that the islands of Langerhans control the assimilation of sugar.

Dr. Opie has devoted a whole chapter to the discussion of the relation of diabetes mellitus to lesions of the pancreas. After an interesting criticism and examination of the work accomplished by various observers he thinks that it has been proved that in considerably more than half of all cases diabetes is the result of a destructive lesion of the pancreas. Further, that when diabetes is the result of pancreatic disease injury to the islands of Langerhans is responsible for the disturbance of carbohydrate metabolism. The most common lesions which injure the islands are chronic interstitial inflammation of the interacinar type and hyaline degeneration. Chronic interstitial inflammation may be the result of general arterial sclerosis or of toxic substances—for example, alcohol causing chronic inflammation of both the liver and the pancreas. The islands of Langerhans show a special tendency to undergo hyaline degeneration but the cause of this lesion is obscure. Finally, other lesions of the pancreas do not exhibit a tendency to select the islands of Langerhans but produce diabetes because they destroy the interacinar islands along with the secreting parenchyma. These observations seem to be well founded and are of great value in the comprehension of the pathology of diabetes mellitus.

The symptoms and treatment of pancreatic disease are briefly but ably discussed. The difficulties of diagnosis are pointed out. The symptoms certainly present little that is characteristic upon superficial examination and their true origin is obscured by the involvement of other organs, notably the liver, the bile passages, and the duodenum. Dr. Opie, however, in our opinion, rather exaggerates the difficulties when he says: "Disease of the pancreas is rarely recognised during life." By careful observation of the progression of the symptoms and assemblage of physical signs a presumptive diagnosis can frequently be arrived at. Medical treatment in cases of pancreatitis can do but very little and it is only by surgical means that the seat of the disease can be reached.

This volume is well worthy of perusal and contains much that is interesting concerning pancreatic disease. Scant space is devoted to such diseases in most text-books of medicine and pathology, consequently the information contained in this work is of exceptional value.

The Nature of Man: Studies in Optimistic Philosophy. By ELIE METCHNIKOFF, Professor at the Pasteur Institute, Paris. English translation edited by P. CHALMERS MITCHELL, M.A., D.Sc. Oxon. London: William Heinemann. 1903. Pp. 302. Price 12*s.* 6*d.*

NEARLY 40 years ago Professor Tyndall scandalised the Church and society by asking the following question: "Can prayer prove itself a match for vaccination?" To-day Professor Metchnikoff, with the obvious sincerity of a seeker after truth, asks whether religion or philosophy can offer suffering humanity consolations in the least degree comparable to those which science can afford. Those who read his remarkable work entitled "The Nature of Man" and can convince themselves that his story and the message of hope which it conveys are not the vain imaginations of megalomania but the logical inferences to be drawn from observed facts may well pause for a reply. Society to-day is differently constituted from what it was some 40 years ago when Professor Tyndall startled it with his question, and presumably it will receive Professor Metchnikoff's iconoclasm in a spirit of greater tolerance. The Church, however, no less militant in the present year of grace than it was in 1866, may be expected to put on its armour and to sally forth to battle to slay this new disturber of its ancient faith. The argument which Professor Metchnikoff unfolds in a story more fascinating than the Arabian Nights is that human misery and suffering are due to disturbances in our organic equilibrium which strike discords within our mortal frame and rack our flesh with the torments of Procrustes. These disharmonies between our corporeal organisation and our environment have been forced on suffering humanity by the evolution of mind which has introduced artificial factors into the environment but which has not, so far, shown the perspicuity to adjust by corresponding artificial means the shortcomings of our organic constitution. Conscious of its own infirmities and at last unable to delude itself "with beautiful mirages offered by religions and systems of philosophy," poor humanity must now find a haven of rest in the expedients of science and still the disturbances of its organic constitution in the bosom of practical hygiene.

These studies inform us that religions and systems of philosophy have been prompted into being by the imperative fear of death. Had there been no such dread of annihilation there would have been no such need of consolation. According to the creed of Professor Metchnikoff the fear of death, which grows as old age creeps upon us, is only the prompting of an instinct which tells us that we are dying before life's span has run its natural course. According to this optimistic philosophy we are to believe that if we live our natural number of days the dread fear of death will ultimately, perhaps in many generations, pass insensibly into an "instinct of death," a welcoming of annihilation and everlasting sleep. This natural death is not of to day or perhaps of to-morrow; it must be regarded as a present "possibility rather than an actual occurrence." We die because of the imperfection of our bodies which we know not how to adjust. How then can science—this new *vis medicatrix*—save us from the disharmonies which compass our end? How can science compensate us for the religion and the philosophy which at her bidding we are to yield for evermore? Read the Metchnikoffian creed and your eyes shall be opened in understanding.

From a purely scientific point of view Professor Metchnikoff's proposed redemption of man from all his woes by the expedients of applied scientific knowledge deserves to be taken in all seriousness. He points out that in course of the phylogenetic evolution of man—an evolution, by the way, which has resulted from the "miscarriage of an ape"—he has entered into a heritage of a considerable number of rudimentary organs which in his present environment are exceedingly dangerous to him. Of these ancestral relics the appendix and the large intestine are the most discordant elements: the appendix because it is an involuting organ and endowed with retrogressing powers of resistance to disease and the large intestine because, as a barbarous relic of a herbivorous past, it harbours bacteria which increase at the rate of 180,000,000,000,000 per diem. These bacteria generate toxins which poison the nervous system and lead to the premature degeneration of its highly differentiated elements. These and many other disharmonies may be attuned to perfect peace by the expedients of modern surgery and by obeying the laws of a rational hygiene—thus will it come about that the number of our days will be those of Methuselah and we shall die a natural death and welcome its coming.

Both as a system of optimistic philosophy and as the exegesis of scientific views which are the outcome of the most brilliant biological investigations Professor Metchnikoff's studies invite criticism as they demand attention. The "instinct of death," that welcoming of annihilation which in his profound optimism Professor Metchnikoff believes will awaken from its thousand years of slumber and cheer us on our bed of natural death, is a large conception. "This instinct," continues Professor Metchnikoff, "lies deep in the roots of the human constitution. Will the means be found to bring it to the surface? Has not the enormous period during which it has remained latent led to atrophy? The science of the future alone can answer that question But the persistence of organs and structures that are extremely ancient gives us the hope that the instinct of natural death may emerge from its latent condition when old age has become a normal process." But will it? Instinct of this kind is eminently a primitive form of cerebration, from the ashes of which higher mental attributes have been developed in man. If judgment, memory, and receptivity are qualities of a high grade of mental evolution it must be degeneration and not evolution which will give us back the primitive instinct of some ancestral ape.

It has been said that most great investigators in pathology come in their old age to refer the ultimate causes of human disease to the nervous system. Professor Metchnikoff has not reached that stage yet, he leaves off where he began with the phagocyte: the phagocyte is the master as well as the servant of man. His explanation of hair growing white and brain cells degenerating through the agency of "microphages" is hardly an explanation of the essential degenerative process but it is an extremely brilliant scientific observation.

The translation of "The Nature of Man" has been conducted by Dr. Chalmers Mitchell with the utmost skill and with much literary *finesse*. In a work which deals largely with sexual questions, in which, as Dr. Mitchell says, "there is much plain speaking on matters that modern civilisation attempts to conceal," and which will be read by educated people of both sexes, any want of taste or looseness of expression might easily give offence. Dr. Mitchell is not only to be congratulated on his courage in translating this volume but also on the elegance and the refinement of the language by which he has enabled Professor Metchnikoff to present his philosophic conceptions to the English-speaking peoples.

Essentials of Pelvic Diagnosis with Illustrative Cases. By E. STANMORE BISHOP, F.R.C.S. Eng. With an Appendix on Examination of the Blood, by C. H. MELLAND, M.D., M.R.C.P. Lond. Bristol: John Wright and Co. 1903. Pp. 297. Price 9*s*. 6*d*. net.

IN his preface to this work Mr. Stanmore Bishop points out that the art of diagnosis is usually taught in the ordinary text-books of medicine on the inductive principle. As he says, this is the very reverse of the conditions met with in actual practice. At the bedside the symptoms are known, the disease is not The latter has to be deduced from the presence or absence of certain signs or symptoms. This work is an attempt to render the mental processes necessary in such a deduction easier to the student. Starting with readily observed symptoms or physical signs the differences between various classes of cases in which they are equally present are pointed out; these classes are again divided into groups in the same way; the groups once more into sections, and these in their turn are split up by means of definite variations in the symptoms until the desired diagnosis is arrived at. The main features of the book are a series of numbered paragraphs entitled "Lines of Diagnosis" in which the general dividing symptoms are called attention to. These are followed by a series of diagnostic tables in which a more detailed view is taken of the entire class, group, or section of pathological conditions to which the case belongs. As the work is concerned with the diagnosis of pelvic conditions alone, only such cases as can be classed under this heading are considered, but those occurring in the male sex as well as in the female sex are included.

The book is divided into five parts. The first of these is devoted to methods of diagnosis. In practising bimanual examination of the pelvis with the patient on the left side the author recommends the use of the left hand internally, while the right hand is to be passed between the thighs and placed flat upon the abdomen with the fingers pointing towards the umbilicus. He thinks that in this way a better appreciation of the relations of the various pelvic organs can be obtained. In the second and third parts of the book, devoted to the lines and tables of diagnosis referred to above, all the diseases of the pelvic organs are considered under their different symptoms. A series of ten cases is given with details to show the best manner of using these tables and there is an appendix devoted to a description of the methods of examining the blood and the methods of staining the tubercle bacillus and the gonococcus. The difficulties of writing such a book are obvious but the author may be said to have overcome them in a most admirable manner.

The volume should be of considerable value not only to students but also to teachers in refreshing their memories as to the inability of students to differentiate between many conditions which to them appear most dissimilar in the light of their greater clinical experience. There is an excellent index with numerous cross references.

La Russie d'Europe: The General Hygiene of European Russia. By Dr. A. BONMARRIAGE, Delegate of the Belgian Government to the Moscow International Congress of Medicine. With numerous Maps and Illustrations. Brussels: Spineux and Cie. Paris: Le Soudier. 1903. Pp 547. Price 20 francs.

THIS is undoubtedly one of the greatest works on Russia that has ever been published. It is not a history, it is not a story, it is not a book to be taken and read straight through. It is more like a State document and indeed has been written with all the help the State could give. Consequently it does not contain a word of politics, barely any criticism, and in parts is as dry reading as any Blue-Book. But, like Blue Books, it is an extremely useful publication and could be referred to with great advantage by anyone meditating a journey to Russia or intending to take part in any enterprise or business in that country. The work gives systematically an exhaustive account of all the leading material factors that contribute to constitute the Russian empire not as a political institution but as a geographical fact. It is divided into chapters according to the main facts; thus the first chapter gives the situation, form, and size of European Russia. Then we have the *relievo*, that is the mountains and plains, and this is followed by the study of the soil or geology, and this naturally leads up to the water-courses. The northern slope to the Arctic Sea, the western slope to the Baltic, and the southern slope to the Black Sea and the Caspian Sea are very fully described. The mountains, the water-courses, and the soil determine the vegetation and influence the climate and they in their turn attract settlers and draw together vast populations; but the latter, by interfering with the natural growths, alter the climate and the sanitary conditions. In time these changes bring about other modifications in the populations. Thus the difficulties of communications have converted the great rivers into the national highways, but as towns have sprung up on their banks the rivers have been all the more liable to contamination as in many cases the current is very slow, for the countries traversed are sometimes almost level. Sanitation, therefore, especially in regard to the prevention of the pollution of rivers, is a matter of especial importance in Russia. Then as the population spreads inland, away from the sea and the great river courses, the tendency is to cut down the woods, to burn the logs, to export them, or to build houses with them. But as the forests disappear the climate is disadvantageously modified, and even in Russia the cry is now that new forests should be planted. And who are the people who thus play fast and loose with nature at the risk of losing their means of existence by such ignorant action? We find in the work before us a most elaborate ethnographical study, with many illustrations of the various types of humanity that people the Russian empire. But the leading races are undoubtedly the Slavs, the Finns, the Tartars, and the Mongols. The Finns are probably the aborigines. The Slavs come from the southern Alpine districts of Europe, they belong to the Aryan race and constitute the Great Russians of Central Russia. They are the dominating and most civilised race, mixing with, permeating, and modifying the Asiatic Mongol and Tartar. But this natural evolution is being considerably modified by the development of industries and of railways. In 1856 the industrial production of the empire only amounted to 200,000,000 roubles; in 1897 it was estimated at 2,950,000,000 roubles. The number of artisans has increased fourfold. Yet even to day there is not a province in Russia where less than 80 per cent of the population are employed in agriculture. All these facts are admirably set forth and they are rendered more clear by a series of maps There are coloured maps for temperature, rainfall, soil, the distribution of races, and so on. Then a very complete index enables easy reference to any phase of the subject.

Dr. Bonmarriage is strongly of opinion that man is the slave of his surroundings and thus describes his own work. "The ideal for the civilised man consists in utilising all the resources which nature offers him and this wherever he may be To succeed in such effort he must first of all realise what are the advantages and the inconveniences of the climate, what are the crops the soil can produce, what are the various products that can be cultivated, what is the water régime of the country, and what is the value and degree of civilisation of the natives. When he is well acquainted with these various elements he will realise that he has not paid too dear for the experience acquired. He will find it more easy to put himself in harmony with the centre in which he has to live. It is for this purpose that we have summarised and described the natural elements of European Russia which more especially interest the hygienist."

LIBRARY TABLE.

A Text-book of Organic Chemistry. By Dr. A. F. HOLLEMAN, Professor Ordinarius in the University of Groningen, Netherlands. Translated from the second Dutch edition by A. GAMIESON WALKER, Ph.D., B A., assisted by O. N. E MOTT, Ph D. London: Chapman and Hall 1903. Pp. 572. Price $2 50—This book, originally a Dutch publication, has been translated by an English chemist and issued by a firm of New York publishers for whom Messrs. Chapman and Hall are agents in London Dr. Holleman has written, it is obvious, a work of distinct educational value and instead of burdening the student with an overwhelming number of disjointed facts he adopts the preferable course of describing the general principles which underlie the structure of organic compounds We say the preferable course assuming that students already possess a general knowledge of chemical principles. We do not agree that the discussion of the constitution of organic compounds is suitable for a beginner. According to our view a certain number of facts should be discussed first and a laboratory course is also helpful. Dr. Holleman is certainly at his best when dealing with theoretical considerations, although it is true that in this volume he has included a description of certain technical processes which relate to the output of organic bodies There is no chapter on testing and even in the account of alkaloids no description is supplied of the colour reactions which serve to identify them. Only a short paragraph is given dealing with the general principle by which alkaloids may be separated and identified. No modern work would be complete without a reference to the theory of ions and electrolytic dissociation, but we are bound to admit that this interesting development as it relates to organic chemistry is dismissed somewhat summarily. However, we notice that the corresponding work by the same author on inorganic chemistry is referred to as containing a full explanation of the subject. The term "halide" as applied to an iodide, bromide, or chloride will be new to many readers. We like the plan of the book; it is written in excellent sequence as regards theory and the structure of compounds and should prove to be an excellent companion to the student attending his first course of organic chemistry.

A Short Manual of Analytical Chemistry. By JOHN NUTER, Ph.D., F.I.C., F.C.S. Ninth edition, illustrated. London: Baillière, Tindall, and Cox. 1903. Pp 235. Price 6s.—Although this work is written within the limits of a special course of instruction, yet we think it will be useful to the general student of analytical chemistry. The author has had considerable laboratory experience and the sections bear evidence of his familiarity with the details of both qualitative and quantitative analysis. Special attention is given to the requirements of pharmaceutical students. Necessarily brief as are some of the details in regard to the analysis of foods, drugs, and pathological products, yet they serve to prepare the student for a more exhaustive account of the subject. The author has certainly succeeded in compressing a good deal of material essential to the general student of chemistry in comparatively small compass. To the class of student described the work should prove of undoubted assistance.

Mr. Woodhouse's Correspondence. By G. R. and E. S. London: Methuen and Co. 1903. Pp. 277. Price 6s.—This book is indeed "infinite riches in a little room," it is a picture of types exquisitely finished and mostly disagreeable. Mr. Algernon Wentworth-Woodhouse is a widower, eminently selfish, rich, and scrupulously polite. Elaine Thompson, his god-daughter, to whom Mr. Woodhouse with unkind truth writes, "If my memory does not deceive me you were christened Ellen," is also charmingly selfish and has written a work called the Woof-Warp. Elaine's end, however, is sad, for she finishes her career, in the book at least, by accepting a post under a food depôt to write attractive advertisements. From our own medical point of view, however, the most attractive character is Lady Louisa Fitzwigan who in company with her medical advisers is a perfectly delightful character. Dr. Riley, the honest practitioner, and Dr. Chubb, the—well, we will call him the fashionable one, are contrasted types and by no means overdrawn. Here is Dr. Chubb's muffin diet which, as Lady Lousia says, was "invented by him and is, I hear, making his fame. The patient takes a hot buttered muffin every two hours and sips a tumbler of tepid water 60 minutes after eating it. The results *for delicate digestions* are incredible." G. R. and E. S. are to be congratulated upon a most finished piece of work, the reading of which will give anybody half-an hour's unalloyed enjoyment.

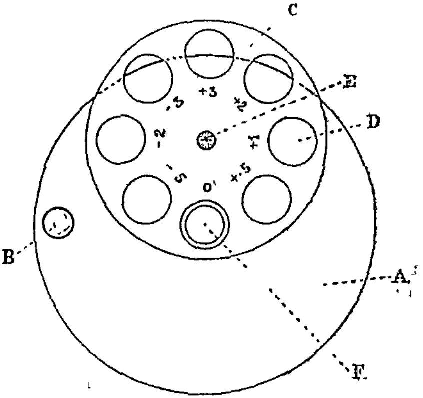
JOURNALS AND MAGAZINES.

The Practitioner.—The November number of this journal deals largely with subjects of gynæcological interest. Mr. Alban H. G. Doran contributes an article on the present position of our knowledge with regard to the treatment of uterine fibroids which is more remarkable for its comprehensive survey of rival recommendations than for any decisive conclusions as to the course to be adopted in dealing with fibromyomata in their very various degrees of harmfulness. Mr. Doran does, however, speak strongly of the necessity for keeping even quite innocuous fibroids under observation and here all will agree with him, whether they are keen advocates for early operation in most cases or not. Dr. Thomas J. Horder writes on the treatment of nephritis and devotes his attention particularly to the views and researches of Professor van Noorden. Some time-honoured plans of dieting the subjects of nephritis certainly seem to be overthrown by the most recent pathological and physiological investigations bearing on the matter. Substantial clinical support of the newer recommendations is still, however, lacking and will, we hope, be earnestly sought.

New Inventions.

A MODIFIED LARYNGOSCOPIC MIRROR.

FOR those who suffer from myopia, and more especially from hypermetropia, I venture to hope that the following addition to the forehead mirror of the laryngoscope may be found useful. *This addition consists of a circular metal* plate carrying various plus and minus lenses riveted to the metal back of the forehead mirror in such a manner that any required lens can be brought into position behind the aperture (vide diagram). This apparatus will be found much more satisfactory than the method of wearing eye-glasses and having the mirror in the centre of the forehead. The instrument which I have was specially made to my own specifications by *Messrs Archibald Young and Sons, Forrest-road*, Edinburgh.



A. The bac[illegible] laryngoscopic forehead mirror. B, Knob f[illegible] head band. [illegible] the back of [illegible] ted so that [illegible] the forehead mirror. E, Rivet fixing metal plate to the metal back of the forehead mirror. F, Inner circle represents the aperture in the forehead mirror, the outer circle represents the aperture in the metal plate, in this case carrying no lens.

IAN STRUTHERS STEWART, M B., Ch B. Edin.
Nordrach on Dee, Banchory, N.B.

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The annual general meeting and dinner of this society were held on Nov. 10th. Mr. Joseph Smith was re elected President, Dr. G. Danford Thomas, Mr. T. Martin, and Dr. Herbert Snow were elected Vice Presidents, Mr. J Brindley James was elected honorary treasurer, and Dr. W. G Dickinson honorary secretary. At the subsequent dinner the toast of "The Society" was proposed by Mr. W. Gibson Bott and responded to by the President. Mr. H. Nelson Hardy proposed "The Officers of the Society" and urged the importance of bringing pressure to bear on Members of Parliament and others in order to promote the just claims of the Members of the College. Dr. Danford Thomas, Mr. Martin, and the secretary replied. *During the evening Mr. Sidney Gandy* gave an entertainment and the President and others contributed music.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 21, 1903.

The Relation of the Anæsthetist to the Patient and to the Surgeon.

THERE will be found in another column a letter dealing with the question of the relation of the anæsthetist to the patient and to the surgeon. The contents of this communication no less than the author's *nom de plume* show it to be written frankly from the point of view of the anæsthetist, but the points touched upon are of importance to the whole medical profession and to the public. Force is given to "Anæsthetist's" views not only by the reasonable language in which he calls attention to a state of affairs that in some circumstances may constitute a public danger, but by the fact that in a recent paper which Dr. ORMOND GOLDAN of New York has contributed to our contemporary the *New York Medical Journal* a strong plea is advanced in favour of a fuller recognition of the status and professional claims of the anæsthetist. Clearly "Anæsthetist's" attitude is not without its defenders in the medical centres of the United States. Dr. GOLDAN, writing from a ripe experience of anæsthetics both from the standpoint of an expert and from that of a careful and accurate observer of the physiological actions of the agents which his skill empowers him to employ, urges that the skilled anæsthetist is able to approach immeasurably nearer than the inexperienced to the ideal of "a featureless narcosis ending with immediate return to consciousness and absence of after-effects, both immediate and remote." He further contends that the knowledge and experience of the expert enable him to select and to apply the chosen anæsthetic by such methods and with such skill as must in many cases preserve the life of the patient. In such circumstances we are asked, Is it right or reasonable that the expert anæsthetist should have no relation to the patient other than the negative one involved in his admission to the operation as an assistant to the surgeon? Dr. GOLDAN says: "I am firmly convinced that not until the anæsthetist is fully recognised by all concerned as entirely separate from the surgeon will anæsthesia ever advance."

With the truism urged by Dr. GOLDAN and implied by "Anæsthetist" that the skilled anæsthetist is of paramount importance in certain operations we are, of course, in accord, but when we come to consider any suggestions for alteration in the status of the anæsthetist as regards the patient, the operating surgeon, or both we see that the matter requires thought. We gather that Dr. GOLDAN desires that the anæsthetist selected should attend the patient upon the same basis as would a physician, if it were deemed desirable by the surgeon that he should meet such a colleague in consultation upon the case. Dr. GOLDAN finds it possible to maintain this position in his own practice. The patient, then, consults the surgeon and either at his instance or at that of his usual medical attendant the anæsthetist is called in to undertake entire control of the patient so far as the anæsthetic is concerned. To him belongs the sole responsibility of his special work and his fee is appraised not by his surgical *confrère* but by himself. It is in the matter of the fee, we think, that Dr. GOLDAN makes out a strong case for his specialist colleagues. The fee of the anæsthetist should, Dr. GOLDAN maintains, be absolutely outside the control of the surgeon and its arrangement should be adjusted either between the anæsthetist and the patient directly or through the family medical attendant as an intermediary, and he narrates in his paper experiences which we should hope are unusual in America or elsewhere. In some instances, we are assured, he has been requested to accept a small fee and has subsequently found that this arrangement had been come to not only without the knowledge, but in direct opposition to the wishes, of the patient. On the other hand, we can well understand that some friction arose in certain instances which he cites where the fees of the anæsthetist largely exceeded the emolument claimed and received by the operator. We are informed that this reversal of the usual proportion of receipts occurred always when the danger to the patient lay rather in the anæsthetisation than in the use of the knife, but we cannot guess how a scale of emolument is to be fixed on such a principle, as fees are usually adjusted before an operation when no one can accurately forecast the directions from which danger may be anticipated. Nevertheless, a broader view of the responsibility and a more generous estimate of the money value of the anæsthetist's work should be accorded and we are glad to support Dr. GOLDAN'S contention even if he has advanced it in an extreme manner. While some few surgeons may fail to recognise all they owe to the skill of the anæsthetist and may regard the question of his fee as one over which they have a right to exercise absolute control, we have no doubt that there are many more who do full justice to their colleagues and who gladly acknowledge their indebtedness to the skill and acumen of the anæsthetist. The fees to be accorded for anæsthetisation are in this country largely questions of custom and individual usage. No doubt the correct thing is for the anæsthetist to be consulted as to his fee. If his own estimate exceeds that which the patient regards as a fair charge for his services his offer may be declined. Presumably the anæsthetist, like the physician or surgeon, knows what the correct and accepted fee is and can either demand it or decline to render his services for a smaller remuneration. It seems reasonable that the option should rest with him and not with others.

Whilst supporting the claims of the anæsthetist to estimate the pecuniary value of his services, we must regard the whole question of his position towards the patient from a broader point of view. Although cases may occasionally occur in which it would be advantageous alike to the patient, the surgeon, and the anæsthetist if the last-named were brought into closer relationship with the patient before, and even after, the operation, and in which a special fee should be determined by the peculiar circumstances of the case, yet we are convinced that Dr. Goldan has not quite grasped the necessarily more intimate relations which must exist between the surgeon and the patient. And possibly "Anæsthetist," in drawing attention to the belittling of the work of his fellows, does not quite take into due account the larger range of the surgeon's responsibilities. There must be a wide gulf between the relation of the surgeon and that of the anæsthetist to the patient. The surgeon's art is only limited by the extent of his knowledge of a field of work almost without boundaries and his responsibility is very great, for he has not only to determine what is best to be done in any given case—and the choice of practice is often very wide indeed—but he has to fight step by step through the dangers and difficulties of convalescence and to decide when to hold his hand and when to face the most heroic of procedures. Occasionally the surgeon's art may be confined to a trifling operation involving no risk, while the anæsthetist's part of the proceeding may involve risk to life, and in such cases it would be fair to accord a commensurate fee to him on whom rests the greater responsibility. These cases, however, are the exception and cannot be quoted to prove that in all instances the services of the anæsthetist must rank upon the same platform as those of the surgeon, as appears to be Dr. Goldan's contention. The surgeon who snubs the anæsthetist and is jealous of his advance in professional repute is, we hope, as extinct as the dodo; but the anæsthetist who claims more than common-sense and enlightened professional opinion are ready to accord to him is likely to do more harm than good to the status of himself and of his branch of practice. Dr. Goldan has taken this risk.

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The Death of Miss Hickman.

The mystery of Miss Hickman's disappearance from the Royal Free Hospital on August 15th was partly elucidated by the finding of her body in a plantation in Richmond Park on Oct. 19th and was fully solved at the coroner's inquisition which terminated on Nov. 12th when the jury returned a verdict of "Suicide whilst temporarily insane." Miss Hickman was a lady of high intellectual attainments, a qualified medical practitioner, and a person of conspicuous physical build, activity, and strength. We mention the last endowments because for a long time it was urged by her friends and accepted by a portion of the press that she had been kidnapped and either cruelly murdered or kept in durance, although common sense and all probabilities pointed to some other solution of her sudden and secret disappearance. From both direct and indirect evidence it is clear that the unfortunate lady felt an overwhelming sense of the responsibility she had assumed in engaging herself to act as locum-tenent for a house surgeon at the Royal Free Hospital. And here it may be remarked how unjust were the accusations brought against the governing body of that institution. They were suggested by expectation, both before and after the discovery of the body, that some other explanation than nervous breakdown would be forthcoming of Miss Hickman's departure from the scene of her professional duty.

What was the evidence against criminal homicide? In the first place Miss Hickman was not known to have had a personal enemy and her public position was such as to engender in the minds of others respect, and even reverence, rather than hatred or malice. The conditions under which her body was found almost negatived the theory that she had met with foul play. The body was discovered far from any habitation in a secluded copse fenced about with high railings, which to the height of some three or four feet were lined with wire netting. It was lying beneath some shrubs in an attitude of repose. There were no signs of a struggle having taken place. The remains had evidently not been disturbed save by marauding rodents and the agents of putrefaction which Brouardel has so aptly termed the "labourers of death." The exposed parts of the body, notably the head and neck, were destroyed to such an extent that the skull was separate from the body and several cervical vertebræ were completely disarticulated. It was this semblance of decapitation that probably incited the belief that a murder had been committed. There were no marks found on the vertebræ of an instrument having been used, a fact of forensic importance, since it is known how difficult it is even with a skilled hand to sever the head from the body and yet to leave no signs of the operation upon the bones. When the medical evidence had clearly proved that the ravages were only those of nature it was thought by some that the death might have been due to heart failure, as there was testimony that some years ago Miss Hickman had been pronounced the subject of cardiac weakness or disease. Her subsequent athletic life and manifestation of health rendered this hypothesis improbable. Besides, a person feeling faint would not be capable of the physical exertion necessary to transport her body from the open park to the stoutly fenced inclosure. The missing links in the chain of positive evidence were supplied by the following facts. Two or three days before she left the hospital Miss Hickman purchased 15 grains of sulphate of morphine; near the body there were discovered a hypodermic syringe and a measure-glass. The syringe contained traces of sulphate of morphine. We have it on the authority of Dr. Stevenson that from ten ounces only of portions of the viscera of the deceased he isolated one sixteenth of a grain of morphine, equal to one-twelfth of a grain of a morphine salt. This was a triumph of the analyst's skill, experience, and judgment, for it must be borne in mind that putrefaction was exceedingly advanced and that morphine is an alkaloid difficult of isolation from decomposed viscera.

Thus the solution, so far as human intelligence can solve it, of the sad problem which has exercised the public mind for so many weeks was reached when a coroner's jury returned a verdict that Miss Hickman came to her death from suicide by sulphate of morphine poisoning while temporarily insane. No other verdict could have been given by impartial minds after a review of the evidence tendered by the various witnesses and however great a shock may have been inflicted upon the relatives of Miss Hickman, still such a cause of death is less distressing to contemplate than violence. The motive for the act of self-destruction was the sense of mental strain brought about by over-estimation of responsibility in a person of hypersensitive nature. It would serve no purpose to try to trace the various steps which led to the abrupt breakdown of a normal and healthy mind. The fears which may and do affect the younger untried members of our profession are very real. Every medical practitioner has experienced such fears and the time of their occurrence seems very dark. Most men overcome them but some fall by the way. Each and all of us when confronted with a tragedy like the present may take to himself the words of LEAR and pray :—

> "Oh, let me not be mad, not mad, sweet heaven!"

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The Metropolitan Asylums Board and the Treatment of Consumption.

FOR some time past endeavours have been made at intervals to induce the Metropolitan Asylums Board to undertake the isolation of cases of pulmonary tuberculosis, and the most recent effort has taken the form of a resolution on the part of the Metropolitan Branch of the Society of Medical Officers of Health urging the Board to undertake the treatment of persons suffering from that disease. In the opinion of the society in question such treatment would be attended with great advantages to the public health, and it suggests that the Gore Farm Hospital at Dartford should be utilised as a sanatorium. This is a somewhat far-reaching proposal and the request, if acceded to, may lead to a very material development or modification of the work of the Metropolitan Asylums Board. The *personnel* and prestige of the Board are, however, such that before either rejecting or accepting the proposal the members will, we feel sure, ascertain carefully what are the advantages and what the disadvantages of such a step, and in their deliberations they will doubtless be called upon to review the effect of their past efforts in the direction of the limitation of certain of the acute exanthemata, the communicability of which is altogether different in degree from that of pulmonary tuberculosis.

With the view of aiding the deliberations of the committee appointed to consider this very important question we venture to draw attention to certain points which should, in our opinion, not be lost sight of. In the first place we notice that the word *treatment* is used and not the word *isolation* and the Board will do well to keep carefully this point before it in its deliberations. There can, we take it, be no question that all forms of disease—such, for instance, as whooping-cough, measles, and diarrhœa—would very materially benefit by treatment in the hospitals of the Board, and it will have to determine how far its statutory functions justify it in undertaking treatment as distinct from isolation. It is not clear from the report which has reached us whether the treatment referred to is to be confined to early cases, or whether it is contemplated that the Board shall also take under its wing patients in the more advanced stages of the malady : nor is it altogether obvious whether the public health advantages which are apparently urged as the basis of the proposal are claimed in respect of the withdrawal of infectious material, or with regard to the prolongation of life which those persons who are to undergo the treatment are likely to enjoy. The Board will doubtless go carefully into these points and the question of the cost of embarking upon this new enterprise is certainly not likely to be overlooked. But in estimating the cost the probable development of a departure such as this must be held in view. It will have to be borne in mind that it may be difficult, having once accepted the principle that the Board should deal with the tuberculous sick of the metropolis, to draw back; people practically of all classes below the opulent class, will not be slow to demand the continuance and expansion of the provision as a right. Moreover, it is not altogether improbable that the step might lead to interesting complications as regards the Poor-law cases and tuberculous patients who might otherwise find a place in the workhouse infirmary will be ready to discover means by which they may instead procure a bed at the proposed sanatoriums. Furthermore, cases of tuberculosis not at present resident in the metropolis may be attracted to London for a temporary sojourn in order to claim a heritage in its sanatoriums.

Then there will arise the questions as to the duration and object of the treatment. If it is proposed that the patients shall be kept under treatment until Koch's standard is attained—i.e., the absence of tubercle bacilli from the sputum—three months will be practically useless. If, on the other hand, "ability to work" is accepted as the standard it will be necessary to ascertain by how much such ability is likely to be prolonged by the length of treatment proposed. In order to arrive at a conclusion on this point the statistics of sanatoriums will have to be consulted, and seeing that in this country there is no compulsory insurance against breakdowns in health causing incapacity for work such as obtains in Germany, it is desirable that the statistics of German sanatoriums should be consulted, and in this connexion the methods adopted in compiling the statistics might profitably be inquired into. With regard to such headings in the columns of statistics as "able to work," "returned to work," "at work," and so on, it is necessary to keep before us the fact that, in the first place, many of these patients were at work when they entered the sanatorium and, in the second place, that having regard to the natural tendency towards recovery of the disease some of them might still have remained at work had they never entered the institution. So, too, with regard to the column "died in the sanatorium," a column which is not infrequently a blank, it would be well to ascertain how many patients were sent out from the institution shortly before their decease. In putting these few suggestions before the Board it must not be understood that we are in any sense hostile to the suggestion of the medical officers of health. On the contrary, we recognise that their action has been animated by humanitarian ideals and are only anxious that there shall be no over-statement and that the hopes of the people as regards the "stamping out" of the disease by sanatoriums alone shall not be raised to fever pitch merely to receive a bitter disappointment in the end. If the Metropolitan Asylums Board can raise half a million sterling to deal with tuberculosis let it be satisfied as to the best method of spending it before it commences the expenditure.

Bayliss v. Coleridge.

THE action for libel and slander brought by Mr. WILLIAM M. BAYLISS, assistant professor of physiology at University College, London, against the Hon. STEPHEN COLERIDGE, honorary secretary of the National Antivivisection Society, after occupying Lord ALVERSTONE and a special jury for several days, has ended in a verdict for the plaintiff for £2000 damages. The details of the evidence have been so fully reported in the newspapers that they need not be recapitulated. The cause of the action arose from the publication of a written statement by reading it at a meeting of the National Antivivisection Society held at St. James's Hall on May 1st, 1903, and also by causing it to be published in the *Daily News* of the following day. The statement was declared by the defendant to be that of an eye-witness and was as follows :—

"I have attended many lectures at the Physiological Laboratory of University College I have constantly heard while there the long drawn howling and whining like that of dogs in terror and agony. When the door of the lecture-room was opened the sound of this grew louder; when the door was again shut the cries seemed to be fainter. On Feb. 2nd this year I saw an experiment by Dr. W. M. BAYLISS on a dog at this laboratory. A big brown dog of the terrier type was brought into the lecture-room stretched on its back on the operation board. Its legs were fixed to the board, the head held firmly in a head holder, and it was muzzled so tightly that it was now deprived of every power to give audible expression to pain. In the skin of the abdomen there were several scarcely healed scars and wounds; on one of them that seemed rather fresh there were left a pair of clamping forceps It was evidently not the first time that the dog had had to serve science. The internal organs of the abdomen had surely had their turns of operations in previous experiments. The neck was opened widely for the stimulation by electricity of a certain gland. The dog struggled forcibly during the whole experiment and seemed to suffer extremely during the stimulation. No anæsthetic had been administered in my presence and the lecturer said nothing about any attempts to anæsthetise the animal having previously been made. When an anæsthetic has been given good care is generally taken to tell the audience about it and, as a rule, the anæsthesia must be kept up by repeated administration of the anæsthetic used. Nothing of the kind was done here and the violent and purposeful struggles of the animal indicated complete consciousness The dog was carried out still fixed to the board after half an hour." "Is not this," defendant asked, when he had read the above statement, "enough to make the blood run cold? If this is not torture, let Mr BAYLISS and his friends—Lord LISTER and Sir VICTOR HORSLEY—tell us in Heaven's name what torture is."

The meaning assigned by the plaintiff to these words was that he had been guilty of torture and inhumanity and had thereby rendered himself liable to criminal proceedings, and that he was unworthy to occupy his position or to hold the Home Secretary's licence. The defendant admitted the publication of the words but denied the meanings assigned to them, and said that in so far as what he had said consisted of matters of fact it was in its natural and ordinary sense true In so far as the words consisted of expressions of opinion they were published *bonâ fide* and without malice, and were fair comment on matters of public interest. In short, the jury had to say whether the allegations of fact were true. If upon this point their view was adverse to the defendant the question of "fair comment" would not arise

The verdict eventually arrived at will be regarded with approval and satisfaction not only by the medical profession but by the public, who in this case will be able to consider the allegations made, and the evidence called to support or to disprove them, with intelligent and dispassionate criticism. To the members of the National Antivivisection Society the verdict will probably bring no conviction; their views and their methods will remain unmodified, except perhaps by such caution as a hostile verdict accompanied by the payment of costs must necessarily tend to produce. To them Mr. COLERIDGE will presumably appear as a martyr and among them he will enjoy such additional regard as martyrdom may bring. To others his statement will figure as a typical example of the ways followed by "antivivisectionists" in their propaganda To anyone with the smallest knowledge of its subject-matter the story which Mr. COLERIDGE told carried its contradiction on the face of it. Even to the members of the society who cheered its narration it must have seemed to be one demanding careful scrutiny before it was made public. It imputed to a professor of physiology in a well known school of science not a secret infringement of the Act under which experiments upon animals are made, not a breach of that Act committed before a limited number of medical students in the medical school of a hospital, not an act committed by negligence or by inadvertence, but a flagrant and deliberate contravention of the law, a contravention involving wanton cruelty to a dumb animal, and one laying the operator open to a severe penalty. The alleged illegal act was, moreover, committed before a large mixed class of students at University College, which class two ardent lady "antivivisectionists" found no difficulty in attending and to which as many more of like sympathies could have gone had they been minded to comply with the usual formal conditions. The "antivivisectionists" who accepted such a story, even when related of a physiologist, without to some extent suspecting its accuracy, well exemplified the saying, "*quem Deus vult perdere prius dementat.*" That the success of the demonstration made by means of the animal in question would not have been enhanced by its consciousness, but would, on the contrary, have been destroyed thereby, they naturally would not consider; indeed, in the course of the trial it was suggested, on the defendant's behalf, that the supposed better performance of the experiment was the reason for the absence of anæsthesia alleged by his principal witnesses. Upon this question as to whether there was anæsthesia or not the issue of the trial depended, and it must be borne in mind that the allegation of Mr. COLERIDGE'S witnesses, two Swedish lady students (who, by the way, were members of antivivisectionist societies in Scandinavia) was not that there was an accidental or temporary return to consciousness on the part of the dog but that the animal was conscious when it was brought into the theatre for the purpose of the plaintiff's demonstration, and throughout that demonstration Their tale was not that they did not see the apparatus by which the A.C E. mixture was being supplied in order to maintain the condition of anæsthesia and by which artificial respiration was being maintained, but that they examined the dog closely, that there was no tube in its trachea when it was being brought into the theatre, and that tracheotomy had not been performed upon it. In accepting the evidence of these witnesses before he told their story at a public meeting in St. James's Hall the defendant must have considered them to be perfectly honest in their intent. The Lord Chief Justice, in summing up to the jury, directed them that these young persons, upon whose testimony the whole of the defendant's case depended, no doubt believed in all that they had stated. But whatever the views of the defendant as to the personal character and the convictions of his witnesses may have been, it might have occurred to anyone not blinded by preconceived opinion to ponder the question whether their knowledge and experience were sufficient to render them worthy of implicit reliance, whether, despite their good faith, they were, in fact, trustworthy witnesses upon the questions as to which their evidence was of vital importance to him. It might also have occurred to him, as no doubt was realised by his legal advisers and by the jury, that among the students who attended this particular lecture of Mr. BAYLISS there might be some no less observant, no less humane, and no less honest than the two foreign ladies upon whose assertion he decided to risk his own reputation as the narrator of truth. The Lord Chief Justice put to one of these ladies, at the conclusion of her evidence, a most pertinent question when he asked her whether any person of ordinary intelligence and observation, having her opportunities to observe, could not have seen all that she had deposed to. Her answer was in the affirmative, yet there was no evidence forthcoming that any other witness of "violent and purposeful struggles" on the part of the dog "indicating complete consciousness" was ever sought for among either the men or the women present.

In contradiction of the story told by the defendant's witnesses there was the perfectly clear and distinct evidence of fact given by the plaintiff and the two gentlemen whose conduct like his own was impugned by the libel, and their evidence upon this and every other point material to the plaintiff's case was corroborated by the unimpeachable testimony of independent witnesses. In the circumstances it is not surprising that the result was such as has been recorded. The only source of surprise should be that the "antivivisectionist" section of the community, of whose methods this libel was a typical instance, should have so completely abandoned all ordinary caution in conducting their campaign. For Mr. BAYLISS and Dr. STARLING, against whom this particular attack was directed, we have nothing but congratulation upon the result of the action. A jury is perhaps not the best possible tribunal before which to investigate questions arising out of the necessities of scientific research but in this instance the issue was too plain to be mistaken or obscured.

Annotations.

"Ne quid nimis."

EPSOM COLLEGE.

As we go to press the governors of the Royal Medical Benevolent College, who were called together by the council of the College last week, are meeting to receive a recommendation from the council that the title of the institution in future shall be "Epsom College" in all documents relating to the school. In all papers connected with the charity it is proposed that the title shall run "Epsom College, established in 1855 as a Public School, with a Royal Medical Foundation." This step has been rendered necessary in the opinion of the council in consequence of the widespread and continuous misconception that the present title indicates that the College is a class school and a charity school. There is plenty of evidence that it was in no wise the intention of the founder to establish an institution with any such limitation or scope. We are informed that the same scale of help will be continued to the pensioners and foundation scholars as heretofore, but strenuous efforts will be made to obtain and to capitalise the sum necessary to make the medical foundation secure. We wish the ruling body of Epsom College every success in its efforts. The record of the school amply justifies the statement, made and re-made in these columns, that we have in Epsom College a first-class public school. The proposed change of title will help the public to appreciate this fact with regard to the school, while the financial policy that has been pursued with conspicuous success for many years ought, we think, now to culminate in the placing of the charitable side of the institution upon a sound basis for all time.

THE LEGAL OBLIGATION TO PROVIDE MEDICAL AID FOR CHILDREN.

IN England the followers of Mrs. Eddy have long exercised a wise discretion in the matter of procuring for the children under their control that medical aid with which they must themselves dispense if they would faithfully obey the precepts of their prophetess. They have, in short, been aware that to neglect to procure medical aid for a child might involve them in a serious criminal charge and they have accordingly obtained it. In Canada they will now presumably follow the same course, for the Court of Appeal of Ontario has held in the case of a "Christian scientist", that medical aid is a "necessary" within the meaning of a section of the Criminal Code of the Colony which makes a parent liable for omitting to provide necessaries for a child under 16 years and that where death follows the omission the parent may be convicted of manslaughter. In England, under the Poor law Amendment Act, 1868, it used to be an offence for any person "wilfully to neglect to provide adequate food, clothes, medical aid, or lodging" for his child whereby the child should be, or should be likely to be, seriously injured. This section which apparently contained an attempt to define the "necessaries" referred to in the Canadian Code is now repealed and under the Prevention of Cruelty to Children Act, 1894, any person having the custody or care of any child is guilty of a misdemeanour if he or she "wilfully neglects such child in a manner likely to cause such child unnecessary suffering or injury to its health." The omission of any direct reference to medical aid in the newer Act rendered it necessary to have recourse to the Court for Crown Cases Reserved in a faith-healing case where death had resulted. In that case[1] Lord Russell of Killowen, L.C.J., pointed out that "it would be an odd result if we were obliged to come to the conclusion that in dealing with such a subject as the protection of children the law had meant to take what may be described as a retrograde step"; and the Court unanimously upheld the conviction for manslaughter. In the case before the Court of Appeal of Ontario the indictment was under a section of the Criminal Code of Canada[2] which is as follows: "Everyone who as a parent, guardian, or head of a family is under a legal duty to provide necessaries for any child under the age of 16 years is criminally responsible for omitting, without lawful excuse, to do so while such a child remains a member of his or her household, whether such child is helpless or not, if the death of such child is caused, or if his life is endangered or his health is or is likely to be permanently injured by such omission." The questions raised upon this were whether the term "necessaries" included medical treatment and whether the Chief Justice of the King's Bench Division of Ontario, the Hon. Glenholme Falconbridge, who tried the case, had rightly directed the jury that the evidence of witnesses that they had been cured or benefited by "Christian science" treatment had no bearing on the case except as showing the good faith of the prisoner. In deciding the first in the affirmative the Hon. Charles Moss, Chief Justice of the Court of Appeal, Ontario, laid down that "what is included in necessaries is to be determined upon the circumstances of each case, and whether there has been neglect to supply them must also depend upon the circumstances" This would protect the parent who believing his child's case to be of a trifling nature did not consider medical aid to be necessary, although, in fact, it was necessary, and would leave for the jury the question whether in all the circumstances of the case "medical assistance and treatment were necessaries proper to be provided for the child having regard to the state and condition in which the evidence showed him to be." With regard to the evidence of "Christian science cures" the learned Chief Justice held that they were properly excluded from the jury's consideration upon the main issue as to whether necessaries had been provided or not, and that as the good faith of the prisoner was not in question the evidence should not have been received at all This eminently sensible and satisfactory decision should result in the saving of an appreciable number of children from death or injury to their health at the hands of "Christian scientists" and other absurd but dangerous people, although the section of the Code which it interprets does not go so far as the British Act which makes penal the causing of "unnecessary suffering." Both the decision in R v. Lewis, the case before the Court of Ontario, and that in R v. Senior, referred to above, are, however, no more than we were entitled to expect. A serious slur would be cast upon medical science in the present day if our law courts refused to recognise its aid as necessary in cases of serious illness or injury where relief is desired or denied its power to alleviate suffering.

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[1] R. *v.* Senior, 1899, 1 Q.B. 283.

[2] Statutes of Canada, 55 & 56 Vict. C. 29, Sec. 210, Subsec. 1.

"ALL PHILANTHROPISTS."

A CORRESPONDENT sends us a report of some remarks made at Bow county court by his honour Judge Smyly in a recent case. The words speak for themselves and require no comment of ours to emphasise the mischievous and belittling attitude of mind of one in a position of public authority towards a hard-working and non-assertive profession. The West Ham guardians sued a man named Gringer for a certain sum which included half a guinea for the medical examination. We now quote the newspaper report. Defendant said half a crown was enough for the doctor. His Honour: But this is for an examination. Mr. Gringer: Well it seems a bit thick to me. His Honour: I think the medical fee is too heavy. The heavy fee was accordingly reduced on his honour's decision to five shillings. Our correspondent remarks: "What would the judge have said in his barrister days if he had been offered 5*s*. for an opinion even which involved no legal responsibility?" We can only echo "What?" The informant further embarks upon the thorny question of fees to medical men as witnesses. His opinions are such as we have often pronounced and supported. When he asks for help from us by advice as to what steps to take in the matter we are forced to confess helplessness. Unless combined effort on the part of the medical profession can induce an influential parliamentary representative to take up the matter we see no hope of any alteration in the law. Until then medical men must rest content to be paid one guinea while they attend county courts and lose the time and remuneration from their practice that such attendance occasions. Our correspondent writes, "At Whitechapel county court I was subpœnaed lately and after waiting till 4 P.M. my case came on. As no fee was guaranteed I said, 'Before being sworn, your honour, I beg to state that I have had no fee and see no prospect of getting one.' The only answer that I got was, 'I am very sorry for you, because if you do not give evidence I shall fine you. You are all philanthropists and must do it gratuitously.' If this is law it is not equity, and I do not see why law should be different in the high courts from what it is in the county courts. It is absurd to expect a man to waste a whole day with the vermin of Hebrew aliens crawling over him for such a sum as one guinea. I never go to an accident without the fear and dread of a wasted day at the county court hanging over me." We sympathise cordially with this gentleman. And we have known practitioners of experience to flee from the scene of a street accident. The damage to the public thus caused by the present arrangements is obvious

THE PATHOLOGY OF CEREBRAL RHEUMATISM.

LITTLE has been written on the pathology of cerebral rheumatism, for only recently has a technique been elaborated sufficient to reveal the fine changes which occur in the nerve cells. At the meeting of the Société Médicale des Hôpitaux of Paris on Oct. 16th M. Josué and M. Salomon described the following case. A woman, aged 38 years, was admitted to hospital on July 25th, 1903. Her illness began four days previously with sore-throat. Soon the feet became painful and then the knees, the hips, the wrists, the elbows, and the shoulders. Violent headache and abundant perspiration followed. On admission she was delirious. The face was red and grimacing and from time to time presented spasmodic contractions. The pupils were contracted. There were convulsive jerkings and disordered movements of the limbs. The joints of the feet and the left elbow and the wrist were swollen and the overlying skin was red and hot. The right knee-joint was full of fluid and hot. On the 26th the temperature was 102·5° F. in the morning and 104·5° in the evening. The heart sounds were muffled but there was no murmur. There was marked dyspnœa out of proportion to the physical signs which consisted of some subcrepitant râles at the bases of the lungs. The urine contained a trace of albumin. Sodium salicylate was given On the 27th the evening temperature was 103 5° and the delirium persisted. On the 29th the delirium was less violent, the face was cyanosed, and there were bronchitic râles all over the chest. The evening temperature was 104°. On the 30th the delirium was violent and the patient tried to get out of bed. Death occurred in the night. At the necropsy the brain was found to be very congested, especially in the frontal lobes and at the base. The cerebro-spinal fluid was not more abundant than normal. The right knee-joint contained thick cloudy fluid. The lungs were congested and œdematous at the bases. There were some filamentous pleural adhesions. There was no endocarditis but on the aorta at the origin of the coronary arteries were some gelatinous patches. Sections of the frontal lobe and of the motor region of the brain were stained by Nissl's method. In the frontal lobe the meninges showed no signs of infiltration with leucocytes but the nerve cells were profoundly altered. Everywhere the chromatophile granules had disappeared. The achromatic substance had a uniform tint and a granular appearance and seemed to have a tendency "to fragment." Some cells were fissured. The nucleus was more stained than normal. In many sections "neuronophagia" was observed. In some places cells were attacked by two or three "neuronophages" which dug out a sort of notch; in others, all the protoplasm of the cell had disappeared, leaving only the nucleus with one or several neuronophages in a vacuole; finally the cell was completely destroyed, leaving only a mass of neuronophages in a clear space. The neuronophages were of two kinds: some had a large clear nucleus and resembled macrophages; others had a small nucleus and the appearance of lymphocytes. In the motor area the meninges showed a mononuclear leucocytic reaction. The changes in the nerve cells were a little different from those of the frontal lobe. There were fewer neuronophages and the nerve cells were less affected. In the vessels of the pia mater were large diplococci and bacilli taking Gram's stain and in the pia mater itself and in certain cerebral capillaries were diplococci. Thus there was in the brain a striking contrast between the trivial macroscopic and the intense microscopic lesions.

EPIDEMICS AND EARTHQUAKES.

Do earthquakes set microbes in motion or do they only affect the nerves? From early times pestilence has been regarded as one of the accompaniments of earthquakes. Nor is this perhaps a mere figment of superstition. Many instances of epidemics following upon earthquakes are on record. Thus, in 557–60 A.D., earthquake years, Constantinople was visited by a pestilence and in 615 A.D., after more than a decade of seismic disturbances which extended from Japan to the Mediterranean, the whole of Italy was visited, according to Sigonius, by a fearful epidemic, of which the nature is not recorded. Old writers, such as von Plenciz, an authority on the Lisbon earthquake of 1755, were wont to attribute the proneness to disease exhibited by whole populations during earthquake seasons to shaken nerves begotten of prolonged suspense and broken rest at night. Von Plenciz particularly notes in this connexion the comment of Seneca upon the great apparent increase in the number of lunatics and imbeciles after the destruction of Pompeii and Herculaneum. An earthquake in the Alps, probably accompanied by vast landslips, must have been peculiarly terrifying even to mountaineers of strong nerves. Such a disturbance occurred throughout Switzerland in April, 802 A.D., and it was followed by a "fearful pestilence" according to the "Diarium Historicum" of Bertrand. Again the nature of the disease is left undescribed, but in 842 A.D. we are told specifically by Dom Bouquet that a severe "tussis," from which many died, followed an earthquake which shook almost all northern Gaul. England became an earthquake centre in the eleventh century, when a sensible mortality among man and beast succeeded violent shocks in Worcester, Derby, and the West. It is remarkable, however, that though England was afterwards subjected to many shocks, which were usually preceded or followed by periods of violent rain or cold, the country does not seem to have been visited again by diseases accompanying earthquakes. The mainland of the Continent continued to suffer from these epidemics, especially Switzerland, Italy, and Carinthia, while England remained immune—that is, if the old chroniclers, such as Baker, are to be accepted as unimpeachable witnesses in the matter.

HERPES OF THE FIFTH NERVE WITH OCULAR PARALYSIS.

In the *British Journal of Dermatology* for September Dr. Arthur J. Hall has recorded the following case which presents several points of interest. A man, aged 66 years, was admitted to hospital on March 23rd with paralysis of the left third and fourth nerves. Eight weeks before he was attacked with severe pains on the left side of the forehead where, as well as on the same side of the nose, blebs soon appeared. He could not open the left eye and when he pushed up the lid he saw double. The blebs healed, leaving scars. On March 14th he went to hospital. There were paralysis of the left third and fourth nerves and congestion of the conjunctiva. On March 21st he was seen again and complained that two days previously he had severe pain in the right eye. There were partial paralysis of the right third nerve and iritis. On admission the paralysis of the right third nerve had disappeared but that of the left third and fourth nerves remained. In the area of distribution of the nasal and supra-orbital branches of the fifth nerve there were scars. The urine contained 4·5 per cent. of sugar but there was no polyuria, thirst, or wasting. The knee jerks were diminished. The paralysis gradually diminished. On May 5th it had practically disappeared but an inflamed papule remained on the lower part of the conjunctiva. In the meantime under a restricted diet the glycosuria was reduced to 3·5 per cent. Paralysis of the third and fourth nerves, associated with herpes ophthalmicus of the same side, is well recognised, but the intercurrent paralysis of the third nerve on the other side which occurred in this case must be exceedingly rare. Bilateral herpes is not unknown but, as Dr. Hall points out, herpes ophthalmicus with associated paralysis on one side, followed by paralysis without herpes on the opposite side in the same area, does not appear to have been previously observed. The explanation seems to be, as he suggests, that the patient was suffering from diabetes, in which ocular paralysis is not uncommon. The diabetes was probably the cause of the right-sided intercurrent paralysis and possibly of the left-sided paralysis and herpes. Though neuritis is not uncommon in diabetes herpes seems to be so.

THE ACCIDENT TO LORD KITCHENER.

Everyone will have heard with sincere regret of the accident to Lord Kitchener in having sustained a fracture of both bones of the leg. From the somewhat scanty reports which have come to hand it appears, however, that the fracture is a simple one and such an accident, though tiresome, is not, as a rule, dangerous. Neither is its repair such a weary business as was the case 20 or 30 years ago when a broken leg meant confinement to bed with the leg in splints for at least five weeks, then another three weeks in plaster, and finally a long period of weakness while the muscles disused for so long were recovering their function. Nowadays, however, owing to the modern method of treatment by splints combined with massage from a very early period the time of convalescence is much shortened, the patient being able to be on the sofa in about a fortnight, and consolidation taking place in about a month, while the muscles by the time that the patient is allowed to walk are almost as active as before the accident. The latest reports state that Lord Kitchener is progressing favourably and there is every reason to hope that this condition will be maintained.

BREAKING UP THE STREETS.

After a too short interval Bedford-street, Strand, is "up" once again. This time the disturber is the New River Company. Last time, if we remember right, it was the electric light. We humbly appeal to the gas company, to the telephone companies, both the National and the Post Office, to the hydraulic power company, to the telegraph authorities, to the drainage authorities, and to anyone else who may want to dig to come quickly while the broken road is in the way with them, and not to wait until the holes have been filled and the new wood paving has been put down. Not that we suppose these august bodies will listen to our appeal and we foresee a weary vista of road-breaking which will last till well over Christmas. Then by the time that the wood pavement has been relaid for the sixth time it will be the turn of the electric light again, and so on *ad infinitum*. It would not be a bad thing to close completely a short street here and there for a space of six months and to turn loose the various road-breaking authorities to play there in the same way as the London County Council provides sand pits for children to dig in. This plan would give employment to deserving or undeserving workmen and would concentrate an unbearable nuisance into a small area. In September the Brompton road was closed and repaved with wood. The road is now "up," for a newly paved roadway attracts road-breakers as sugar does moths. They cannot keep away from it. But when will London be free from the expense and the nuisance of perpetual road-breaking?

RETIREMENT OF MR. F. C. ABBOTT.

WE much regret to learn that, acting on medical advice, Mr. F. C. Abbott has felt compelled to give up his work as assistant surgeon at St. Thomas's Hospital and at the Evelina Hospital. The severance of Mr. Abbott's connexion with St. Thomas's Hospital and the sudden interruption of a brilliant career there and elsewhere are felt by his colleagues and friends to be a genuine misfortune for surgery. We are glad to know that the reason which has led Mr. Abbott to consider it his duty to give up work as an operating surgeon will not prevent his active pursuit of surgery as a profession. He is the victim of a very rare condition of the retinal arteries from which his father suffered before him. This condition, while not interfering with visual activity in a bright light, causes great difficulty in distinguishing objects when the illumination is indifferent—the symptom commonly known as "night-blindness." The inconvenience resulting from this defect had of late become more obtrusive and consequently Mr. Abbott has considered it wise to abandon the career of an operating surgeon on which he had embarked with such signal success and to take up while still young some other branch of professional work in which acute visual perception in a poor light may be less essential. We tender our sympathies to Mr. Abbott in a situation that must be very painful to him, while we add our assured hope that he will succeed in the somewhat different field of enterprise on which he proposes to embark.

THE REDUCTION OF DISLOCATION OF THE CERVICAL SPINE.

IN the *Boston Medical and Surgical Journal* of Oct. 22nd Dr. G. L. Walton has published an important paper on cervical dislocation and its reduction. He points out that cervical dislocation is not, as may be supposed, a pathological curiosity but an accident which any practitioner may encounter and which is capable of speedy relief by appropriate treatment. The methods in vogue—traction with or without abduction and rotation, and abduction and rotation without traction—are not very satisfactory. Careful study of the displacement has led Dr. Walton to the conclusion that dorso-lateral flexion combined if necessary with slight rotation is the best treatment. In the lumbar and dorsal regions the articular processes are so upright that dislocation can hardly occur without fracture, but in the cervical region they are more horizontal and the articular process of one vertebra may slip forward on the next and fall into the intervertebral notch. More rarely both articular processes of a vertebra are dislocated. Supposing an articular process on the left side has slipped forward the head will be rotated so that the face is turned to the right. If the articular process has slipped down into the intervertebral notch the head will in addition be tilted to the left, but if the process has been caught on the crest of the one below the head will be tilted to the right. Thus the side on which the dislocation has occurred can be determined by the direction in which the head is rotated. In bilateral dislocation the head is carried forwards and tilted directly backwards. The only conditions with which dislocation is likely to be confounded are torticollis and vertebral disease (caries). In torticollis, if the head be rotated to the right and tilted to the left, the left sterno-mastoid will be contracted. In a similar position produced by unilateral dislocation the left sterno mastoid will be lax and the right more or less on the stretch. In caries the history will assist the diagnosis. In most cases of unilateral dislocation there is no paralysis; the nerve roots escape pressure. But in two cases Dr. Walton observed paralysis and in a case of bilateral dislocation there was spastic paralysis from pressure on the cord. The method of reducing a unilateral dislocation is as follows. Suppose a left articular process has slipped forward into the intervertebral notch. If the patient be facing north the head must be tilted south east. Slight rotation in the direction towards which the face is rotated (the right) may be necessary to free the process. Rotation in the opposite direction will then complete the reduction. During the operation the patient should be sitting and the head should be rocked without traction, for traction lessens the effectiveness of the fulcrum necessary for reduction. The period after dislocation in which reduction is possible has not been determined but it exceeds six months.

THE REMOVAL OF KING'S COLLEGE HOSPITAL.

ON Nov. 12th an appeal was issued from King's College Hospital for funds in connexion with the projected removal of the institution from its present site. The appeal states that London as a whole, excluding the City of Westminster, is woefully deficient in provision for its sick poor, while South London, whither it is proposed to remove the hospital from its present site in Portugal-street, is particularly so. The sum of £300,000 is needed to carry out the scheme of removal and to build and to equip the hospital upon the new site, although the site has already been most generously given The chief reasons which led to the decision to remove the hospital are stated to be that the existing building is obsolete in design, inadequate in accommodation, and incapable of adequate extension or remodelling, while the poorer inhabitants of the neighbourhood have gone to other and distant parts of London. Although King's College Hospital will be removed to South London it is expected that patients will continue to be sent there from all parts and it is claimed that the hospital will still be a national institution and therefore should be nationally supported. Of course it must be remembered that in every case where a bigger building and more accommodation are obtained a correspondingly larger income at least will be necessary to maintain the hospitals not only up to the level of their previous efficiency but also to keep pace with the rapid progress of modern methods of treatment which in many cases entail a larger expense. This no doubt explains the constantly increasing expenditure of hospitals in the maintenance of patients to which the special attention of the committee of distribution of the Metropolitan Hospital Sunday Fund has been directed.[1] Of course, there is no doubt that in many cases the governors are quite right in believing that when they can show a building worth having, admiring, and cherishing it will stimulate observers adequately to support it. If the duration of a patient's sickness can, by slightly increased expenditure, be shortened without the loss of efficiency there will be in many cases a considerable saving in the wealth-producing power of the worker which will benefit the country at large. Those who intend practically to support the removal scheme may find particulars of where to send their donations in the letter from the governors in our issue of Nov. 7th, p. 1324.

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[1] THE LANCET, August 8th, 1903, p 410.

THE PROFESSOR OF SURGERY AT THE UNIVERSITY OF CAMBRIDGE.

THE public orator, Dr. Sandys, spoke as follows in recently presenting for the complete degree of Master of Arts *honoris causâ* Mr. Howard Marsh, the newly elected Professor of Surgery:—

> Haud ita pridem, ut meministis omnes, plenus annis, plenus honoribus, e vita excessit vir insignis, per annos plurimos primum anatomiam, deinde chirurgiam, inter nosmet ipsos praeclare professus. Qui qualis quantusque vir fuerit, quanto scientiæ amore, quanta animi alacritate, quanta sermonis facundia praeditus, non est quod longius exsequar: vosmet ipsi vobiscum recordamini. Chirurgiae vero professoris nostri primi in locum, annorum septem intervallo interposito, nuper electus est vir egregius, quem, tot aliis ministrum salutis, Academiae nomine hodie ipsum jubemus salvere. Viri talis autem inter laudes, non nostrum erit hodie scientiae tam reconditae penetralia perscrutari, non artis intimae mysteria occulta et abstrusa in lucem proferre; ne corporis quidem mala illa dura verbis duris expressa, ut ἀρθρῖτις, ut ἀγκύλωσις, totiens ab hoc viro feliciter levata, coram vobis hodie commemorabuntur. Mentis potius ad bona praeclara transibimus, et professorem nobis nuper datum propterea praesertim animo laeto accipiemus, quod ingenio tam vivido, judicio tam subacto est præditus, in rebus minutissimis observandis tam subtilis, in rebus obscurissimis explicandis tam lucidus. Viro in ea parte medicinae quae manu curat insigni manus libenter tendimus, dextraeque tam sollerti dextram libenter jungimus. Duco ad vos baronetti quidem illustris, Jacobi Paget, quondam adjutorem, equitis autem insignis, Georgii Humphry, nunc demum successorem, virum nobis omnibus acceptissimum, Professorem Marsh.

The public orator at Cambridge has a knack of saying nice things in the nicest way as well as in unimpeachable Latin. We are sure that Professor Marsh's friends and pupils will appreciate the kind sentiments expressed towards the new Master of Arts of the University of Cambridge, while all our readers will endorse the praise given in memory of Paget and Humphry.

MUSIC AND MADNESS.

BY the above heading we do not mean to suggest that Hector Berlioz, whose centenary occurs this year, was mad, but the vague aspirations, the longings, the loneliness, and the horrible visions of insanity were surely never more powerfully set forth than in that master's *Symphonie Fantastique*, a most powerful rendering of which was given at Queen's Hall, London, on Nov. 12th, by Herr Felix Weingartner and the magnificent band under his control. The protagonist of the symphony is a musician who is possessed by an "*idée fixe*" naturally connected with a woman with whom he is in love. The first movement gives this *idée* and illustrates his longings and in the second movement he sees his love at a ball. Here the lights and the swirl of the dancers are marvellously illustrated by the glitter of harps and the shimmer of a waltz theme played by the muted strings. In the third movement the scene is laid in a pastoral country where a melancholy shepherd illustrated by a theme for the *cor anglais* calls to his love who answers him on the oboe. The duet continues for some time and finally the *cor anglais* calls for the last time but elicits no response but the mutterings of a thunderstorm. The young musician concludes from this that his love is hopeless and so takes opium to end his misery. He only takes enough, however, to give him fearful dreams, the subject of which is his own march to execution for having killed his love. The dismal procession is set forth with wonderful skill. By means of the throbs and mutterings of the drums and of the double-basses we find suggested the tramping of feet and the many-voiced cries of the attendant crowds which haunt the hearer with a horrible sense of uncanny surroundings. With a crash the axe falls but the hero's sufferings are not over, for although he is dead he is now at a witches' Sabbath, where the theme of his "*idée fixe*," hideously burlesqued and vulgarised, is piped on a clarionet while the assembled witches jeer. Under all pulses the terrific plain chant of the *Dies Iræ*. It is not soothing music but so far as one man can enter into another's brain and convey his sensation to others Berlioz has certainly made his music a means to so doing. Medical men who have not heard this work should take the first opportunity of repairing their neglect.

CHOLERA IN EGYPT.

FROM a return recently issued by the Egyptian Sanitary Department we learn that 20,976 cases of cholera were treated in Government hospitals during 1902. Of these 14,958 cases died and 6018 recovered. There were also 19,637 deaths "out of hospital"; the total mortality consequently amounted to 34,595. The number of infected villages was 2026. No comments of any kind accompany the return which is purely statistical, but some idea of the work done by the Egyptian sanitary officials can be obtained from the figures. Every one of the infected villages had to be taken in hand with a view to disinfection, to say nothing of the large towns and "governorates," in which 3393 deaths occurred out of an aggregate population of 1,000,000. It is more than probable that rural Egypt has never been so clean before. It speaks volumes for the tact displayed by Sir Horace Pinching and his subordinates that all the necessary demolition, whitewashing, and sweeping were accomplished without the slightest friction and it is also greatly to their credit that they were able to deal with, and to control, an important epidemic without causing a panic. Not only has the confidence of the *fellahin* been secured but also that of the more impressionable Greek and Syrian inhabitants.

A SPECIALIST IN CRIME.

ON Nov. 10th at the County of London Sessions a man named William Smith pleaded guilty and was sentenced to three and a half years' penal servitude for a series of ingenious robberies perpetrated upon medical practitioners in the metropolis. There were more than a dozen cases against him and he had before served two sentences of imprisonment for like acts. His method was to watch for a medical man to pass on his professional rounds or else to entice him out to pay a visit to an imaginary patient by means of a bogus message. He then called at the house and on being informed that the medical man was out asked to write a note. In the course of writing it and of leaving the house he usually contrived to annex some portable article, such as an ornament from the room or an umbrella from the hall. Medical men who have read the story of his depredations will do well to instil caution and vigilance into their servants, for although the sentence recorded may serve as a warning to other criminals the success which for some time evidently attended the efforts of this rascal has been made equally conspicuous by the reports of the case in the newspapers. Medical practitioners have to take with the rest of the community their share of the inconvenience and loss which dishonest persons can always cause to their victims; it is a little hard upon them that circumstances should expose them in a greater degree than others to the devices of criminals who choose to devote their attentions as "specialists" to the medical profession.

THE ASSOCIATION OF RICKETS AND WEAK-MINDEDNESS.

THAT some association exists between certain forms of rickets and weak-mindedness in children seems to be a conclusion in favour of which evidence of a satisfactory character has been accumulating in recent years. In a previous annotation in THE LANCET reference was made to the observations of Dr. Renoult of Paris with regard to the connexion of rickets with weak mindedness[1] In a communication read at the recent Congress of French Alienists and Neurologists held at Brussels and published in the *Archives de Neurologie* for September Dr Bourneville and Dr Lemaire of the Bicêtre Hospital, Paris, having been struck with the frequency of the association of rickets and weakmindedness, state that they were led to investigate systematically a number of cases of the nature referred to in order to find a satisfactory answer to the question, "Does there exist a relationship between the disorder of nutrition which underlies rickets and arrest of mental development in the child?" It was found that rachitic changes of unmistakeable character were present in 34 out of 435 patients in residence The latter comprised idiots, imbeciles, and feeble minded children, the proportion of rachitic cases amongst these amounting to 8 per cent The malformations noticed were in descending order of frequency beaded thorax deformity of the skull, facial asymmetry, and dental anomalies Five cases of scoliosis and six of excessive curvature of the tibia were also noticed Pelvic deformities were met with in only two cases Another fact was also clearly shown—viz, that the mental backwardness of the patients was generally not congenital Such infants appeared to be of normal intelligence during the first few months of their life and it was only at the age of one and a half or two years that symptoms of idiocy manifested themselves The majority of the children were free from anatomical "stigmata of degeneracy" apart from the special deformity of rickets, a fact which suggested that the defect of the nervous system could not have been produced in the period of fœtal life It was frequently noticed that the mental weakness of the rachitic patients referred to above made its appearance after an attack of infectious broncho pneumonia or gastro enteritis It was also noticed that while in many cases mental enfeeblement was the sole sequel of the pulmonary or gastro intestinal infection in a few cases rachitic deformity of the bones alone resulted and that the relationship of these sequelæ to one another was such as to suggest that one and the same toxic or infectious agency was the cause of brain degeneration (weak mindedness and imbecility) and of disease of the osteogenetic process (rickets) A number of photographs were shown by Dr Bourneville and Dr Lemaire in support of these statements

A PROVINCIAL sessional meeting of the Sanitary Institute will be held at the town hall, Leicester, on Saturday, Dec 5th, at 11 A M, when a discussion will take place on the Collection, Disposal, and Utilisation of Town Refuse in Leicester, to be opened by Mr Frank W Allen of Leicester A visit will afterwards be paid to the destructor works On Dec 9th at 8 P M a discussion will take place at the Parkes Museum, Margaret-street, London W, on the Flooding of Basements in London by Sewage, which will be opened by Mr Maurice Fitzmaurice, C M G, and Dr H R Kenwood, and general discussion is invited The chair will be taken by Sir Benjamin Baker, K C M G Tickets for admission of visitors may be obtained on application to the secretary, Mr E White Wallis, at the Parkes Museum

Dr Allan Macfadyen will deliver a lecture at the Lister Institute of Preventive Medicine, Chelsea gardens, London, S W, on Thursday, Dec 3rd, at 9 P M, on Intracellular Bacterial Toxins and their Practical Application

THE medical officer of health of the Cape Colony states that for the week ending Oct 24th only two cases of plague were discovered in the Colony—namely, two coloured males, one being found dead, both discovered on Oct 19th As regards the Mauritius a telegram from the Governor received at the Colonial Office on Nov 13th states that for the week ending Nov 12th there were 81 cases of plague and 48 deaths from the disease

THE Dutch Government having appointed a well known Zurich homœopath—who, by the way, was originally a pastor—to the chair of Pharmacognosis and Pharmacodynamics in the University of Leyden, in opposition to the wishes of the medical faculty, a considerable amount of interest has been excited in Dutch scientific circles as to the results of the quarrel

THE annual dinner of past and present students of the National Dental Hospital and College, will be held at the Trocadéro Restaurant, Piccadilly circus, London, on Friday, Nov 27th The chair will be taken by Mr Tweedy, President of the Royal College of Surgeons of England

THE autumn dinner of the Irish Medical Schools' and Graduates' Association will take place at the Trocadéro Restaurant, Piccadilly circus, on Wednesday, Nov 25th, at 7 30 P M The President, Dr P S Abraham, will take the chair

Mr T H Openshaw, F R C S, C M G, surgeon to the London Hospital, has been appointed by the Metropolitan Asylums Board honorary consulting surgeon to the training ship *Exmouth* at Grays

OUR Berlin correspondent, writing on Nov 16th, confirms the satisfactory reports which have appeared in the daily press as to the German Emperor's recovery from his recent operation

Sir Hermann Weber will deliver a lecture on Thursday, Dec 3rd, at 5 P M at the Royal College of Physicians of London, on the Means for the Prolongation of Life

THE death is announced, in the eightieth year of his age, of Sir Robert Martin Craven, the well known surgeon of Hull

THIRTY-SECOND ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD (1902 03)

THE more purely medical matters which come under the very wide head of local government having been dealt with at great length in the annual report of the medical officer of that Board, which we have already reviewed,[1] it is by no means easy to make choice of matters to consider in the report now under consideration for that report consists of nearly 1000 pages of matter, including tables of statistics and charts Local government concerns itself with nearly everything which *touches the ratepayer* in all the daily matters of life Public health, relief of the poor, the duties of county councils, lunatics, education, and midwives all come under its ægis As regards metropolitan pauperism it is somewhat disquieting to be told that the total expenditure for this purpose out of the rates, excluding the expenditure of the Metropolitan Asylums Board, is 15*s* 0¼*d* per head of the estimated population in the middle of the year 1901 When we consider in addition to this enormous sum the amount of money annually given for charitable purposes the cost of relief of the poor seems abnormally high With regard to vaccination the report on p 181 draws attention to the following —

> During the year an important decision was given by the High Court of Justice in an appeal from a conviction by the magistrates of

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[1] THE LANCET, Jan 10th, 1903 p 117

[1] THE LANCET, Sept 19th (p 839) Oct 3rd (p 972) and 17th (p 1111), 1903

Leicester. In the case stated by the magistrates two questions were raised, viz., (1) whether the vaccination officer, by virtue of his appointment as such, [illegible] or special from the guardians at any time, [illegible] guardians' directions not to prosecute [illegible] could institute the proceedings which were taken against the appellant under the Vaccination Acts 1867 to 1898; and (2) whether it was a condition precedent to a prosecution by the vaccination officer under Section 29 of the Vaccination Act, 1867, that due proof should be given of service on the parent of the child by the public vaccinator of the notice mentioned in the Vaccination Acts, 1867 to 1898, and of his having visited the house of the child as therein directed. The court decided the first of these questions in the affirmative and as regards the second they held that such formal proof was not necessary in every case and they dismissed the appeal with costs.

The Local Government Board upon this decision being given drew the attention of the several boards of guardians and vaccination officers to it by means of a circular dated Sept. 2nd, 1902.

That portion of the report which deals with the working of the Sale of Food and Drugs Act is of extreme interest. As regards milk, which is the food-stuff most frequently adulterated, 11·6 per cent. of the samples taken during 1902 were found to be adulterated, this being the highest rate of adulteration recorded in any year since 1893. Many analysts call attention in their reports to the growing practice of reducing the quality of good milk so that it may just reach the standard fixed by the Board of Agriculture in its regulations for the sale of milk. The analyst for the county of Kent remarks that "this reduction is nowadays done very accurately." We long ago anticipated that the introduction of a limit in regard to the amount of fat would tempt the milk-seller to dilute rich milk down to the standard. It is difficult to see how the law can be made to reach those persons who adopt such a niggardly practice. If only the analyst were able to differentiate added water from the natural water of the milk there would, of course, be no need for standards at all. The difficulty is increased by the fact that poor milk, showing slightly less than 3 per cent. of fat, is occasionally the genuine product of the cow, but this is generally due to indifferent feeding or to ill-health. We believe that the limit of 3·25 per cent. of fat which the departmental committee appointed by the Board of Trade originally suggested fairly represents the milk of mixed herds and that the honest milk-dealer would have no difficulty at all in supplying milk well up to that standard. Sometimes also the fraud is gross. We are personally acquainted with an instance in which a family took a house in Kent for the summer. Cream was ordered from the local milkman. He supplied the cream, it is true, but he skimmed it off the milk supplied to the family. This skim-milk was charged as milk, the cream, of course, being charged for as cream in addition. The report draws attention to the fact that some magistrates think lightly of these offences. The analyst for Walsall states that he condemned a sample of milk because it contained 7 per cent. of added water, but the magistrate, without hearing the defence, dismissed the case with the remark that it was a paltry prosecution. We have always maintained that the penalties for offences connected with food-supply, whether in the form of adulteration or of selling putrid or diseased meat or other food-stuffs, are grossly inadequate and we are glad to find the following passage in the report, p. clxxiv.: "During the year we drew the attention of the Secretary of State for the Home Department to the fact that we have from time to time received complaints from local authorities respecting the inadequacy of the penalties imposed by justices for breaches of the provisions of the Sale of Food and Drugs Acts and he subsequently addressed a circular letter to clerks of the justices of the petty sessional divisions throughout the country asking that the matter might be brought to the notice of the justices in order that they might give special consideration to the question whether the penalties imposed in the cases coming before them were such as would be likely to deter offenders from repeating, and other persons from committing, the offence." During the year with which the report deals penalties were imposed in 2928 cases and in 164 of these the fine did not exceed 2*s.* 6*d.*, 77 being of 1*s.* and under. Punishment on this scale is simply ridiculous and worse than useless. London as usual shows a comparatively high rate of adulteration of milk, the percentage being 15·6 as against 10·3 in the 20 next largest towns of England and Wales. In six of the metropolitan boroughs the proportion exceeded 20 per cent. A large number of samples of margarine were reported to contain water, some in so great a proportion as 20 per cent. The analyst for Kent remarks upon this: "Water is not intrinsic to margarine; every drop we find in it has been put there with the sole purpose of its being sold at the price of margarine."

As regards the water-supply Dr. T. E. Thorpe sends in a long and valuable report (p. 213 *et seq.*). The Kent Company as usual stands at the head of the list of metropolitan water companies for general excellence of the water supplied. The district of the metropolis supplied by the Kent Company is served with water coming from 19 wells in the chalk. This water, though of great purity as regards organic contamination, is very hard. By Table K, which appears on p. 290, we see that the mean of degrees of hardness (one degree equals one part of carbonate of lime or its equivalent in 100,000 parts of water) for the year 1902 was 28·8 per cent. For the month of September the figure was 32·4. It seems to us that a company which in 1902 paid a dividend of 15 per cent. (*vide* p. cxcvi.) should be compelled to soften its water before delivery. Water of the hardness of over 20 per cent. is not always conducive to health as a beverage and is a constant source of expense when used for domestic purposes, both by making an extravagant quantity of soap necessary and by blocking hot-water apparatus.

MEDICAL MAYORS.

THE following have been elected or re-elected to the mayoral chairs of their respective boroughs:—

Bridport.—Mr. S. J. Allden, M.D. Durh., L.R.C.P. Lond., M.R.C.S. Eng., received his medical education at the University of Durham and St. Thomas's Hospital. In 1888 he took the degrees of M.B., B.S., and in 1890 the degree of M.D. Durh. In 1889 he was appointed house surgeon at the Royal Infirmary, Newcastle-on-Tyne, and during the four following years filled different resident appointments at the Hospital for Consumption and Diseases of the Chest at Brompton, London. He has been a member of the Bridport town council for six years, during which time he has filled the office of chairman of the sanitary committee.

Cambridge.—Mr. J. H. C. Dalton, M.D., D.P.H. Cantab., graduated in arts (twelfth wrangler) in 1884 and in the following year registered as a medical student. In 1889 he became a Licentiate of the Society of Apothecaries and in 1890 graduated as bachelor of surgery at Cambridge. Previously to taking the L.S.A. Dr. Dalton studied at St. Mary's Hospital. In 1893 he took the M.D. degree at Cambridge and subsequently the D.P.H. of that University. In 1890 he was elected guardian of the parish of Camberwell and two years later became a manager of the Metropolitan Asylums Board. After travelling round the world he settled at Cambridge where he was elected on the board of guardians in 1898 and member of the borough council in 1899 and an alderman in 1900. In 1902 he was elected chairman of the board of guardians.

Dartmouth.—Mr. R. B. Searle, L.R.C.P. Lond., M.R.C.S. Eng., was educated at King's College, London, where he distinguished himself in mathematics and medicine. He has been in active practice for more than 40 years. He was elected at the head of the poll as town councillor of Dartmouth six years ago. His term of office having expired three years ago he did not seek re-election but this year he was called upon by the town council to become their mayor.

Denbigh.—Mr. David Lloyd, M.B., M.S. Glasg., was educated at the University of Glasgow and the Middlesex Hospital, London. He is a justice of the peace and has acted as county councillor for four years.

Dorchester.—Mr. E. W. Kerr, M.D., M.Ch. Dub., was born in 1849 at Grange Gorman, near Dublin. He was educated at Dungannon Royal School and Trinity College, Dublin, and studied medicine at the School of Physic, at Sir Patrick Dun's Hospital, and at the Richmond and Whitworth Hospital. He graduated B.A., M.B., and M.Ch. in 1872 and M.D. in 1889 and became L.M. K. & Q.C.P.I. in 1872. Before going to Dorset in 1884 he practised in Donegal and Leitrim. For the past six years he has been on the Dorchester town council and served on several committees. He has been chairman of the recreation and reception committee and vice chairman of the sanitary committee for the past two years.

Falmouth.—Mr. William Banks, M.B. Lond., M.R.C.S.

Eng. (re elected), entered the council in 1892 on the extension of the borough and was elected alderman in 1898.

Hampstead.—Mr. Edward Collingwood Andrews, M.D. Cantab., M.R.C.S. Eng., son of Dr. James Andrews of Hampstead, was educated at University College School, St. John's College, Cambridge, and Guy's Hospital, London. He matriculated at the University of London in the honours division and proceeded to the B.Sc. degree in 1882 He was successively exhibitioner and foundation scholar of St. John's College and took the B.A. degree in 1884, having obtained honours in the natural science tripos, Parts I. and II. He obtained the degrees of M B, B.C. in 1886, M A. in 1887, M.D. in 1892, and the Membership of the Royal College of Surgeons of England in 1885. He entered the borough council of Hampstead on its formation in 1900 and was forthwith appointed chairman of the public health committee and on expiration of two years' term of office chairman of the housing committee. At the recent election he was returned at the head of the poll for the central ward.

Hedon.—Mr. James Soutter, M R C.S., L R C.P. Lond. (re-elected).

Honiton.—Mr. James Campbell Macaulay, M R C S. Eng., L.S A, who has been re-elected mayor of Honiton, has occupied the civic chair on five previous occasions—namely, in 1884, 1887, 1894, 1901, and 1902 He was for many years a member of the Honiton borough council but in 1897 he resigned his seat as alderman.

Saffron Walden.—Mr Henry Stear, M.R C S. Eng., L S.A. (re-elected), commenced his professional career in 1845 by serving for five years an apprenticeship to the late Mr Thomas Lucas of [illegible] a course of [illegible] ow and also one of chemistry at Cambridge, afterwards becoming a student at the Middlesex Hospital. He became a resident of Saffron Walden in 1854 and retired in 1895 after having been in practice for 41 years. He has always taken an active part in everything that tended to promote the welfare and interests of his fellow townsmen. He entered the town council in 1863 and retired after holding the office for three years but entered the council again five years ago

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Nov. 12th, Mr. JOHN TWEEDY, the President, being in the chair.

Diplomas of Membership were issued to 102 candidates.

It was referred to the Court of Examiners to consider, and to report upon, the remarks made by the visiting inspectors of the General Medical Council with respect to the final examination in surgery of the Conjoint Board.

A report was received from the delegates of the two Royal Colleges regarding the proposed conference with the General Medical Council in reference to the requirements of the Conjoint Examining Board in England respecting study and examination in chemistry, physics, and biology. The report was adopted but any action in reference thereto will depend on its adoption by the Royal College of Physicians.

The Council then considered the report of the Conjoint Committee on the regulations relating to the first examination and the first year of study. It was entered on the minutes and the recommendations contained in it were adopted subject to any modifications which may appear desirable after consultation with the medical schools and examiners.

The recommendations referred to are as follows:—

1. That Part I. Chemistry, Part II. Physics, Part III. Biology, and, at the option of the candidate, Part IV. Practical Pharmacy, be the subjects of the first examination.

2. That a minimum length of courses be required in chemistry, physics, and biology before candidates are admitted to examination in these subjects [illegible]

[illegible]

In physics 120 ,, ,, ,,
In biology 120 ,, ,, ,,

4. That these courses need not run concurrently, nor be completed within one year.

5. That these courses may be commenced or attended before the required preliminary examination in general education is passed.

6. That study at an institution other than a recognised medical school be counted for not more than six months of the curriculum.

7. That the study of anatomy and physiology be not recognised until after the first examination in chemistry, physics, and biology has been passed.

8. That no student be admitted to examination in medicine and [illegible] y after [illegible] owards [illegible] unted,

A letter was read from Mr. L. A. Bidwell, F.R C.S, dean of the Post-graduate College of the West London Hospital, applying for the recognition of that hospital as an institution where graduates of four years' standing may pass the necessary year of post-graduate study before presenting themselves for the final Fellowship examination. The letter was referred to the Court of Examiners.

The PRESIDENT stated that the Bradshaw Lecture would be delivered by Mr. Henry Morris on Wednesday, Dec. 9th, at 5 P.M., and that the subject of the lecture would be Cancer and its Origin.

The PRESIDENT reported that on Nov. 3rd he attended the ceremony of the laying of the foundation stone of King Edward VII. Sanatorium for Tuberculosis at Lord's Common, near Midhurst, and that after the ceremony he had the honour of being presented to His Majesty.

The SECRETARY reported the notices of motion for the annual meeting of Fellows and Members on Thursday, Nov. 19th.

PUBLIC HEALTH IN BOMBAY IN 1902.

THIS interesting report[1] includes those of the medical officers in charge of the hospitals for infectious diseases. The statistics are based upon the census return of 1901. The birth rate of the city is shown as 6209 more than the average of the preceding five years and is a birth-rate of 22·67 per 1000 against 17·42 during 1901; from this it will be inferred that there has been a marked improvement in the registration of births (the new scheme of registration of births and deaths proposed by Dr Turner has been in operation during the year). The mortality during the year under report was the lowest of any year since 1898.

The following is the list of the deaths from each zymotic disease during 1901 and 1902:—

	1901.	1902.
Plague	18,736	13,820
Cholera	193	75
Small pox	159	288
Measles	67	642
Whooping cough	97	83
Enteric fever	62	89
Remittent fever	7,266	3,847
Relapsing fever	1,560	651
Malaria ague	490	483
Dysentery	1,341	1,377
Puerperal fever	514	477
Simple continued fever	113	99
Total	30,593	21,931

The mortality from plague began its seasonal rise in January and reached its maximum on April 3rd and then declined. There was a decrease in the number of deaths from plague in all communities except Europeans and Negro-Africans, and there occurred a marked reduction in deaths from this malady in all sections of the city except Upper Colaba, Fort, Southern, and Chaupati. From August the plague mortality rose gradually to the end of the year. In the beginning of the year plague measures were carried out by the military officers appointed by the Government under the supervision of the health officer, subject to the control of the municipal commissioner, but by the end of March all the military officers had been withdrawn and the entire control of the plague administration was vested in the health department. This change was a desirable one inasmuch as now the influences affecting the health of the city come under the direct control of the health officer. The Government has, after careful consideration, done away with the compulsory measures and introduced voluntary ones directing the health department to follow a persuasive policy. Inoculation is not in favour with the people; the inhabitants of Bombay seem to have lost all faith in the protective effects of the prophylactic

During the year 288 deaths from small-pox occurred, as compared with 159 in 1901. *The increase is accounted for* by the number of unvaccinated people who went to Bombay from the Portuguese territories, most of whom soon after their arrival were found to be suffering from the disease. Cholera did not assume an epidemic form during the year.

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[1] Annual report of the Executive Health Officer for the City of Bombay for the year 1902. By John A. Turner, M.B Edin, D P.H. Cantab., Executive Health Officer. Bombay, June, 1903. Pp. 113.

A total of 4518 deaths was registered from fevers. Remittent fever claimed the highest number—viz., 3847—being 3419 less than in the previous year and 1938 less than the average of the preceding five years. To enteric fever 89 deaths were ascribed, being 27 more than during the previous year and 42 more than the average of the last five years. 483 deaths were registered as due to ague, three more than during the previous year and 190 more than the average of the last five years. It was noted that the mortality from fever rose and fell with the mortality from plague. During the year investigations into the prevalence of malarial fever were made and a report was submitted to the corporation. The divisional health officers instructed their staffs in the methods of distinguishing the various mosquitoes and larvæ and a list of places was made out where anopheles larvæ were found. The anopheles culicifacies and anopheles Listonii are said to be the only malaria-bearing mosquitoes known in Bombay at present. The extracts from the health officer's report to the municipal commissioner show that sound advice is being given as to the best known means of preventing the breeding of anopheles.

Measles prevailed in an epidemic form during the last two months of the year and was accountable for 642 of the registered deaths. The corporation, having called for an exhaustive report on the question of the high infantile mortality in the city—(1) as to the causes and (2) on the measures and remedies for reducing it—the health officer in his letter on the subject to the municipal commissioner stated that the first point is a simple one to deal with and that on the second point it is not difficult to offer suggestions, but he expressed grave doubts as to whether the corporation can undertake to give practical effect to some of them. He observes that to suggest remedies for the apparent causes it is necessary to inquire into the conditions which predispose to these diseases. The statistics prove that the greatest mortality is amongst the poorer classes and the causes of this predominance are : (1) want of stamina in the mother ; (2) the hard work that mothers have to do during pregnancy ; (3) want of proper nourishment to infants ; (4) want of proper clothing ; (5) want of medical treatment in sickness ; (6) insanitary surroundings ; (7) overcrowding ; (8) insanitary dwellings ; (9) drugging of children to enable the mothers to attend to their work ; and (10) early marriage.

We are glad to note that seven additional dispensaries have been provided by the municipality and that the ten dispensaries have done excellent work during the year. The voluminous statistical tables are carefully drawn up and the "Diagram-Weekly Total and Plague Mortality" shows at a glance the weekly total mortality, the weekly plague mortality, and the weekly average mortality ; other useful illustrations exhibit the incidence of plague and cholera in different parts of the city.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

A QUARTERLY meeting of this College was held on Nov. 3rd, Dr. T. S. CLOUSTON, the President, being in the chair.

The PRESIDENT referred in feeling terms to the lamented death of Dr. G. W. Balfour, the fourth Fellow on the roll of attendance, President in 1882–84, librarian and trustee for many years, and one who took the keenest interest in all the affairs of the College. His death was a loss alike to the College and to the profession of medicine.

John Cumming, F.R C.P., F.R C.S Edin., Percy Theodore Herring, M.D., F.R C.P.Edin., and John William Simpson, M.B., C.M., F R C.P.Edin., were introduced and took their seats as Fellows of the College The following Members were admitted by ballot to the Fellowship of the College : James Taylor Grant, M.B., C M., M.R.C.P. Edin., Edinburgh ; Charles Cromhall Easterbrook, M D., M.R.C.P. Edin., Glengall-by-Ayr ; and Edwin Bramwell, M B., C.M., M R C.P. Edin., Edinburgh. The following candidates were *admitted to the Membership of the College after examination* : George Lyon, M.B., Ch.B Edin., Edinburgh ; Frederick Norton Menzies, M.B., Ch.B. Edin., London ; and Alexander Lyons, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., Torquay. The Registrar reported that since the last quarterly meeting 40 persons had obtained the Licence of the College by examination.

Dr. A. R. Simpson has been nominated trustee of the College in room of the late Dr. Balfour. Dr. J. Playfair has been elected as representative on the conjoint committee of the triple qualification.

MEDICINE AND THE LAW.

The Traffic in the Streets of London.

IN a letter appearing in the *Times* of Oct 28th attention was called to the ill-paved, ill-lighted, and unprotected condition of the roads surrounding the Albert Hall, where conditions are observable which are surprising in such a locality, and in another letter upon the same date the employment of heavy traction engines drawing trucks through the streets of London was criticised and it was urged that county and borough councils should have increased powers to regulate their use. The conditions of London traffic impose a certain amount of danger of accident upon all who circulate in the streets of the metropolis and it is important that such danger should be reduced to a minimum, while it is also desirable from the point of view of the public health that the greatest possible degree of cleanliness and quiet consistent with the busy life of a great city should be obtained. The insanitary and unsafe state of the roadway near the Albert Hall is a matter of detail with regard to which concert-goers and those who live in the neighbourhood might well combine in order to make their protests heard, but it is not a solitary instance and in spite of modern progress and of improvement in many directions London is not, and apparently never will be, a well-paved, well-lighted city with its streets watched by a police force proportionate to its requirements. To take conspicuous examples, Regent-street and Oxford-street have been subjected to patching operations during the past year but in both of these important thoroughfares the roadway is in places in a condition which renders it not only filthy in wet weather but at all times dangerous to horse traffic. Less frequented streets are often in no better state and in the majority of our quiet squares and unimportant thoroughfares such safety as there is at night or on foggy afternoons is due to the law-abiding character of the people rather than to the deterrent effects of light and supervision. With regard to the traction-engine nuisance the demolition and rebuilding of whole streets, coupled with tunnelling for the purposes of underground railways have made trains of heavily laden trucks part of the regular traffic of London streets, visible by day and painfully audible by night. The Locomotives Act, 1898, enabled county and borough councils to permit the loading of wagons drawn by engines of necessarily increased weight with burdens exceeding those which were previously permitted and provided generally for a heavier locomotive traffic upon our highways, and the new state of affairs shows a tendency to become unpleasantly obtrusive. In addition to its effect upon the roadway and to the disturbance caused by noise and vibration, the traction engine with its train behind it appears to have increased the pace at which it travels and the man who should be present as a protection to those driving horses is not always conspicuous when an occasion for his intervention arises. The hardship which presses upon the individual in these circumstances lies in the fact that whatever benefit may accrue to the community he is without compensation for any injury which he may personally sustain. He cannot sue the owner of the traction engine for broken rest or for shaken nerves. If his horse is frightened he is not likely to be able to establish negligence that will entitle him to damages and if his house suffers he is still less likely to obtain satisfaction. That Londoners are beginning to protest is not to be wondered at. The popularity and usefulness of the motor-car have perhaps helped to encourage the idea that the horse may advantageously be dispensed with and that mechanical modes of traction should be encouraged but it will be a matter for considerable regret if the motor-car and the traction engine are allowed to become continual sources of irritation and danger to the vast majority who do not use either of them.

The Peculiar People

An inquest held at West Ham recently showed, what, indeed, hardly needed demonstration, that the law can do nothing to save the lives of foolish people from being sacrificed to their own folly The deceased, according to the medical evidence, died from pleurisy and bronchitis The medical practitioner who had made a post mortem examination had also been called in to see her before death and had prescribed Other evidence showed that the deceased had told the witness who had summoned the medical man that she had better put his medicine down the sink and had prevailed upon her to do so The coroner expressly asked whether any member of the sect of Peculiar People, to which she belonged, had prevailed upon the deceased to dispense with medical aid, but this was denied An elder of the sect had been called in and had prayed over the sick woman but there was nothing to show that he could in any way be made liable for her death The matter, therefore, was concluded by a verdict of the jury in accordance with the medical evidence

Looking Back.

FROM

THE LANCET, *SATURDAY*, NOV. 19, 1825.

FOREIGN DEPARTMENT

ANALYSIS OF FOREIGN MEDICAL JOURNALS

Medical Galvanism

THE following cases[1] are given by M Bailly, physician to the Hôpital de la Pitié, and M Meyranx, in an article on a new mode of applying galvanism to the cure of painful affections of the joints and nerves, in the last number of the *Archives Générales*

Chorea cured by Galvanism

A girl, after difficult dentition, was affected with convulsions of the muscles of the right cheek, which soon extended to the shoulder of the same side The disorder had resisted all the treatment which had been employed, and at the age of seven years the symptoms had become more violent When she was brought to La Pitié, she was in a debilitated state, the muscles on the right side were much wasted, the alternate contraction and relaxation of the muscles in the face produced constant convulsions and distortions Galvanism was first applied to this patient by simple communication, without the introduction of needles, but she derived no benefit from it, a needle was then introduced near the first and second cervical vertebræ and another was placed near the division of the brachial plexus Three elements developed enough of the galvanic fluid to produce decided contractions and a painful sensation The girl felt so much relieved by the operation, that the next day she asked to be galvanised again, but as we happened to touch, by mistake, with the thread which served as a conductor to the negative fluid, an element at a great distance from the first element, she felt so great a shock, and such severe pain, that the needles were torn out from their situation, and we had considerable difficulty in persuading her to place herself again in the galvanic circle The operation was prolonged for half an hour, and six sittings sufficed to cure, completely, a disorder which had for years resisted the most powerful remedies that could be employed

Messrs Bailly and Meyranx state, that galvanism, combined with acupuncturation, had been employed with the most decided success in a great number of cases, the details of which they intend shortly to lay before the public The pain produced by the operation is inconsiderable, and the galvanic fluid possesses the singular property of never inflaming the part which it penetrates What then, they exclaim, is the nature of this fluid which burns and melts metals, which puts charcoal in a state of incandescence, and which traverses the living tissues of the body, in which it increases sensibility and contractility in so marked a manner, without leaving a trace of disturbance behind it? The phenomena are altogether inexplicable

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[1] *Only one of the four cases related is transcribed*

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 8391 births and 5169 deaths were registered during the week ending Nov 14th The annual rate of mortality in these towns, which had been 15 1, 15 8, and 16 1 per 1000 in the three preceding weeks, further rose last week to 17 9 per 1000 In London the death rate was 16 7 per 1000, while it averaged 18 4 in the 75 other large towns The lowest death rates in these towns were 6 0 in Hornsey, 7 4 in King's Norton, 7 9 in Aston Manor, 10 2 in Hastings, 10 3 in Grimsby, 10 7 in Croydon and in Willesden, and 10 8 in Walthamstow and in Brighton; the highest rates were 22 9 in Nottingham, 23 5 in Wigan, 23 9 in Leeds, 25 3 in Salford, 25 8 in Rochdale, 26 8 in Sunderland and in Tynemouth, 26 9 in Middlesbrough, and 32 2 in Warrington The 5169 deaths in these towns last week included 432 which were referred to the principal infectious diseases, against 532, 523, and 419 in the three preceding weeks, of these 432 deaths, 138 resulted from diarrhœa, 79 from measles, 61 from diphtheria, 59 from "fever" (principally enteric), 51 from whooping cough, 43 from scarlet fever, and one from small pox. No death from any of these diseases was registered last week in Hornsey, Tottenham, Bournemouth, Devonport, Burton-on Trent, Wolverhampton, King's Norton, Coventry, Stockport, Bury, Barrow in Furness, West Hartlepool, or South Shields, while the highest death rates from the principal infectious diseases were recorded in Hanley, Wigan, Warrington, Preston, Rotherham, York, Sunderland, Gateshead, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Warrington, Blackburn, Rotherham, York, and Sunderland, from scarlet fever in Wigan; from diphtheria in Hanley, from whooping-cough in Warrington, York, and Newport (Mon), from "fever" in Bolton and Merthyr Tydfil, and from diarrhœa in Northampton, Preston, and Gateshead One fatal case of small pox was registered last week in London, but not one in any of the 75 large provincial towns The Metropolitan Asylums hospitals contained 51 small pox patients on Saturday last, Nov 14th, against 34, 42, and 43 on the three preceding Saturdays, 16 new cases were admitted during last week, against 26, 12, and five in the three preceding weeks The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 1858, 1828, and 1854 at the end of the three preceding weeks, had declined again to 1824 at the end of last week, 185 new cases were admitted during the week, against 209, 199, and 224 in the three preceding weeks The deaths referred to pneumonia and diseases of the respiratory organs in London, which had been 194, 260, and 271 in the three preceding weeks further rose last week to 339, and were seven above the number in the corresponding period of last year The causes of 49, or 1 0 per cent, of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in West Ham Bristol, Leicester, Salford, Bradford, Leeds, Newcastle on Tyne, and in 47 other smaller towns, the largest proportions of uncertified deaths were registered in Liverpool, St Helen's, Sheffield, Middlesbrough, Sunderland, South Shields, and Gateshead

HEALTH OF SCOTCH TOWNS

The annual rate of mortality in eight of the principal Scotch towns, which had been 16 7, 17 0, and 15 8 per 1000 in the three preceding weeks, rose again to 17 4 per 1000 during the week ending Nov 14th, and was 0 5 per 1000 below the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 12 0 in Greenock and 13 9 in Perth, to 18 4 in Glasgow and 18 5 in Dundee The 571 deaths in these towns last week included 20 which were referred to diarrhœa ten to measles, ten to "fever," four to diphtheria, four to whooping cough, and one to small pox, but not one to scarlet fever In all, 49 deaths resulted from these principal infectious diseases last week, against 77, 62, and 53 in the three preceding weeks These 49 deaths were equal to an annual rate of 1 5 per 1000, which was also the mean rate last week from the same diseases in the 76 large English towns The fatal cases of diarrhœa, which had been 39, 33, and 15 in the three preceding weeks, increased again last week to 20, of which seven occurred in Glasgow, four in Aberdeen, three in Edinburgh, three in Dundee, and two in Paisley. The deaths from measles, which had been 16, 11, and 19 in the three preceding weeks, declined again to ten last week and included nine in Glasgow. The fatal cases of "fever," which had been six, two, and one in the three preceding weeks, rose again last week to ten, of which five were registered in Glasgow, three in Dundee, and two in Edinburgh. The deaths from diphtheria, which had been five in each of the two preceding weeks, declined to four last week and included two in Glasgow and two in Edinburgh. The fatal cases of whooping-cough, which had been eight, seven, and six in the three preceding weeks, further decreased last week to four, of which two occurred in Glasgow, where the fatal case of small-pox also was recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 92, 108, and 107 in the three preceding weeks, rose again last week to 129, but were ten below the number in the corresponding period of last year. The causes of 19, or more than 3 per cent, of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·5, 21·2, and 21·7 per 1000 in the three preceding weeks, declined again to 20·9 per 1000 during the week ending Nov. 14th. During the past four weeks the death-rate has averaged 21 3 per 1000, the rates during the same period being 15 9 in London and 15·8 in Edinburgh. The 152 deaths of persons belonging to Dublin registered during the week under notice showed a decline of six from the number in the preceding week and included seven which were referred to the principal infectious diseases, against 13, seven, and two in the three preceding weeks; of these, three resulted from whooping-cough, three from "fever," and one from scarlet fever, but not any from small-pox, measles, diphtheria, or diarrhœa. These seven deaths were equal to an annual rate of 1·0 per 1000, the death-rates last week from the principal infectious diseases being 1·5 in London and 1·3 in Edinburgh. The three fatal cases of whooping-cough exceeded the number recorded in any recent week. The deaths from "fever," which had been three, four, none, and one in the four preceding weeks, increased last week to three. The 152 deaths in Dublin last week included 32 of children under one year of age and 47 of persons aged 60 years and upwards; the deaths of infants corresponded with the number in the preceding week, while those of elderly persons showed a marked excess. Six inquest cases and three death from violence were registered, and 50, or about one-third, of the deaths occurred in public institutions. The causes of eight, or more than 5 per cent., of the deaths registered in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING OCTOBER, 1903

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 6·8 per 1000 of the population, estimated at 4,613,812 persons in the middle of the year. In the three preceding months the rates had been 6·4, 5·5, and 6·5 per 1000 respectively. The rates were considerably below the average in Kensington, Chelsea, the City of Westminster, Hampstead, Holborn, and the City of London, while they showed the largest excess in St. Pancras, Hackney, Bethnal Green, Stepney, Poplar, and Deptford. There was a slight increase last month in the prevalence of small-pox; of the 40 cases notified during the month 19 belonged to Southwark, five to the City of Westminster, four to Lambeth, and two each to St. Pancras, Stepney, and Wandsworth. The Metropolitan Asylums hospitals contained 42 small-pox patients at the end of last month, against 66, 57, and 21 at the end of the three preceding months; the weekly admissions averaged 10, against 15, nine, and five in the three preceding months. Scarlet fever was less prevalent during October than it had been in the preceding month; the greatest proportional prevalence of this disease occurred in St. Pancras, Bethnal Green, Stepney, Poplar, and Woolwich. The number of scarlet fever patients in the Metropolitan Asylums hospitals, which had been 1697, 1754, and 1849 at the end of the three preceding months, had declined again to 1794 at the end of last month; the weekly admissions averaged 210, against 234, 211, and 241 in the three preceding months. The prevalence of diphtheria showed a slight increase last month as compared with the preceding month. Among the various metropolitan boroughs this disease was proportionally most prevalent in St. Pancras, Poplar, Southwark, Battersea, Deptford, and Greenwich. There were 753 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of October, against 840, 716, and 671 at the end of the three preceding months; the weekly admissions averaged 121, against 130, 94, and 114 in the three preceding months. The prevalence of enteric fever, which had shown a continuous increase during the preceding six months, further rose last month; the greatest proportional prevalence of this disease was recorded in Hackney, Finsbury, the City of London, Shoreditch, Stepney, and Battersea. The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 119, 172, and 247 at the end of the three preceding months, had further risen to 285 at the end of last month; the weekly admissions averaged 44, against 18, 27, and 40 in the three preceding months. Erysipelas was proportionally most prevalent in St. Marylebone, Hackney, Holborn, Finsbury, Bethnal Green, Stepney, and Bermondsey. The 20 cases of puerperal fever notified last month included five in Hackney and two each in Kensington, Chelsea, Lambeth, and Wandsworth.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various boroughs, the deaths occurring in public institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ending Oct. 31st the deaths of 5183 persons belonging to London were registered, equal to an annual rate of 14·6 per 1000, against 12 5, 13·5, and 14 4 in the three preceding months. The lowest death-rates in London last month were 8·9 in Hampstead, 10·0 in Stoke Newington and in Lewisham, 10·6 in the City of London, 11·3 in the City of Westminster, and 12·0 in Wandsworth; while the highest rates were 18·6 in Bethnal Green, 19·0 in Bermondsey, 19·3 in Finsbury and in Shoreditch, 20 8 in Stepney, and 21 1 in Poplar. The 5183 deaths from all causes included 629 which were referred to the principal infectious diseases; of these, 62 resulted from measles, 30 from scarlet fever, 54 from diphtheria, 38 from whooping-cough, 49 from enteric fever, and 396 from diarrhœa. No death from any of these infectious diseases was recorded last month in Hampstead; in the other boroughs they caused the lowest death-rates in Kensington, Hammersmith, Chelsea, Islington, the City of London, and Lewisham; and the highest rates in Fulham, Holborn, Finsbury, Bethnal Green, Stepney, Poplar, and Bermondsey. The 62 fatal cases of measles showed a decline of 24 from the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Paddington, Fulham, St. Marylebone, Stepney, Lambeth, and Wandsworth. The 30 deaths from scarlet fever were 38 below the average number in the corresponding periods of the ten preceding years; the highest proportional mortality from this disease occurred in Hackney, Bethnal Green, Poplar, and Wandsworth. The 54 fatal cases of diphtheria were only about one quarter of the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Fulham, St. Marylebone, St. Pancras, Stepney, Poplar, and Greenwich. The 38 deaths from whooping-cough showed a decline of 32 from the average number in the corresponding periods of the ten preceding years; the greatest proportional mortality from this disease occurred in Fulham, St. Pancras, Bermondsey, Battersea, Deptford, and Greenwich. The 49 fatal cases of enteric fever were 28 below the corrected average number; among the various metropolitan boroughs the highest "fever" death rates were recorded in Hackney, Finsbury, Shoreditch, Bethnal Green, Stepney, and Battersea. The 396 deaths from diarrhœa were 180 in excess of the average; this disease was proportionally most fatal in Holborn, Finsbury, Bethnal Green, Stepney, Poplar, and Bermondsey. In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was more than 13 per cent. above the average.

Infant mortality in London during October, measured

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING OCTOBER, 1903.

(*Specially compiled for* THE LANCET.)

Cities and Boroughs.	Estimated population in the middle of 1903.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.											Deaths from all causes.	Death rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,613,812	40	1002	650	—	326	2	20	330	—	2420	6·8	—	63	30	54	38	—	49	—	396	629	1·8	5133	14·6	155
West Districts.																										
Paddington	146,032	1	33	19	—	8	—	—	11	—	72	6·4	—	4	1	1	—	—	1	—	13	20	1·8	161	14·4	151
Kensington	178,409	—	28	14	—	4	—	2	13	—	66	4·8	—	1	1	—	—	—	—	—	9	11	0·8	163	12·1	138
Hammersmith	115,303	—	30	9	—	7	—	—	8	—	54	6·1	—	1	1	1	—	—	—	—	6	9	1·0	109	12·3	136
Fulham	147,780	1	20	20	—	11	—	—	4	—	56	4·9	—	8	1	4	2	—	2	—	12	29	2·6	161	14·2	124
Chelsea	74,169	—	6	6	—	3	—	2	6	—	23	4·0	—	—	—	1	—	—	1	—	3	5	0·9	79	13·9	101
City of Westminster	179,052	5	16	17	—	3	—	—	14	—	55	4·0	—	3	—	1	2	—	1	—	8	15	1·1	155	11·3	162
North Districts.																										
St. Marylebone	131,234	1	27	20	—	5	1	1	21	—	76	7·5	—	3	1	3	—	—	2	—	7	16	1·6	162	16·1	119
Hampstead	85,197	1	10	7	—	3	—	—	4	—	25	3·8	—	—	—	—	—	—	—	—	—	—	—	58	8·9	107
St. Pancras	235,716	2	72	45	—	10	—	—	13	—	142	7·9	—	3	1	6	3	—	1	—	13	27	1·5	275	15·2	164
Islington	339,137	—	70	27	—	24	—	1	19	—	141	5·4	—	1	2	1	—	—	5	—	16	25	1·0	317	12·2	121
Stoke Newington	52,069	—	5	1	—	13	—	—	2	—	21	5·3	—	—	—	—	1	—	—	—	7	8	2·0	40	10·0	127
Hackney	224,082	—	66	35	—	33	—	5	29	—	168	9·8	—	4	4	2	2	—	5	—	13	30	1·7	261	15·2	166
Central Districts.																										
Holborn	57,845	—	4	2	—	4	—	—	7	—	17	3·8	—	1	—	1	1	—	—	—	10	13	2·9	69	15·6	142
Finsbury	99,717	—	20	6	—	11	—	—	13	—	50	6·5	—	—	1	1	1	—	2	—	14	19	2·5	148	19·3	181
City of London	24,539	—	1	2	—	3	—	—	2	—	8	4·3	—	—	—	—	—	—	—	—	1	1	0·5	20	10·6	286
East Districts.																										
Shoreditch	117,513	—	28	13	—	20	—	—	9	—	70	7·8	—	1	—	2	—	—	3	—	12	18	2·0	174	19·3	215
Bethnal Green	130,028	—	54	18	—	13	—	—	20	—	105	10·5	—	—	2	—	1	—	3	—	19	25	2·5	186	18·6	199
Stepney	302,153	2	105	46	—	22	—	1	46	—	222	9·6	—	6	2	7	3	—	5	—	60	83	3·6	483	20·8	215
Poplar	169,550	—	55	61	—	19	—	1	9	—	145	11·1	—	2	4	6	1	—	2	—	29	44	3·4	275	21·1	227
South Districts.																										
Southwark	207,369	19	27	35	—	17	—	1	17	—	116	7·3	—	—	—	1	2	—	3	—	26	32	2·0	254	16·0	140
Bermondsey	129,801	1	26	15	—	12	—	1	15	—	70	7·0	—	—	1	2	3	—	1	—	20	27	2·7	189	19·0	176
Lambeth	307,711	4	55	41	—	19	—	2	25	—	146	6·2	—	11	2	3	3	—	3	—	28	50	2·1	336	14·2	129
Battersea	173,422	—	30	34	—	19	—	—	9	—	92	6·9	—	2	1	3	4	—	5	—	10	25	1·9	170	12·8	126
Wandsworth	249,678	2	64	42	—	11	—	2	11	—	122	6·4	—	6	3	1	2	—	2	—	22	36	1·9	230	12·0	133
Camberwell	265,562	1	51	29	—	10	1	—	22	—	114	5·6	—	5	1	1	2	—	—	—	13	22	1·1	249	12·2	114
Deptford	112,537	—	30	32	—	2	—	—	14	—	78	9·0	—	—	—	2	2	—	—	—	6	10	1·2	109	12·6	142
Greenwich	99,824	—	14	18	—	9	—	—	4	—	45	5·9	—	—	—	3	2	—	—	—	4	9	1·2	110	14·4	179
Lewisham	136,405	—	29	21	—	6	—	1	7	—	64	6·1	—	—	1	1	—	—	1	—	5	8	0·8	105	10·0	104
Woolwich...	121,478	—	36	15	—	4	—	—	1	—	56	6·0	—	—	—	—	1	—	1	—	10	12	1·3	132	14·2	175
Port of London	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—		—

* Including membranous croup.

by the proportion of deaths among children under one year of age to registered births, was equal to 155 per 1000 The lowest rates of infant mortality were recorded in Chelsea, St. Marylebone, Hampstead, Islington, Camberwell, and Lewisham; and the highest rates in Finsbury, the City of London, Shoreditch, Bethnal Green, Stepney, and Poplar.

THE SERVICES.

Royal Navy Medical Service.

IN accordance with the provisions of Her late Majesty's Order in Council of April 1st, 1881, Surgeon Michael Joseph Smith has been allowed to withdraw from His Majesty's Naval Service with a gratuity

Deputy Inspector-General of Hospitals and Fleets Edward Elphinstone Mahon, C.B, has been promoted to the rank of Inspector-General of Hospitals and Fleets in His Majesty's Fleet (dated Oct. 10th, 1903).

The following appointments are notified:—Staff Surgeon G. T. Collingwood to the *Berwick*. Surgeons: A. J. Wernet to the *Berwick* and H. A. Julius to the *Cambridge*.

Army Medical Service.

Surgeon-General G. J. H. Evatt, C.B., is placed on retired pay (dated Nov. 11th, 1903).

Royal Army Medical Corps.

Major W. Moyle O'Connor, R.A.M.C. (Militia), assumes medical charge of women and children, Wellington Lines, Aldershot.

Surgeon-General James Albert Clery, C.B., joins at Salisbury for duty as Principal Medical Officer, 2nd Army Corps, in place of Surgeon-General G. J. H. Evatt, retired. Lieutenant Colonel Andrew Baird, retired list, late Royal Army Medical Corps, is appointed to the medical charge of troops at Worcester.

Army Medical Reserve of Officers.

Surgeon-Lieutenant A. L. Jones to be Surgeon-Captain, with precedence next below J. P. S. Ward (dated Nov. 11th, 1903).

Surgeon-Major G. D. P. Thomas having resigned his Volunteer appointment ceases to be an officer in the Army Medical Reserve of Officers. Surgeon Major H. Wright having resigned his Volunteer appointment ceases to be an officer in the Army Medical Reserve of Officers.

Imperial Yeomanry.

Lovat's Scouts: Surgeon-Lieutenant J. R. Kennedy resigns his commission (dated Nov. 14th, 1903).

Scottish Horse: The appointment of David Mitchell Macdonald to be Surgeon-Lieutenant, which was announced in the *London Gazette* dated Oct 23rd, 1903, is cancelled; Surgeon-Lieutenant David Mitchell Macdonald, from 5th (Perthshire Highland) Volunteer Battalion the Black Watch (Royal Highlanders), to be Surgeon-Lieutenant (dated Oct. 24th, 1903).

Volunteer Corps.

Royal Engineers (Volunteers): 1st Devonshire and Somersetshire: Surgeon Captain J. Fuller to be Surgeon-Major (dated Nov. 14th, 1903) 2nd Lancashire (the St Helens): Surgeon-Lieutenant E. H. Monks to be Surgeon Captain (dated Nov 14th, 1903).

Rifle: 2nd Volunteer Battalion the Lincolnshire Regiment: Surgeon Captain S. H. Perry resigns his commission (dated Nov. 14th, 1903). 3rd Volunteer Battalion the Royal Welsh Fusiliers: Surgeon-Lieutenant Colonel R A Prichard resigns his commission and is granted the honorary rank of Surgeon Colonel, with permission to wear the uniform of the battalion on retirement (dated Nov. 14th, 1903) 1st Volunteer Battalion the Hampshire Regiment: Surgeon-Captain H M. Brownfield, from 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment, to be Surgeon-Captain (dated Nov 14th, 1903) 5th (Isle of Wight Princess Beatrice's) Volunteer Battalion the Hampshire Regiment: William Henry Harland to be Surgeon-Lieutenant (dated Nov. 14th, 1903) 2nd Volunteer Battalion the Essex Regiment: Surgeon Lieutenant J. E. Molson to be Surgeon-Captain (dated Nov 14th, 1903).

Royal Army Medical Corps (Volunteers).

The Glasgow Companies: William Bryce to be Lieutenant dated Nov. 14th, 1903).

Volunteer Officers' Decoration.

The King has conferred the Volunteer Officers' Decoration upon the undermentioned officers of the Volunteer Force who have been duly recommended for the same under the terms of the Royal Warrant (dated July 25th, 1892):—*North-Eastern District: Rifle:* 2nd Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment): Surgeon-Lieutenant John Hugh Maclean. 1st Volunteer Battalion the King's Own Yorkshire Light Infantry: Brigade-Surgeon-Lieutenant-Colonel Edwin Lee *North-Western District: Rifle:* 3rd Volunteer Battalion the Manchester Regiment: Brigade-Surgeon-Lieutenant-Colonel James Duncan. *Scottish District: Rifle:* 2nd Volunteer Battalion the Cameronians (Scottish Rifles): Surgeon-Major Robert Thin Craig Robertson. *Woolwich District: Royal Army Medical Corps (Volunteers), the Woolwich Companies:* Major Charles Henry Hartt.

Reform in the French Navy.

Several minor reforms, all more or less bearing upon the health and well-being of the officers and men of the French navy, have recently been carried out under the auspices of M. Camille Pelletan, the Minister for that department. We append a brief account of these innovations compiled from the *Archives de Médecine Navale* for July. Formerly the punishments inflicted on sailors were largely at the discretion of commanding officers and consequently varied considerably in different vessels. In order to secure uniformity all offences are in future to be dealt with in accordance with an established system. The Bérenger law, which deals with first offences, has been made applicable in the navy; all entries relating to a first offence are to be erased from the offender's record of service provided he can pass a certain time without again committing himself. Under the old regulations men could be punished by the withholding of their wine ration; this clause has been suppressed, the Minister being advised that the deprivation was likely to exercise an injurious effect upon health. Soup instead of coffee can be drawn for breakfast by men who prefer it. The quality of the string which is used for tying roasting meat to the spits in naval kitchens is to be strictly supervised; the employment of tarred hemp or yarn for the purpose should be rigorously interdicted. Officers and men may in future be permitted to pass the night on shore as well as the day whenever their services can be dispensed with afloat. With the exception of the chapels attached to hospitals and prisons all establishments of this description are to be closed. Sailors desirous of taking part in public worship can attend the parish churches. Tobacco smoking is forbidden to all apprentices and boys in the navy. Finally, in all official correspondence the phraseology is to be as simple and direct as possible; the phrase "I have the honour" is specially interdicted.

Surgical Work in the Italian Navy.

The statistics of the surgical division of the Italian naval hospital at Venice for a period of 16 months from the beginning of September, 1901, to the end of December, 1902, form the basis for an interesting article in the *Annali di Medicina Navale* for September last, the author being Dr. Gaetano Tacchetti, chief medical officer of the second class. During the period 329 patients were treated with the following results: cured, 281; improved, 1; no improvement, 29; died, 1; and remaining under treatment, 17. The number of operations performed was 117, including laparotomy, resection of rib, radical cure of hernia (18), amputation (three), and disarticulation (two) Before commencing to operate Dr. Tacchetti succeeded in effecting the introduction of the antiseptic system throughout the whole establishment, taking as his model that in force in the Padua hospital. To the rigorous application of this system the highly satisfactory results are, no doubt, in a great measure due.

Deaths in the Services.

Lieutenant-Colonel Vivian Wearne, late of the Royal Army Medical Corps, at Spitzbergen, Jamaica, on Oct. 16th. The deceased officer, who was 62 years of age, joined the army as an assistant surgeon in March, 1865, was promoted to surgeon in March, 1873, to surgeon-major in February, 1878, and retired in February, 1886, with the rank of surgeon-lieutenant colonel.

The War Office has sanctioned the adoption of the site on Gun Hill, Aldershot, on which it is proposed to place an obelisk as a permanent memorial to all ranks of the Royal Army Medical Corps who fell in South Africa.

Correspondence.

"Audi alteram partem"

HETEROGENESIS

To the Editors of THE LANCET

SIRS,—Apart from the historical interest in the question of heterogenesis to which you allude in your issue of Nov 7th (p 1316), I think Dr H O Bastian's paper emphasises most profitably a much needed lesson There are many in this age of abstracts and epitomes who are compelled by circumstances to read conclusions and results rather than the experimental evidence on which they are based and the often intricate chain of reasoning by which they are supported The more active a man's mind the more diverse are the calls on his attention and the more impossible it becomes for him to do more than accept in many cases the manufactured article without actually examining for himself the complicated machinery by which it was produced This, it seems to me, gives a fallacious air of finality to many modern doctrines, and even on much controverted points many have to form their opinion more on the known attainments of the exponents of one or another rival theory than on a just estimation of the difficulties which may underlie the acceptance of either In this way, whoever, like Dr Bastian, calls attention to less commonly accepted views on any subject does good service by causing men to reflect on the bases of their conceptions and to remember that however widely a given view may be held its contrary has often never been absolutely disproved With regard to the details of Dr Bastian's paper I think it would be well carefully to mark the distinction between the origin of a *case* of disease *de novo* and the origin of a *cause* of disease *de novo* For example, in the case of a widely distributed organism like the tubercle bacillus no one will, I think, deny that cases of tuberculous disease may arise *de novo*, that is without direct contagion from a previous case In fact, the difficulty of accepting Behring's view of the long latency of the bacillus in the body lies in the impossibility of excluding a much later infection from an untraceable source, but all this does not disprove the possibility or even the probability of direct contagion in certain cases Dr Bastian argues that gland irritation from obvious causes *plus* a certain systemic condition is the real basis of the "scrofulous" disease of the glands and that tubercle bacilli are the "product" of this condition This may only be another way of stating the generally accepted fact that a certain "predisposition" *plus* infection is necessary to the production of these lesions, or, as Sir Dyce Duckworth puts it, that a person is first "strumous" and then becomes "tuberculous" But Dr Bastian goes on to state that he has proved the possibility of the origin of the tubercle or other bacilli *de novo* This apparently refers to Dowdeswell's experiments reported in 1884 Now, in the first place, these experiments were not made with pure cultures of micro organisms but with putrid blood and Dowdeswell himself remarks that "many microphytes of very various forms were observed in the blood under the microscope" Now "Davaine's septicæmia" was apparently, from Dowdeswell's description, produced by diplococcus or streptococcus whereas in "Pasteur's septicæmia the bacillus œdematis maligni was found Dr Bastian's theory that these were altered forms of the same organism is not *proved* by the experiments because pure cultures were not originally used Sir John Burdon Sanderson's experiment is quoted, however, to show the *de novo* origin of the bacillus of "Pasteur's septicæmia," but as this bacillus is found in the intestine all that it *proved* is that extensive damage to the peritoneum or in his words "the intensity of the inflammation," enabled the bacillus to migrate from its usual habitat into regions where it could exert its pathogenic properties In fact on p 1222 Dr Bastian says "Here we have the *de novo* production of a contagious disease , but on p 1223 he says "I, on the other hand, have proved the possibility of their (i e, the micro organisms) *de novo* origin "

It is now very rightly insisted upon that fallacies are likely to result if we base our views of disease in man too exclusively on the results of experimental investigations on animals, valuable as these are when due allowances are made But in spite of this I do not think it is fair to ignore entirely the results of the direct injection of tubercle bacilli in pure culture into animals and to base our view of the origin of tuberculous disease on a theory with which these results are incompatible Such a proceeding might, to quote Dr Bastian, bring the question of the etiology of tuberculous affections "more closely into accord with former views," but views as such are not more valuable when old than when new, and what is desirable is to bring our views into accord with facts, which if accurately ascertained are of perpetual value whether they be old or whether they be new.

That the soil is as important as the seed and that great variations in type and properties may obtain in various bacteria is admitted by all, but this does not mean that the soil can generate the seed or that it can even effect a gross variation in the kind of seed with which it is fertilised To suppose that the streptococcus pyogenes could by inoculation become the bacillus œdematis maligni would be indeed to gather the grapes of theory from the thorns of a most inconclusive experiment

I am, Sirs, yours faithfully,

J M FORTESCUE BRICKDALE, M A, M D. Oxon

Clifton, Nov 14th 1903

RECURRENT OVARIAN CYSTOMA AND ABERRANT ACCESSORY OVARIAN STRUCTURES.

To the Editors of THE LANCET

SIRS,—In THE LANCET of Nov 14th (p 1393) Mr W Roger Williams wrote that my explanation of the cases recorded in THE LANCET of Oct 31st "leaves something to be desired" and he maintained that the presence of aberrant accessory ovarian structures is "the cause of most of these curious phenomena" In the cases in question an ovarian tumour developed after the ovary was supposed to have been removed for cystic disease, and my conclusion was that the condition could "be *explained only* by assuming that a minute portion of ovarian tissue is inadvertently and perhaps unavoidably left in the body"[1] at the first operation In the next paragraph I stated that the impossibility of completely removing an ovary in some cases was demonstrated by the discovery of an accessory piece of ovarian tissue so close to the uterus that its removal was not possible unless the womb was taken away also I then related two cases in which I had found ovarian tissue close to the divided surface of the broad ligament when it was supposed that the ovary had been completely removed It seemed to me obvious that in these last cases the ovary had been divided and a small part of it had been left at the first operation simply because the surgeon (myself in one instance) had not tied the broad ligament sufficiently low It may be suggested that in these cases also there were accessory ovaries but in one of them the utero ovarian ligament was seen expanding into a piece of ovarian tissue of the normal shape of the adjacent part of the ovary and it is well known that it is often difficult to tie and to divide the broad ligament by the transfixion method so as to be sure of removing all the ovarian tissue I did not further attempt to differentiate between accessory ovaries and pieces of healthy tissue detached from normally shaped ovaries as the seat of origin of secondary non malignant growths

The occurrence of aberrant accessory ovarian structures is well known The late Mr Lawson Tait described them[2] 20 years ago, taking as his authority the works of Herman, de Sinéty, and Beigl He added that "it is possible that some of the cases of continued menstruation after the removal of both ovaries may have their peculiarity from some such cause as this " He suggested also that a patient with an accessory ovary "might have been the subject of a third ovarian tumour " There seems to be no doubt that this may occur and it is not unlikely that the presence of some detached fragment of ovarian tissue explains the case I briefly referred to in which I removed a multilocular cyst growing from the wall of the bladder But in the cases under discussion it does not seem to me more probable that accessory pieces of ovarian tissue existed than that a minute portion of healthy ovary was detached in enucleating the *first formed new growths* At none of the second operations was there anything to suggest that the tumours grew from a situation different from that of a deeply imbedded ordinary ovarian tumour. In the circumstances it seems to me incapable of proof that the tumours arose from accessory ovaries and it is equally impossible to demonstrate the absence of such aberrant pieces of ovarian tissue. Hence, although Mr. Williams has urged the importance of an interesting speculation which I only suggested, my statement that some portion of ovarian tissue was left behind is as comprehensive as the facts justify.

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[1] THE LANCET, Oct 31st, 1933 p 1223 (last lines of page)

[2] Diseases of the Ovary, fourth edition, 1833 pp 9-10

Mr. Williams believes that accessory ovaries after removal of the main masses of ovarian tissue become centres of great formative activity and that "in these circumstances the limits of physiological activity may easily be overpassed, and when the process becomes pathological it eventuates in the formation either of non-malignant cystoma or a malignant tumour. Thus may be explained the extraordinary frequency of malignant disease after the removal of both ovaries." This involves the whole question of the origin of cancer and of tumours, which I do not propose to ask leave to discuss, but I should like to point out that there are cases in which it is indisputable that removal of the ovaries has been followed by remarkable improvement in recurrent malignant disease of the breast. Although the improvement is sometimes, possibly always, only temporary, yet the fact of its occurrence seems rather opposed to Mr. Williams's view.

I have long been of opinion that ovarian tumours are malignant more often than is generally supposed. When a malignant ovarian tumour is removed a recurrence follows, I think, invariably and a microscopic examination of the primary neoplasm often enables the surgeon to predict the development of secondary growths. In such cases malignant disease cannot be described as a consequence of removal of the ovaries, and apart from these cases my personal experience does not afford any data to support Mr. Williams's statement that there is an extraordinary frequency of malignant disease after removal of both ovaries.

I am, Sirs, yours faithfully,

Portman-street, W., Nov. 14th, 1903. JOHN D. MALCOLM

THE FUTURE OF ST. BARTHOLOMEW'S HOSPITAL.

To the Editors of THE LANCET.

SIRS,—You are correct in saying I am unaware of the action taken by the medical staff in this matter for some years but that is my misfortune and not my fault. I have tried to obtain copies of the full evidence and reports submitted to the Mansion House Committee by members of the staff and medical council but without success, so you will see you are in error in supposing that because I am a governor I "surely could obtain access" to the various reports.

In my opinion no scheme will be supported by the public unless it has the almost unanimous approval of the medical council of the hospital. Yet the views of the staff have not been, and are not, properly and sufficiently considered at the meetings of the committees and governors and by the treasurer and officers. They have been practically ignored hitherto, with consequences of grave peril to St. Bartholomew's Hospital.

Both the press and the governors ought to be supplied with the complete memoranda containing the full evidence and reports which were printed for the Mansion House Committee. Had the governors had these documents before them they would probably not have voted as they did at the meeting of Nov. 5th.—I am, Sirs, yours faithfully,

Banbury, Nov. 16th, 1903. ANDREW MOTION.

To the Editors of THE LANCET.

SIRS,—Mr. Andrew Motion, who tells us in a letter in THE LANCET of Nov. 14th, p. 1392, that he is a governor of St. Bartholomew's Hospital, is evidently in the happy position of a man who has made a great discovery. For he, a governor of the hospital, has at last realised that if St. Bartholomew's Hospital had more land it could more easily erect more and better buildings than it can on its present site! And, like other similar discoverers, he is not satisfied with announcing his discovery, but proceeds to comment on the "supineness" of others who might have been expected to guide him in his search.

Thus—"One of the most remarkable features in this prolonged controversy has been the absence of any expression of opinion by the medical staff of the hospital." Again—"So long as the medical staff stands silent so long will there be doubt and mistrust" And once more—"Doubtless the views of the staff were officially submitted to the Mansion House Committee, *but they have never reached either the governors* or the general public." (The italics are my own.) Now, in view of the real facts which I will proceed to enumerate it is quite evident that Mr. Motion has been quietly asleep for some years and now that he has awakened he is quite oblivious of what has passed during his long slumbers. Sir H. Burdett's proposal to raise £600,000 and purchase additional land evidently appeals to him as a completely novel idea. Did he never hear of Sir Henry Knight's proposal to raise an almost similar sum for the very same purpose in 1901? It was fully placed before him as a governor! Did he support it then or not?

Here, Sirs, are some facts as to what the staff have actually done. They are beyond dispute and as they are known, or should be known, to every governor they are in no way secret, and have also been fully placed before the Lord Mayor and his committee. 1. Four years ago, on Nov. 2nd, 1899, a deputation of the medical council urged the treasurer and almoners to purchase the whole of the site of Christ's Hospital. They had previously sent in a full report of the seriously defective state of the casualty, out-patient, and special departments. 2. On August 22nd, 1901, when the purchase of a portion of Christ's Hospital was more imminent, the staff sent a printed circular letter *to every governor*, signed unanimously by every member of the medical council, summarising their previous actions alluded to above, and detailing at great length the need for more land and new buildings. In this letter they said, "In our opinion the whole site of Christ's Hospital ought to be obtained, and we desire to impress the importance of the statements we have made on every governor. ...... To lose this present opportunity of obtaining the whole site is to prevent the growth and limit the sphere of action of a noble charity." Has Mr. Motion quite forgotten this letter? 3. On Oct. 22nd, 1901, the medical council wrote another letter to every governor offering to give further details of what they considered to be "the needs of the hospital." 4. In response to these letters a meeting was called and the whole body of governors appointed a special committee of inquiry. On Nov. 14th, 1901, the staff sent to this committee a full and detailed account of the buildings required and of the space they would occupy. 5. A majority of this committee reported on financial grounds adversely to the suggestions of the staff as to the purchase of more land but approved of the proposed buildings, and their report was adopted at a special meeting of the governors who decided that no more land could be purchased considering its great cost. 6 Since that time the medical council have reported on six different plans for buildings and have sent to the Mansion House Committee a full account both of the actions they have taken and the opinions they have expressed to the governors on this matter during the past four years.

And now. Sirs, I will ask any impartial man whether Mr. Motion's letter represents or misrepresents the action of the medical staff? There can be only one answer. But since Mr. Motion has raised this question and now at the eleventh hour advocates the purchase of more land, one may be permitted to ask what action he has himself taken in the past. What steps did he take when he received the circular letter of the staff urging the purchase of additional land more than two years ago? Did he attend the special meetings of governors and strenuously urge that which he now advocates? Did he support the majority or the minority of the special committee? Did he approve or disapprove the decision of the governors to purchase no more land? Did he do anything at all? Was it the medical staff that was supine, or was it Mr. Motion? I shall leave Mr. Motion to answer these questions or not as he likes. In the meantime I will assert that neither Mr. Motion nor anyone else can truthfully say that the staff did not inform every one of the governors most fully of the opinions unanimously held by them and of the action they advised. And it may be further noted that this information was supplied before a yard of Christ's Hospital site had been purchased and before any public appeal had been decided upon. I will not now discuss whether the governors or the Lord Mayor's committee decided rightly or wrongly, wisely or unwisely—that is in many respects a financial matter—but I will say that no single governor can truthfully allege that he was not fully informed of the views of the staff, and no one can now lay the blame on the treasurer, almoners or house committee if he has changed his mind and considers that the governors' decision is now to be regretted Everyone who was a governor in 1901 had his own individual responsibility in the decisions arrived at and amongst these Mr Motion is included

Mr Motion's letter necessarily suggests the question whether it is yet too late to obtain an increased area as well as other questions, but until he has substantiated or withdrawn the statements he has made as to the action of the staff I will not further criticise his position Will he still contend that "the views of the staff have never reached the governors'? He includes in his general charge of "supineness" "old 'Bart.'s' men all over the country, and as he has not specially accused any one of them or myself in particular I will conclude a letter written to vindicate St. Batholomew's men as a whole by signing myself,

Nov 16th 1903 A ST BARTHOLOMEW S MAN

THE ALIEN IMMIGRANT

To the Editors of THE LANCET

SIRS,—I have no desire to enter into a discussion of the very complex question of alien immigration, which I conceive is hardly a question for the columns of THE LANCET But the very partial notice in THE LANCET of Nov 7th (p 1304) of Major W Evans Gordon's book—compiled, as far as the portion dealing with the Jewish population is concerned, as the result of a very hurried scamper through the towns and cities mentioned—prompts a word or two of comment, maybe of protest

In the first place your reviewer's statement that the Jews are "a race apart' and form "a colony permanently distinct" is so far as England is concerned, obviously misleading in the light of a single circumstance The English Jews (i e, those with an English ancestry of not less than one generation), although showing a smaller death rate and larger birth rate than other portions of the community, do not increase in number The explanation of this phenomenon is that while their numbers are kept up by the influx of foreign Jews, their increase is stayed by the fact that there is a steady mergence of Jews in the surrounding population Moreover, does not the assertion that a people who live "permanently apart' from the rest of the inhabitants of the country sound like a prescientific statement? Surely a very little sociological knowledge should be enough to convince anyone that where such a case does occur it is because persecution, or social opinion, by treating the people as a race apart, keeps them in that stage All experience and all study show that once social and legal restrictions are removed the people of any country tend to become homogeneous in their general characteristics Such comments as those are among the most powerful agencies in keeping up the very evil that is deplored I have also to point out that the man who can write of the East of London as a district in the streets of which "it is an exception to hear the English language spoken' possesses knowledge of that part of London which is highly peculiar if not very extensive The East end has, I believe a population of about 1 500 000 On the writer s own showing the foreign population is 88 000 What is the matter with the other 1 412 000? Are they all dumb? Or do the 88 000 talk so much that one cannot hear the other 1,412,000 speak? Is it not a little remarkable that a writer can make such a statement without realising its intrinsic absurdity?

A word on sanitation I have no desire whatever to argue [illegible] in sanita [illegible] what the [illegible] or less, [illegible] London —north, south east, and west And to treat it as a question specially connected with the foreign population is to play directly into the hands of those whose interest it is to obstruct these much needed reforms Moreover, there is one aspect of the Royal Commission s report that ought to have attracted the attention of a writer for THE LANCET The evidence was overwhelming from schoolmasters and others that in the poorer schools the Jewish children were better clothed, better nurtured taller, and mentally more alert than Gentile children And taken with this one may point to the fact that Jews are much more immune than other people during epidemics Looking at these two sets of facts one is driven to the conclusion that either the teaching of science as to the value of sanitation and food is sheer humbug or that the question of our foreign population is but one aspect of the general social question and can only be removed by its solution I prefer the latter alternative

I am, Sirs, yours faithfully,

Stratford E, Nov 10th 1903 MORRIS STREIMER

THE LUNG REFLEX OF ABRAMS

To the Editors of THE LANCET

SIRS—I have read with great interest the letter on the above subject by Dr A. G Auld which appeared in THE LANCET of Oct 17th (p 1118) The subject has occupied a great deal of my attention during the last few months—ever since in fact I read a paper upon it by Dr A Abrams which appeared in *American Medicine* of Jan 3rd last The matter seemed very fascinating and I carefully studied all of Dr Abrams's writings upon it up to date Since then we have tried for these reflexes in a great many patients and healthy people and, on the whole, the results have been disappointing and contradictory Most of our investigations have been made in the Victoria Hospital for Sick Children here and I must thank Dr Graham and Dr Biggar, house physicians in that institution, for their valuable assistance

In order that there may be no misunderstanding I will describe exactly how the tests were made The individual to be examined usually a healthy chested boy, was stripped to the waist and laid in the supine position upon a bed in a quiet, well warmed room The lower borders of the lungs were then very carefully mapped out by light percussion and marked with a dermatograph During quiet respiration these borders were found to alter their position only very slightly Then the individual was requested to take a long breath and at the acme of inspiration the points to which the now distended lungs reached were again marked, most attention being paid to the præcordium and the right vertical nipple line Usually, during forced inspiration, the superficial cardiac dulness almost disappears and the lung descends in the right nipple line from one to two inches Next the surface of the chest was freely sprayed with ether for three minutes or else vigorously rubbed with a coarse towel until it became red Then the borders of the lungs were again carefully percussed out On some occasions a *slight* expansion of the lungs seemed to have occurred the superficial cardiac dulness being encroached upon from above and from the left and the right lung being a little lower in the nipple line and elsewhere, and along with this increased volume an increased resonance occurred But in many cases no such expansion could be detected and in a few the lungs seemed to have actually receded The same uncertainty was apparent in the splenic region These results were so different from those of Dr Abrams that they required repeated confirmation before they could be given publicity I had promised to read a paper on the subject before the Ontario Medical Association last spring but hesitated to do so in the circumstances and hence cancelled the engagement Since then however, we have repeated the experiments many times and always with the same uncertain results Since reading Dr Auld s letter we have most carefully examined 16 individuals using the ether spray, friction, firm plugging of the nostrils with cotton wool, and violent epigastric percussion, and *yet* are not convinced that any considerable or certain expansion of the lung takes place as a result

As already mentioned, in many cases a slight expansion of the lung is detected after the stimulation of the surface over it, while at other times this is not the case During our early experiments we were much struck with this variation in results and hence the following alteration in the technique was introduced and has always been used since The patient is placed on a bed as before and the lung margins are carefully percussed out He is then left for a few minutes and the percussion is repeated. It is thus found that the margins of [illegible] the same positions—sometime [illegible] line and at others within it [illegible] ndent of the respiration and of any stimuli) The resonance of the lung also alters, being greater when the lung is extensive and less when it recedes After repeating this test many times I reported last spring to Professor A B Macallum, our professor of physiology, that the normal lungs seem to be in a state of slow contraction and relaxation, exactly, in fact, as are other organs which contain non-striped muscular tissue. This opinion I feel more than ever confirmed in. In this connexion it should be mentioned that the question of whether or not the bronchial muscles possess tonus is a moot one, Chauveau[1] and Roy and Graham Brown[2] contending that it is normally present, while Dixon and Brodie[3] think that it is only there under certain conditions. We have demonstrated the fact of alteration in the bulk of the lungs repeatedly and in it I believe we have the explanation of the variation in the results obtained during stimulation experiments. The lung normally varying in size, it is hard to say in any given case how much of the expansion is due to the stimulus and how much would have occurred in its absence.

If in a healthy lad the highest and lowest points in the right nipple line be marked between which the border of the lung vacillates during its slow expansion and relaxation it will be found that they are from a quarter to one inch apart. (When the patient takes a full breath the border will descend an inch or more lower still.) This inherent expansion and relaxation are best detected in the upper part of the superficial cardiac dulness and in the right side in the parasternal line. If the chest now be sprayed with ether or vigorously rubbed and the border again be percussed out it will be found that this may or may not have descended, but will probably not have gone below the line which it sometimes reached in its normal rhythmical expansion. In no case will it even approximate to the point which it reaches in forced inspiration. I am aware that this latter statement is quite the opposite of that made by Dr. Abrams who says, "the dislocation of the lung borders by forced inspiration never approaches the dilatation produced by the ether spray,"[4] but I can only state what has been our constant experience.

It is very interesting to note Dr. Auld's quotation from Laennec showing that that most acute of clinicians had observed that the lung possessed an inherent power of contraction and expansion independent of the movements of respiration. One such movement, I believe, is a rhythmical one, depending on the non-striped muscle which the organ contains. This tissue has been shown conclusively to be under the nervous control of the vagus[5] and one would expect *a priori* that it would be effected by reflex stimuli. But the point which I would here make is that stimulation of the surface of the chest does not in our hands produce the constant and extensive dilatation of the lungs which Dr. Abrams has obtained. To give another concrete case. Dr. Abrams states[6] : "If the ether spray is directed on the borders of the lungs posteriorly the lung borders will descend from two to four inches, dependent upon certain conditions." To-day I examined two boys, aged 12 and nine years, both suffering from cataract but otherwise healthy. In each I carefully percussed out the lungs posteriorly, they being in the sitting posture I then sprayed the older boy with ether over the right base for three minutes and rubbed the younger one with a rough towel until he was red. In neither boy could the lung be found to have descended at all. Yet Dr. Abrams says that the lung reflex as an aid to diagnosis is specially useful in pediatrics.[7]

Dr. Abrams believes that the degree of activity in which the reflex is present is an indication of the condition of the lung, it being less marked than normal, or absent, in cases of early tuberculosis. But in our experience the phenomenon is altogether too uncertain to have any clinical significance in this respect. I will not follow Dr. Abrams and Dr. Auld into the fascinating field of the application of the "lung reflex of dilatation" to the explanation of certain diseased conditions, such as asthma and emphysema. Dr. Auld accepts as fact Dr. Abrams's belief that hot poultices applied to a child's chest relieve pulmonary collapse by causing a long-continued reflex dilatation of the lung. To accept this would be to assume that pulmonary collapse in broncho-pneumonia is due to a continued spasm of the non-striped muscle of the lung tissue, and I think that such a view would not appeal to pathologists. Because a hot poultice gives relief to a child suffering from broncho-pneumonia it does not at all follow that it acts by producing a "reflex of dilatation." There are other theories that are just as likely.

Dr. Auld quotes Dr. Abrams extensively in regard to many other points in connexion with reflex dilatation and contraction of the lung. But before the medical profession accepts as proved that plugging of the nostrils with cotton-wool or strong percussion in the epigastric region causes marked dilatation of the lung or that percussion over the manubrium sterni produces reflex contraction of the same, these phenomena must be much more extensively tested by different observers than has been done up to the present. We have not investigated these points so fully as we have the matter of lung dilatation from stimuli applied to the thoracic surface, but the few experiments that we have made have been distinctly negative. I can certainly say this much : 1. It is possible to plug firmly both nostrils of a healthy individual without producing any appreciable dilatation of the lungs. It seems, however, to stimulate respiration. 2. It is possible to percuss forcibly the epigastrium with an equally negative result.

Dr. Abrams has done good service in drawing attention to these matters. His work has been of a pioneer nature and, like most pioneer work, will not be final. It is to be hoped, now that Dr. Auld has drawn the attention of the English profession to the subject, that it will receive the full investigation that it deserves and that thus the extent and significance of the lung reflex will take their true position in the field of medicine. I have used the term "rhythmical contraction and dilatation" on several occasions, meaning an alternate contraction and dilatation. Whether such alterations occur at regular intervals of time we cannot say at present.

I am, Sirs, yours faithfully,

Toronto, Canada, Oct. 30th, 1903. ROBERT D. RUDOLF.

To the Editors of THE LANCET.

SIRS,—In a further communication of much interest Dr. Harry Campbell defends his thesis as to thoracic expansion in a series of arguments characterised by great ingenuity. It would not be so easy perhaps to establish the existence of the lung reflex of dilatation were theoretical considerations alone to weigh, but I fear that the positive evidence obtainable is such as to rebut even the relentless logic of Dr. Campbell, as I shall presently point out.

First, however, with regard to Dr. Campbell's complaint that I unwittingly failed to do him justice in respect of his view as to the causation of thoracic expansion, I must firmly, though courteously, resist it. I made it perfectly clear, as I trust, that experiments had shown that there was "a certain point to which the chest may expand beyond an ordinary inspiration which does not necessitate any action on the part of the inspiratory muscles as the inhibition of the lung pull is of itself sufficient to produce it" and then I go on to say that when Dr. Campbell "makes the general assertion that 'any enlargement of the chest ...... is chiefly brought about by the inspiratory muscles' he fails to appreciate that enlargement (up to a certain point) which is brought about by the reserve recoil of the chest wall." Now, in making use of the words "*any* enlargement" Dr. Campbell includes such enlargement as may be brought about solely by pulmonary relaxation—i.e., apart altogether from the inspiratory muscles. I have never denied that Dr. Campbell takes pulmonary relaxation into account; what I took him to task for (to quote his own expression) was not for disregarding this factor but for asserting that this factor is not alone able to produce a certain degree of thoracic expansion, without, that is, any aid on the part of the muscles of inspiration. Holding tenaciously as he does to the view that any degree of thoracic expansion is chiefly brought about by the muscles of inspiration it is perfectly evident that it would be impossible to convince Dr. Campbell that even a local lung reflex may be quite independent of such muscular action, but while Dr. Campbell is merely supporting a theory the evidence as to a purely passive recoil of the chest is founded on well-authenticated experiments.

There is a good deal of debatable matter in the subsequent theoretical observations of Dr. Campbell in respect to the functions normally exercised by the inspiratory muscles as, for instance, that the initial "stretching" of the infant's lung tends to be kept up permanently. It is true that after birth the lungs must expand and that the child's inspiratory muscles undergo a shortening or, in other words, acquire their normal tonus, but this once established and regulated to the newly acquired pulmonary elasticity it by no means follows that such action is thereafter maintained and perpetuated to a similar purpose, as the conditions are not parallel. The conditions are, in fact, reversed and the inspiratory muscles instead of endeavouring to establish a pulmonary suction are in reality directed rather against it. With regard to the function of the pulmonary suction in facilitating cardiac diastole this is surely a well-established fact in pneumono-dynamics.

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[1] Semaine Médicale, 1889.
[2] Proceedings of the Physical Society, 1885.
[3] Journal of Physiology, March, 1903.
[4] Medical Record, April 22nd, 1899.
[5] Dixon and Brodie, Journal of Physiology, March, 1903.
[6] Medical Record, April 22nd, 1899, p. 562.
[7] New York Medical Journal, Jan. 13th, 1900.

Coming, however, to the point chiefly at issue—viz., a lung reflex of dilatation—it was pointed out in my last letter that when this reflex is induced the expansion of the chest is more persistent than that produced by voluntary deep breathing, but it is to be observed, as has been pointed out by Abrams, that in the case of the lung borders these can also be made to *descend* to a much greater extent than is possible by forcible inspirations. Nor can we assume that herein "some degree of dyspnœa is produced" which can possibly account for the phenomenon. Both careful percussion and the fluoroscope demonstrate that the downward extension of the lungs which can be produced reflexly may exceed by quite two inches that produced by inspirations. The fluoroscopic picture shows a greater general increase of brightness in the former case, specially well marked in the complemental spaces, lasting from two to three minutes. An increase of brightness is also produced whatever area of lung is stimulated and even over quite small areas. That cutaneous stimulation, whether in the form of ether spray, or cold, or rubbing, or the electric brush, excites the respiratory centre is true, but if such action were so limited the ensuing lung dilatation would be measured by that due to inspiratory effort, whereas we have, in fact, a lung dilatation which much exceeds this.

Dr. Campbell is right in his reference to the bronchial dilatation following the absorption of drugs into the blood, but the word reflex was really an oversight, as all I meant to convey was the fact of bronchial dilatation apart from the primary induction of respiratory effort chiefly in connexion with the experimental work previously referred to. In conclusion I beg to thank Dr. Campbell for his able and kindly criticism respecting work for which I myself do not claim a particle of credit. It has been merely my endeavour in the light of what little experience I possess to attempt a vindication of the character of the work which has been most carefully conducted by our *confrère* on the other side of the Atlantic. And let me also thank you, Sirs, in so generously affording room for the discussion of the subject.

I am, Sirs, yours faithfully,

Henrietta-street, W., Nov. 7th, 1903. A. G. AULD.

THE PREVENTION OF THE RECURRENCE OF NASAL POLYPI.

To the Editors of THE LANCET.

SIRS,—In an interesting article under the above heading which appeared in THE LANCET of Nov. 7th, p. 1295, Dr. E. S. Yonge states that "Lambert Lack has comparatively recently made some valuable observations on the origin and the radical treatment of polypi." While fully recognising the admirable work of Dr. Lambert Lack in this branch of surgery the discovery of the origin and the credit for the radical treatment of nasal polypi are undoubtedly due to my father, Dr. Edward Woakes, who published his observations on this subject in 1885, and by whom the radical operation has been performed for over 20 years. A reference to my father's book, "Nasal Polypus, with Neuralgia, Hay Fever, and Asthma in relation to Ethmoiditis," will show that thorough investigation of the subject had been carried out by him before the year 1882, and, moreover, that the reports of the pathologists Thurston and Martin, which Dr. Yonge states practically confirm Dr. Lambert Lack's observations, were, in fact, reports made by these gentlemen at my father's request from specimens of the disease provided by him, and the reports were subsequently published by him.

In cases of multiple polypi I have performed the radical operation referred to by Dr. Yonge for upwards of eight years in private practice as well as at both the London Hospital and the London Throat Hospital. In these cases I follow my father's method by operating with the patient in a sitting posture. This is most important, as it is essential throughout the operation to have a clear view of the locality under treatment; also in the course of the operation frequent digital examinations should be made. After removing with forceps the large polypi and middle turbinate I use a heavier and [illegible] the removal of the [illegible] ration to which Dr. [illegible] the operator has a [illegible] the relations of the parts in the region of the operation and uses antiseptic precautions throughout, and if the patient be thoroughly anæsthetised by a competent anæsthetist.

I am, Sirs, yours faithfully,
CLAUD E. WOAKES,
Surgeon to the London Throat Hospital.
Harley-street, W., Nov. 12th, 1903.

A GROUP OF CANCER CASES.

To the Editors of THE LANCET.

SIRS,—I have read with much interest the article in THE LANCET of Nov. 14th (p. 1356) on "A Group of Cancer Cases." As I am a believer in the infectivity of cancer possibly a few more cases may be of interest to your readers.

In 1901 I attended an old gentleman with cancer of the larynx from which he died; he was a smoker, but nearly blind, so his valet used to light his pipe for him and in doing so used to take a few "draws." The valet has just died in St. Thomas's Hospital from cancer of the pylorus. In this neighbourhood are several "cancer houses." In one house five persons have died from cancer. I attended the latest one after Sir Frederick Treves had operated on him and he (Sir F. Treves) told me that he knew a row of cottages every one of which was a "cancer house." In another house here 15 years ago I attended a woman who died from cancer of the rectum; the next woman who occupied the house died two years ago from cancer of the vagina and vulva. Just across a lane another woman died from cancer of the uterus. In another house a man I attended died from cancer of the rectum; the house was empty for about two years, then a lady took the house and four years afterwards had the breast removed for cancer, from which she ultimately died. The diagnosis, curiously enough, has in every case been verified by a London surgeon.

If the disease be not infectious or endemic all these and similar cases on record must strain "coincidence" to breaking point. I am at present searching for "histories" of certain houses in a district and believe I shall have still more cases to record.

I am, Sirs, yours faithfully,
A. CHARPENTIER, M.D.Durh., D.P.H.R.C.P S Lond.
Uxbridge, Nov. 16th, 1903.

THE TREATMENT OF GOITRE BY THE USE OF DISTILLED OR RAIN WATER.

To the Editors of THE LANCET.

SIRS,—With reference to Dr. A. E. Taylor's letter on this subject in THE LANCET of Nov. 7th (p. 1324) I should like to point out that his first two cases seem to be cases of exophthalmic goitre, which surely claim a different etiology to those of endemic goitre and the treatment of the former disease by the use of rain or distilled water is not in question. Case 4 is one of endemic goitre of long standing and these cases, as a rule, do not benefit to any extent from this treatment in my experience at least. So much depends on the amount of gland tissue remaining; the more the fibrous element in the goitre the less hope of ameliorating. Case 3 theoretically should have derived benefit, but I notice that the water-supply of the district is stored in galvanised iron tanks. Some salt of iron (if not a bacillus) is, in my opinion, the cause of endemic goitre and one would like to know from Dr. Taylor as to the presence or absence of iron in the water-supply of Outtrim, especially if the water remains for some time in the tanks.

I may say I have had several cases in this district where a goitrous mother has given birth to a goitrous child.

I am, Sirs, yours faithfully,
LOUIS E. STEVENSON, M.B., B.C. Cantab., F.G.S.
Temple Sowerby, Penrith, Nov. 10th, 1903.

THE RELATIVE EFFICIENCY OF RADIUM SALTS.

To the Editors of THE LANCET.

SIRS,—I should like to direct attention to a practical point connected with the medical use of tubes of radium compounds. Two tubes in my possession, each invoiced as containing five milligrammes of pure radium bromide, exhibit the following differences:—

—	Old radium bromide tube.	New radium bromide tube.
Action on acidified (HCl) common salt in two hours.	Turns it buff colour.	Produces no apparent change.
Relative effect on barium platino-cyanide.	4	1
Colour of radium compound.	Brownish yellow.	Pale yellow.
Colour of the glass of the tube.	Dark violet.	Palest violet.

It is manifest that in acting on organic tissue the old tube would be far and away the more effective and that as a preliminary to progress some simple test of efficiency is wanted, such as the first one I have given. While the differences noted here may possibly be owing in part to trade qualities it is not improbable that age is the chief cause, the gradual change of colour of radium salts being concurrent with increased effectiveness.

While addressing you may I also turn the attention of investigators to another part of the subject? It is now recognised that the efficacy of x rays and Becquerel rays is due to their pulsating character. *A pulsating character* can be conferred on ordinary light by mechanical means, as in Bell's device for the production of sound by radiant energy, which will be found described in *Nature*, vol. xxiv., pp. 42-44, 1881. The action of such a mechanically produced intermittent beam of coloured light has not, so far as I am aware, been tried on bacteria. If it should prove to be bactericidal its analogy to the afore-mentioned rays would be established and there would be the possibility of its use as one of the cheapest therapeutic agents of its kind.

I am, Sirs, yours faithfully,
WILLIAM ACKROYD, F.I.C., &c.,
Public Analyst for Halifax.
Halifax, Yorks, Nov. 16th, 1903.

THE RELATION OF THE ANÆSTHETIST TO THE PATIENT AND TO THE SURGEON.

To the Editors of THE LANCET.

SIRS,—It is hardly open to question that the position of the anæsthetist whose duty it is to take the life of his patient in his hands while the surgeon performs an operation has never been at all clearly defined. Surgery has had its prophets from time immemorial while anæsthesia has but recently celebrated its first 50 years of practical existence. Almost from the day that Morton used ether and Simpson introduced chloroform there have been medical men who, by reason of their special researches or practical experience, have become expert anæsthetists. Our hospitals have found it necessary to add to their staffs members whose duty it is to undertake the sole responsibility of the anæsthesia, and by the recent decision of the English Royal Colleges and of the University of London these gentlemen now assist in furthering the work of the hospital medical school by teaching students to acquire practical skill in anæsthetics. However, the grave responsibility which these duties have imposed upon these specialists—for specialists they are compelled to be if their attendance at their hospitals and their teaching are taken at all *seriously*—and the necessity for devoting their whole [illegible] and energies to their one branch of medicine have never [illegible] the recognition that might have been expected. No [illegible] reason far to seek. The subject of anæsthesia has [illegible] been studied, or, indeed, understood, in its entirety by [illegible] majority even of the profession and until of late years [illegible] but few of the public. This has led in many instances to a belittling of the importance of the anæsthetic and still more so of the responsibility incurred by the anæsthetist. No one willingly commits his life to the inexpert chauffeur or shoots in covert with a novice, but when the question of taking an anæsthetic is broached the average individual evinces little interest in the matter and is content to leave his life to the tender mercies of anyone who adopts the rôle of anæsthetist. When fatalities arise it is assumed that such deplorable occurrences are inevitable and prevision can hardly obviate them. It is cheerfully surmised since the mortality is low that with luck the individual will escape and that whether he does so or not is rather a matter of chance than the natural result of skill or inexperience.

The relation subsisting between the hospital surgeon and his colleague the hospital anæsthetist is usually cordial and one of mutual respect. It is, however, at present unfortunately the case that the anæsthetist has few opportunities of gaining a knowledge of his patients. Except an often perfunctory examination of the chest immediately before the administration of the anæsthetic there is no chance given to the anæsthetist of studying the case. In some instances this must prove detrimental to the patient. When the anæsthetist undertakes work *sine honorario*, and he does so with wholehearted willingness, it is usually at the request of his surgical colleague and without the personal request of the patient's friends and often without any subsequent expression of their gratitude. This state of affairs, which is not, perhaps, of any personal importance to individual anæsthetists, reacts upon them as a class and tends to retard the progress of the study to which they have committed themselves. It is assuredly injurious that the personal or "patient" element should drop out of any branch of the healing art. When it does so there is always the fear that the financial side will attain undue proportion while the worker loses to some extent his pride in his branch of practice, and his zeal for improvement and advance grows cold if it does not die out altogether. The remedy seems to be that as the old conditions have passed away and the anæsthetist is no longer a house surgeon or a dresser there should be a closer relationship cultivated through the medium of the surgeon between the anæsthetist and his patient, that when possible arrangements should be made directly between them, or at all events after consultation with the anæsthetist. That this is becoming more the custom in the better class of practice may be conceded, but the contention of the writer is that such conventions should be generally recognised and be the rule instead of the exception as at present.

I am, Sirs, yours faithfully,
ANÆSTHETIST.
Nov. 17th, 1903.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Neglect of Sanitation in Mofussil Towns.—The Plague Epidemic.

IN the Government resolution on the reports concerning the municipalities of Bengal attention is drawn to the fact that the supervision of the municipal commissioners over their waterworks is of little practical value and that neglect of the machinery and filters and abnormal waste of coal are faults that are constantly brought to the notice of the Government. That these things should continue year after year suggests that these municipalities should be made to feel a higher power and that the officers concerned with the neglect of such important works should be reminded of their duty. I note, however, that inspections of these works are not made annually and the Lieutenant-Governor appears to lament the want of means of comparison between the several installations. Some of the problems dealing with conservancy seem to be as far off solution as they were 20 years ago. Among them may be mentioned the following: Should the sewage be removed directly by carts or from depôts? Should a light tramway be used? What is the best form of cart? How is the cart to be got beyond the edge of the trenching ground in the rainy season? Can all the waste fluid from the houses be removed by carts and, if not, how is that which must be removed to be separated? What suitable private latrine can poor ratepayers afford? How are the upper storey privies to be dealt with? A report on the work of the local boards of Assam has appeared from which I extract the curious information that while over a lakh of rupees was spent on dispensaries and more money still on education only Rs 8228 (under £600) were spent in sanitation This amount was directed chiefly to improvements of water supply by the construction of new tanks and wells and in the clearance and repair of old tanks The absurdly small amount is another illustration of the general neglect of sanitation, as this is for a whole province and not merely for one or two towns Cawnpore city, with a population of 180 000 is at last to be provided with an underground system of drainage The main sewer is completed and runs for nearly seven miles from one end of the native city, through the cantonment, to the river Ganges, but the subsidiary sewers are now being constructed Unfortunately it is reported that plague has again developed in this city and is rapidly assuming alarming proportions

The mortality from plague throughout India has again made a halt in its otherwise rapid rise of the past few weeks The last figures show 16 300 deaths for the week, distributed over India as follows —Central Provinces, 1401 , Hyderabad State, 1145 , Mysore State 761 , Madras Presidency, 231 , United Provinces, 156 , Bengal, 123 , Bombay city, 64 , Rajputana, 59 , Bombay Presidency, 10 386 , Central India, 1585 , Punjab, 353 , Calcutta, 17 , and Karachi, 3

Oct 30th

THE UNIVERSITY OF TORONTO OPENING OF THE NEW MEDICAL SCHOOL AND LABORATORIES

(FROM A SPECIAL CORRESPONDENT)

THE ceremonies in connexion with the opening of the new medical school and laboratories of the University of Toronto marked an episode of considerable importance Although the occasion was the opening of the building it was also, in a measure the celebration of the amalgamation of the two great medical faculties of the Province of Ontario—viz , that of Trinity College, Toronto (also a University with the usual faculties), and that of the University of Toronto The ceremonies were initiated with a luncheon given by the Dean Dr Reeve, to his colleagues and a number of distinguished guests on Oct 1st in the east examination hall The toast of "His Majesty the King" having been duly honoured Dr Reeve gave the toast of "The Lieutenant Governor," the Visitor of the University The Lieutenant-Governor, Mr Mortimer Clarke who has warmly supported the University for more than 40 years and who has taken an active interest in the medical faculty from its inception, having responded, the chairman next proposed the health of Professor Goldwin Smith whom he described as the Nestor of university graduates present In his reply Professor Smith referred to the approaching realisation of university federation in Ontario, as evidenced by the union of the medical faculties of Toronto and Trinity, and eulogised the medical profession of which his father had been a member, for the services it had rendered to mankind

At the conclusion of the luncheon the company adjourned to the north lecture theatre of the new building where Mr John Hoskin, LL D , on behalf of the board of trustees presented the keys of the building to Dr Loudon the President of the University Dr Hoskin congratulated the University upon the fact that in spite of a disordered labour market and troublous time in the financial world the new building had been erected and furnished in 14 months He referred warmly to the interest taken by the Government in the progress of the University as evidenced by promises of future grants

Dr LOUDON, after accepting the keys and presenting the thanks of the University to the board of trustees, gave in outline the history of medical education in Toronto

The PRESIDENT then introduced Professor C S SHERRINGTON who delivered the inaugural address on Medicine and Science in the Modern University, which was published in THE LANCET of Nov 7th, p 1273

Addresses were then delivered by the following gentlemen who brought messages of congratulation from their respective universities Professor WELCH, of Johns Hopkins University , Professor CHITTENDEN, of Yale University , Professor TOWNSEND PORTER, of Harvard University ; Professor RODDICK, Dean of the Medical Faculty of McGill University ; Professor A C ABBOTT, of the University of Pennsylvania , Professor J P MCMURRICH, of the University of Michigan (a graduate of Toronto) , Professor BARKER, of Chicago University (also a graduate of Toronto) , and Professor ROSWELL PARK, of the University of Buffalo

In the evening Professor W OSLER delivered an address to the students entitled "The Master Word in Medicine" which was full of pleasant reminiscences of his own student days at the University of Toronto

Dr REEVE followed speaking with great energy in spite of being partially disabled by an attack of influenza He said that it was in accordance with the fitness of things that the medical faculty of the University, as the senior faculty, should put away childish things and set an example of sensible conduct to the undergraduate body and he congratulated his hearers upon [illegible] the ceremony He pointed [illegible] opening of a building for [illegible] its details, for the first time in the province They had the first example given to the world of the unit system of laboratory construction devised by Dr Minot of Harvard They were also incidentally celebrating the union of two medical faculties which had been working side by side for years in honourable rivalry but in hindrance of the full development of each He particularly referred to the expense and difficulty of maintaining even one complete system of laboratories for medical instruction and to the foolish waste which resulted in any attempt to duplicate such instruction In his concluding remarks he expressed the hope that the students would ponder over the words which had fallen from Professor Osler and that they would remember that they had been listening to one who was once an undergraduate like themselves in the University of Toronto but who by virtue of the talisman "work" was to day the medical author *most widely read in Great Britain* and the most distinguished clinician in the United States

An address from Dr J A TEMPLE of Trinity College terminated the proceedings of the day

On Oct 2nd addresses were delivered in the north lecture theatre by several of the visiting professors, including Professor W W KEEN Jefferson Medical College, Philadelphia, Professor WELCH, Professor J G ADAMI of McGill University, and Professor ABBOTT In the south lecture room addresses were delivered by Professor CHITTENDEN, Professor SHERRINGTON, Professor BARKER, and Professor PORTER, the last of whom pointed out that it was not what one knew from the point of view of theory that was all important but the knowledge of the manner in which the facts and generalisations of physiology were obtained Visits were then made to the new laboratories and lecture rooms of the affiliated Royal College of Dental Surgeons under the guidance of the dean of the department, after which the President of the Union of [illegible]

At a special convocati[illegible] already announced in TH[illegible] received the degree of LL D *honoris causâ* from the hands of the Vice Chancellor, the Hon Charles Moss, Chief Justice of Ontario , Professor Keen, Professor Welch, Professor Osler, Professor Chittenden, Professor Sherrington, and *in absentia* Professor Bowditch

The ceremonies came to a conclusion with a dinner given by the Faculty of Medicine to over 100 guests the speakers including the Hon Richard Harcourt Minister of Education , Professor Irving H Cameron Professor Osler, Professor Keen, Professor Sherrington Professor Welch Mr Byron E Walker, Dr James H Richardson and Mr Alfred Mosley, C M G , who we need hardly remind our readers equipped and maintained an ambulance and nursing staff in South Africa during the war and who subsequently sent out a labour commission to the United States and is now supporting an educational commission to the same country

POST-GRADUATE WORK ABROAD

(BY A SPECIAL CORRESPONDENT)

V FLORENCE [1]

A SERIES of what are known as private courses in various subjects is given yearly in connexion with the Royal Institute for Superior Studies of Florence These courses, which are only open to graduates, commenced this year on Nov. 16th and will end on Dec. 12th, one lecture in each course being delivered three times a week, and are conducted by some of the best known Florentine professors such as Lustig, Grocco, Mya, and Pestalozza. To be admitted to a course the graduate is required to make written application to the president of the faculty on stamped paper and to present his diploma and the receipt for the fees (20 lire for each course with an additional laboratory fee of five lire for practical classes). Foreign graduates may attend but no undergraduates are admitted. The following list of the courses with the names of the professors who are to conduct them will show the range of post-graduate study at Florence :—

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[1] No I (Paris) No II (Berlin) No III (Vienna), and No IV. (Budapest) were published in THE LANCET of Sept 12th (p 781), Sept. 26th (p. 912), Oct 17th (p 1121) and Oct 24th (p 1194) 1903, respectively

Demonstrations on topographical anatomy with its applications in practice.—(Professor Giulio Chiarugi.)

Practical questions in vaccination and serum therapeutics.—(Professor Alessandro Lustig.)

Physiology.—Demonstrations of the blood and lymph and of the circulatory and lymphatic systems, with special reference to technical methods applicable in medical practice (Professor Giulio Fano).

Hygiene in reference to environment, epidemiology, and buildings.—(Professor Giorgio Roster.)

Legal medicine.—Human blood stains and the biological theory of reacting serums; micro-chemical technique in the emergencies of medical practice; Gosio's method of vaporisation of arsenic; accidents to workmen and questions relative thereto affecting the rights and duties of medical practitioners (Professor Angelo Filippi).

The new remedies studied experimentally in reference to their pharmacology and therapeutics.—(Professor Giovanni Bufalini.)

Clinical medicine.—Demonstrations of the most important cases in the Medical Clinic, with special reference to the most recent observations regarding the diseases which they illustrate (Professor Pietro Grocco).

Clinical surgery.—Similar demonstrations of cases from the Surgical Clinic with the same object (Professor Enrico Burci).

Physiology and pathology of alimentation.—Demonstrations on cases from the Dispensary and the Clinic of Pædiatry (Professor Giuseppe Mya).

Psychiatry.—Demonstrations on cases at the Lunatic Asylum (Professor Eugenio Tanzi).

Diseases of the eye, with special regard to the needs of medical practice; separate classes for the study of ocular symptoms in nervous and constitutional diseases (Professor Luigi Guaita).

Practical course of gynæcological therapeutics in dispensary practice.—(Professor Ernesto Pestalozza.)

Dermosyphilopathy.—(Professor Celso Pellizzari.)

Operative medicine, with special regard to the operations most urgent and most frequent in medical practice (Professor Giovanni del Greco).

Physical diagnosis.—Practical illustrations of the principal methods of physical examination of the circulatory, respiratory, and digestive systems (Professor Umberto Flora).

Diseases of the nose, the throat, and the ear, with special reference to the requirements of medical practice.

Chemistry, microscopy, and bacteriology applied to clinical work.—(Professor Giuliano Daddi.)

Some important modern methods of clinical diagnosis, with special reference to recent methods such as the investigation of agglutinating power, the examination of cerebro-spinal fluid obtained by the syringe by lumbar puncture (Professor Cesare Baduel).

The lectures are all in Italian, a certain knowledge of which language is therefore essential to the student desiring to attend any of them. The ordinary medical classes of the Florence School (which, by the way, is not one of the Italian universities) are also open to foreign graduates, or indeed, to any student who may care to attend them, on payment of the fee. By frequenting these anyone may study under teachers so well known in their special departments as Professor Grocco, Professor Lustig, and Professor Banti. No private clinics in Florence, so far as I am aware, are open to foreign medical men unless perhaps by personal favour.

VI. MILAN.

Arrangements are at present being made for the institution of post-graduate courses in Milan. The prime mover in the undertaking, Professor Mangiagalli, has already succeeded in bringing into line the Commune, the Province, and the Ospedale Maggiore of Milan, by means of which all facilities will be afforded to students and teachers to profit by the large amount of material for clinical study available in that populous centre, and he is now endeavouring to obtain Government support for his scheme. Already the Minister of Public Instruction, Signor Nasi, has promised to ask the Government to sanction the grant of a subsidy of 20,000 lire (£800) towards the foundation of the new polyclinic and so soon as the expected coöperation of the Government is secured no time will be lost in putting the scheme into execution. For the present the idea is to start with three clinics—namely, (1) an obstetrical and gynæcological clinic in connexion with a hospital of 200 beds; (2) a clinic for diseases incidental to various occupations (*malattie professionali*), with material for study derived from 60 beds; and (3) a clinic for epidemic and contagious diseases, with a hospital attached for contagious diseases consisting of seven pavilions with 164 beds. The foundation of this polyclinic is regarded as a great boon in prospect for the younger medical men, especially those in the northern part of the kingdom, and it will probably also attract a good many foreign graduates on account of the large amount of material upon which the institution will be able to draw for teaching purposes in such a city as Milan.

BIRMINGHAM.

(From our own Correspondent.)

Foundation of a Huxley Lectureship in the University.

At the last meeting of the council of the University a letter was read from Professor Poynting, F.R.S., stating that he was commissioned by a friend, who desired to remain anonymous, to offer to the University a sum of money capable of producing annually £20 for the endowment of a lectureship, in the University to be called the Huxley Lectureship. The intention is that the lectureship shall not only keep in memory the work and life of an eminent man of science but also his connexion with Mason College, the forerunner of the University, for at the opening of that institution an address was delivered by Professor Huxley. The donor of the endowment has only specified that a lecture shall be given annually, either in the winter or spring terms, and that it shall be open to all members of the University without any payment. The council of the University has accepted the gift and, in accordance with the wish of the donor that some person who had been a friend of the late Professor Huxley should be the first lecturer, has, on the advice of the senate, agreed to invite Sir Michael Foster, K.C.B., F.R.S., to deliver the first Huxley lecture.

Hospital Saturday Fund.

The meeting at which the cheques for the year are distributed to the representatives of the institutions benefited by the Fund has recently taken place. As mentioned in a former letter the sums of money allotted to the hospitals are exactly the same as last year and amount in all to £10,000. The Lord Mayor presided on the occasion of this meeting and Alderman Cook, the chairman of the Fund, was present and stated that he hoped that it would be a very long time before a less sum than £10,000 was voted to the hospitals by his committee. He was glad that there was an appreciable improvement this year, for 76 more contributions and £607 more were received on the actual Hospital Saturday than was the case 12 months ago. The Lord Mayor, in his speech, congratulated the committee on again establishing a record, since the contributions for this year amounted to £18,553 as compared with £18,036 obtained in the previous year. It was undoubtedly the weekly system that added so much to the large revenue which they were able to obtain He had pleaded before to manufacturers to allow their establishments to participate in this work and it was very gratifying to know that this year the number of firms showed an increase of 101. There were, however, still 400 or 500 firms in the city who did not subscribe and he appealed to them to coöperate. In conclusion, he pointed out that since the establishment of the Fund the hospitals had received altogether £222,337, the General Hospital having received £70,710, the Queen's Hospital £43,155, the Dispensary £23,861, the Children's Hospital £18,332, and the Eye Hospital £15,000.

Bequests to Medical Charities.

On Nov. 13th was buried Miss E. J. T. James, a lady who had individually and in union with her sister, who died a few years ago, devoted a large amount of her money to charitable objects, including almshouses, pensions for poor gentlewomen, &c By the terms of her will a number of hospitals receive handsome legacies, free of duty The following come in for £1000 each the General and Queen's Hospitals Birmingham, the Eye Hospital and the Blind and Deaf and Dumb Asylums in the same city, the Hospital for Incurables at Putney, the Cancer Hospital, London, and the Hospital for Consumption, London A legacy of £500 is left to the Hospital for Incurables at Leamington

Birmingham and District General Medical Practitioners' Union

Regret is expressed by the *Midland Medical Journal*, the organ of the above union, that the Walsall Medical Society has decided to withdraw from the position which it has held up to now of being a ward of the union It is pointed out that the society will be weaker by itself than in combination with the other wards of the union and that the multiplicity of small societies is a great hindrance to a complete organisation of the profession It is stated that the reason for this decision on the part of the Walsall Medical Society is that their town had received no help whatever from the union when it attempted to stop the penny a week clubs On the other hand, it is pointed out by the journal on behalf of the union that the attendance of the Walsall delegates at the council meetings was most irregular, one having put in no appearance for a year and the other only having attended two out of ten meetings, so that the views of the Walsall Society were not properly made known to the other members Moreover, it is pointed out that when the union issued a recommendation to neighbouring general practitioners to refuse to have anything to do with touting clubs out of 34 practitioners in Walsall at that time only six consented to fall into line If the information of the editor of the *Midland Medical Journal* is correct it would appear as if, as he puts it, Walsall were in a parlous state unless matters have mended since the issue of the circular to which attention is called

Health of the City

The report on the health of the city for the third quarter of the year shows that though the birth rate was very low (32 2 per 1000) the death rate (15 6 per 1000) was also unusually low, indeed only once before—viz, in 1894 when it fell to 14 8 per 1000—has so low a death rate been recorded for this particular quarter This is chiefly due to the small amount of mortality from diarrhœa Most of the infectious diseases were less prevalent than usual, the typhoid fever cases in particular being much below the average number Unfortunately the cases of diphtheria show an increase The outbreak of small pox, though not extensive, has caused the authorities much anxiety This is the last report which will appear under the name of Dr Alfred Hill, for he vacated his position on Sept 30th, when Dr J Robertson, the newly appointed medical officer of health, took up the duties of office

Sanatorium for Consumptives in Staffordshire

A conference presided over by Lord Hatherton, chairman of the Staffordshire county council, has recently been held to consider a proposal to establish a county sanatorium for tuberculous patients A site just outside Lichfield has been offered by Colonel Wilkinson who has given the inhabitants of that city, should they view the establishment of such an institution in their vicinity with apprehension, the alternative of purchasing the piece of land for the sum of £2400 such sum to be applied to the purchase of another plot of ground in some other part of the county Lord Lichfield said that the county medical officer had drawn up a report from which it appeared that the death roll in Staffordshire from phthisis was 800 per annum and that there were at least 2000 sufferers in the county It also expressed the opinion that the open air treatment was both curative and preventive The report recommended the establishment of a central hospital for the accommodation of 50 patients The cost of erection of the sanatorium was estimated to be £17,500 and the maintenance something like £5000, of which the county council would find £2500 leaving the other half to be provided by the local authorities It had been suggested that chalets should be erected instead of a sanatorium but in a climate like that of England such places would be unsuitable The Mayor of Smethwick moved—

> That this meeting is of opinion that it is desirable to provide a sanatorium for cases of pulmonary tuberculosis in the county, and
>
> any specific proposals the
> ent would gladly welcome
> any scheme having that
> ay submit for the approval
> set forth in the report of

In the course of the discussion upon this motion Mr T Bamford of Uttoxeter said that in his opinion a saving could be effected by sending patients to existing institutions at the seaside—a saving in the case of first class patients of 2*s* 6*d* per week and of second class patients of 12*s* 6*d* per week He contended that the climate of Staffordshire rendered it unsuitable for the treatment of these cases during the winter months He also suggested that phthisis should be made a notifiable disease, pointing out that its cause was insanitary surroundings coupled with an overworked and underfed population The Mayor of Lichfield said that the city council had passed a resolution in favour of the sanatorium being erected on the site given by Colonel Wilkinson near their city After a lengthy discussion, to which Dr G Reid the county medical officer of health replied, the motion was carried

Nov 14th

MANCHESTER.

(FROM OUR OWN CORRESPONDENT)

Anthrax in Cheshire

FOR some months past anxiety has been felt on account of the existence of anthrax in Lancashire and Cheshire In any case the danger of its spreading and of its communication to man is considerable but it is increased by the fact that among the farmers some are to be found who, either from want of intelligence and education or from heedless selfishness, disregard all warnings and try to sell animals which are suspiciously ill It is done without regard to the terrible consequences that may follow As mentioned a fortnight ago, two men were summoned at the Eddisbury petty sessions for not notifying cases of anthrax At the meeting of the Cheshire county council on Nov 12th it was stated that there were four outbreaks during the last quarter in none of which the existence or suspected existence of anthrax was reported Nothing would probably have been heard of them if the carcasses of the animals had not been sent to the Manchester abattoirs and examined by the chief inspector who brought the matter to the notice of the chief constable of Cheshire Six persons are stated to have been attacked with anthrax as the result of these outbreaks Professor S Delépine was supplied with organs from the animals in the four cases referred to and he sent a very important report to the county council in which he said that for the last few years he had had to report on cases of anthrax occurring in man and animals in Cheshire Lancashire, and Derbyshire and that his impression was that it was much more prevalent in these counties than was generally supposed Beyond the immediate danger connected with a given outbreak there is the further most serious consequence that the field which has been occupied by the diseased cattle will be liable to permanent infection "Each beast slaughtered in a cow shed or field was liable to cause permanent infection of the spot where anthrax blood was spilt,' so that a few undetected cases might ' be followed by a gradual generalisation of the disease in districts naturally damp " Without disinfection such land is fatal to stock and, unfortunately, it is a difficult and costly proceeding to get rid of the bacillus anthracis As Professor Delépine says, the land should not be used as a pasture but peas and beans would be safe crops to grow He adds further that it would be more advantageous 1 That the field should be well drained 2 That a heavy top dressing of lime would be beneficial, after which some say it would be safe in the course of a few months but this he doubts But if the field is not very extensive he would feel inclined to use chlorinated lime and "not to spare the material ' 3 Rather, however, than using the field for growing vegetables he would prefer a plantation of young trees for three or four years. 4 He thinks it should not be used as a pasture for at least three years, "after which it would probably be entirely safe" The Board of Agriculture has issued a leaflet giving advice which can be obtained free of cost but it is said that farmers do not trouble to get it. The small holder is reputed to be most guilty of neglect, his excuse being that he cannot bear the loss of his cattle by compulsory slaughter. This perhaps is not the place to consider the matter in its economic bearings but surely a scheme of insurance, if need be compulsory, might be devised to meet such cases.

Lifts and Fires.

A correspondent of the *Manchester Courier* draws attention to an important point as to the position of the lifts in a building. It was *à propos* of an incident mentioned by Dr. Torrey, an American evangelist now visiting Manchester. The lift was placed in the well of the staircase. The fire began on the ground floor, so that when it reached the staircase escape from the upper floors was impossible by either the lift or the staircase. Though it would be more costly it would be safer to have a separate arrangement for the lift in another part of the building, as there would then be two possible ways of escape instead of one. The staircase in fires originating in the lower parts of a building serves too often as a flue with a strong draught.

Municipal Chemistry.

Mr. I. Carter Bell, who is the analyst for the county of Chester and for the county boroughs of Salford, Birkenhead, Congleton, Stalybridge, and Glossop, and chairman for the year of the Manchester section of the Society of Chemical Industry, gave an interesting address on Municipal Chemistry at the opening of the twenty-first session of the society on Nov. 6th. By municipal chemistry he meant the chemistry connected with all the chemicals required by a large corporation and all matters upon which the chemist of that corporation had to advise, including also all samples bought under the Sale of Food and Drugs Act. He showed how corporations lost large sums of money through not having the chemicals which they bought examined. He thought that there should be an adequate staff to work under the analyst and considered that if there were such an arrangement large sums would be saved. In reviewing the quality of food during the last half century he pointed out that while years ago the percentage of adulterated samples was 70, it was now only 1 in Salford and 3 in Cheshire and that at the present time the adulteration was almost perfectly harmless. He thought the work of analysts might be made more useful if a central bureau were established for the spread of information among them in connexion with their work. It appears that there are over 200 counties and boroughs that require analysts. He also urged that in technical schools and elsewhere special departments should be established for the training of chemists for the special work of municipal chemistry. In explanation of the necessity for the establishment of such a department he said that "during all the years he had been a public analyst he had never yet had a student fresh from college who had been of any use to him until he had been with him some little time."

Compensation for Death by Lightning.

Rather a curious question as to compensation for the death of a labourer by lightning came before Judge Bradbury on Nov. 12th. Two bricklayers were at work on a scaffold on new premises at Failsworth and were both killed. The widow of one claimed compensation under the Workmen's Compensation Act and, subject to the question of liability, the amount was agreed on as £300 At a former sitting of the court "a doubt arose whether the fact that the deceased man was working on a scaffold 23 feet from the ground made an appreciable increase in the risk of his employment as compared with working on the ground" and the case was adjourned for expert evidence. On the 12th Dr. C. C. Garrard, head of the testing and experimenting department at Messrs. S. Z. de Ferranti and Company's electrical engineering works, and Mr. J. M. Faulkner, an erector of lightning conductors, both considered that the position in which the man was working did increase the danger above that of working on the ground or in shelter. His honour gave judgment for the plaintiff with costs, but granted a stay of execution and consented to state a case for appeal. He thought the question was one in which it was desirable that there should be a decision of the higher court. Pending the decision of the appeal he directed that the respondents should pay the widow £1 a week on account.

Manchester and Salford Red Cross Society.

The annual meeting of the delegates of the Red Cross Society was held on Nov. 6th at the City Art Gallery. The report stated that the collections this year had reached a record amount (for this district)—namely, £4537 4s. 3d. The committee regards this as an indication that the work-people appreciate the efforts made to provide them with convalescent homes. Another important factor is that weekly collections are now made at the various works. To give one instance. At the Bridgewater collieries the collections in 1902 amounted to £54 while the nine months of the past financial year realised £100, and in the future it is expected to realise annually £150.

Manchester Guardians and Milk Dangers.

At a recent meeting of the Manchester board of guardians it was decided to send to the corporation sanitary inspectors a list of the contractors who supplied milk to the board, asking that the board should be informed if tuberculosis were discovered among the cows of any of the farmers in the list. A member of the board thought the farmers should be informed that cattle could now be insured against tuberculosis at a very moderate rate and that if the cows were insured and the farmers knew they would not suffer loss they would not try to conceal cases of tuberculosis.

Nov. 17th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

A Judge on Infanticide.

AT the Carmarthenshire assizes, held on Nov. 12th, Mr. Justice Bruce in his charge to the grand jury referred to crimes of infanticide, which he feared were becoming common, so that there was a danger of the crime being encouraged by false public sympathy. It was contrary, he said, to every principle of morals and every instinct of nature for a mother not to be careful to preserve the life of her offspring, and if infanticide came to be regarded as a light or venial crime the consequences to society would be deplorable. It was a high function of the law to protect all. The greatest were not exempt from its power; the least were not unworthy of its care and it would abdicate one of its chief functions if it did not exert itself to preserve the lives of innocent and helpless children. The particular case which called forth this protest of Mr. Justice Bruce was that of a farm servant who gave birth in a field to a child whose dead body was subsequently found in a pond. The evidence did not make it very clear as to whether there had been a separate existence and there was no concealment of the facts by the girl who declared that the child was stillborn and she was accordingly acquitted.

Weston-super-Mare Refuse Destructor.

The town of Weston-super-Mare is becoming increasingly popular not only as a seaside resort during the summer months but also as a place for permanent residence. The members of the urban district council have usually shown themselves to be fully alive to their responsibilities; the roadways are for the most part wide, well paved, and sufficiently scavenged, electric trams have been installed, a well-organised isolation hospital has been provided, and the water-supply is abundant and above suspicion. The council may now be congratulated upon its resolve to abandon the refuse tips which during recent years have been accumulating on the outskirts of the town and it is to be hoped that the small minority of district councillors who are opposing the provision of a destructor will not be able to influence local public opinion in opposition to those councillors who are evidently desirous that their town shall not be behind other health resorts in its sanitary equipment It is proposed to erect the destructor near the waterworks and to use the steam in connexion with the pumping engines There appears to be a little uneasiness in some quarters as to the depreciating effect upon the surrounding property which is exercised by the erection of a destructor. That there need be no cause for anxiety provided a proper type is selected may be easily demonstrated by a visit to neighbouring towns where destructors have been in operation for more or less lengthy periods.

Scarlet Fever Patients in Seaside Lodgings.

The proprietor of a lodging-house at Aberystwyth has recovered damages amounting to £21 from a person whose wife took a child to the house while in the convalescent but infectious stage of scarlet fever. It appears that one of the four children who went with their mother to the lodging-house was taken ill on the night of their arrival and was found on the next day to be suffering from scarlet fever. The medical man who was called in to see the child ascertained that one of the sisters was actually peeling and it was with respect to this latter patient that proceedings were taken. There can be little doubt that the large number of isolated cases of scarlet fever which are constantly occurring without any apparent contact with a previous case are to be accounted for by the thoughtlessness which permits infected children to travel from one place to another. It is extremely probable that this particular child may have infected others during the railway journey from Staffordshire to Aberystwyth.

University of Wales.

There was an interesting series of ceremonies at Cardiff on Nov. 13th in connexion with the University of Wales. A letter from the Chancellor, the Prince of Wales, was read congratulating the University on the record results of the year. The chairman (Sir Isambard Owen) stated that during the past year 141 degrees were granted, the highest number given in any previous year being 103. The ceremony of laying the foundation-stone of the University registry offices in Cathay Park was performed by Sir Isambard Owen, the senior deputy-chancellor. The mayor subsequently entertained the University court, the corporation, and the guests at luncheon. In the course of the afternoon degrees were conferred and Lord Kelvin was admitted to the honorary degree of D Sc. of the University of Wales. In the evening the Principal and Mrs. Griffiths held a reception.

Colston Day in Bristol.

Nov. 13th was observed in Bristol as Colston Day in the customary manner. In the evening the members of the various societies—the Dolphin (at which the Prime Minister was the guest of the evening), the Anchor, the Grateful, and the Parent—held their respective dinners. The collections for the various charities amounted to £4384, compared with £3589 in 1902.

Nov. 17th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Dr. Steevens' Hospital, Dublin.

SOME important changes have recently taken place in the medical staff of Dr. Steevens' Hospital. A meeting of the governors was held on Nov. 10th, when a letter having been read from Dr. H. C. Tweedy resigning his post of visiting physician to the hospital the same was accepted with much regret and it was unanimously resolved to ask Dr. Tweedy to accept the position of consulting surgeon to the hospital. A letter [illegible] his post [illegible] to the [illegible] THE LANCET will recognise the significance of the latter appointment. Mr. Hastings Tweedy is now, and will be for the next seven years, Master of the Rotunda Hospital, Dublin, which has only one rival in Europe in its special department.

The Milk-supply of Belfast.

Considerable attention has of late been called in the daily press of Belfast to the milk-supply of that city which seems to be sadly in need of greater supervision. At present it is not unusual to see milk-servers on their rounds carrying from the houses of their customers buckets or cans of household garbage—called locally refuse—while those who, like medical men, drive about the streets constantly meet country carts with manure from city stables wending their way home with empty buttermilk barrels on the top. Again, in many parts of Belfast at certain times, usually the evening, one sees collections of milk-carts, the drivers of which are borrowing from one another milk, while all the time the innocent buyers of milk imagine their supply comes from the same uniform source. The corporation officials take no notice and as far as the public health committee of Belfast is concerned it never initiates any reform but contentedly waits until it is literally shamed by a public outcry into doing something and then what it does propose, as in the case of dealing with the treatment of consumptives, so slightly touches the main question that it is generally ridiculed in the newspapers and finally defeated in the city council.

The Polluting of Belfast Lough.

At a meeting of the Castlereagh rural district council on Nov. 10th public attention was again called to the horrible condition of the foreshore at Cultra on the right bank of Belfast Lough. Since August it appears that several cases of typhoid fever—all of bad type—have occurred in the neighbourhood and as in each case there was a different milk- and water-supply it is inferred that the bad drainage was responsible for an endemic condition of this disease. The abominable smell from the foreshore was so bad that it was stated that many families have left the district and sore throats of a diphtheritic type have been prevalent among the residents. The contention is that all this disease arises from the circumstance that the sewage of Belfast is discharged unpurified into the Lough and that the corporation of that city has failed to provide bacteria beds (as it is obliged by Act of Parliament) for the purification of the city sewage. A motion was passed requesting the Local Government Board to order a local inquiry to be held into the cause or causes of this nuisance on the foreshore of the district so that it may be found out by whose act or default the nuisance is created and the steps which should be taken for dealing therewith.

Outbreak of Typhoid Fever at Malin Head.

An outbreak of typhoid fever (17 cases) has taken place at Cullcort, near Malin Head, and attention has been drawn at the Innishowen rural council to the importance—as bearing on this epidemic—of enforcing the law in regard to the odious practice—still prevalent there—of keeping pigs in dwelling-houses.

Outbreak of Small-pox in Belfast.

On Oct. 10th a man named Moore, who had spent four days in a model lodging-house in Glasgow (from which several cases of small-pox have been reported in that city), returned to Belfast. On Oct. 20th, while at work in a large establishment in Belfast, he suddenly sickened, went home, and on Oct. 26th made his way to the Union Infirmary, when the eruption, now much faded, was diagnosed, and he was promptly isolated and sent to the small-pox block at Purdysburn, near the asylum. As a result five cases of small-pox have arisen and there are six "contacts" at the intercepting hospital. All the cases except the last reported on Nov. 14th (the patient being a brother-in-law of the first case) are mild but in this, the most recent case, the disease has assumed a severe type, the rash being confluent.

Nov. 17th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The School of Colonial Hygiene at Marseilles.

AT a recent meeting the municipal council of Marseilles voted a sum of 180,000 francs for a staff college of hygiene for colonial troops. The college will be installed in the Pharo, in that portion of the building hitherto used by the School of Medicine. The early expenses will be defrayed by the town which will also contribute to the general expenses of the school by giving 20,000 francs annually for the first five years. At the sixth year this grant will be reduced to 15,000 francs. The War Office will look after (1) the salaries of the staff in authority; (2) the salaries of the various employés; (3) any hospital expenses which may be incurred by colonial soldiers; (4) any payments which may be due to civilian nurses sent for service at the college by the hospital administration (these payments will be calculated on the basis at present obtaining in mixed military hospitals); (5) the keeping up of a stock of drugs, chemicals, and reagents which may be necessary for teaching; and (6) the general expenses of the college over and above the maximum sum allowed as a grant from the town. The municipal council of Marseilles has every reason to consent to bear these burdens for its city is one eminently marked out to be the centre of a school for teaching colonial hygiene.

A View of the Digestive Journey.

At the meeting of the Society of Biology, held on Oct. 31st, M. A. Sicard and M. C. Introit gave an account of a method by which they had tried to study systematically the movements of the digestive tract in man. They used an ordinary gelatin capsule 15 millimetres long and six millimetres in breadth which was filled with a salt of bismuth and then dipped into collodion. This gave the capsule a coating which was almost unaffected by the digestive juices. It thus became possible by means of radiography to define the various places which the capsule occupied after being swallowed. The capsule was swallowed fasting and was seen to remain in the greater curvature of the stomach for about half an hour. Nothing more was then seen of it for about eight hours when it was located in the cæcum. This was due to its traversing the seven or eight metres of the small intestine at too rapid a rate—namely, some 25 centimetres in the ten or 15 minutes of exposure—to leave an impression on the sensitised plate. It was found to remain a long time, four or five hours, at the level of the cæcum and then passed through the ascending colon in one or two hours, the transverse colon in from two to three hours, the descending colon in from three to four hours, and finally between the twentieth and the twenty-fourth hour came to rest in the sigmoid flexure ready to be expelled. The interest of this test from a physiological point of view can be easily seen and the method will doubtless find many applications.

The Tuberculosis Commission.

The President of the Council, M. Combes, is occupied with setting on foot the permanent committee for the prophylaxis of tuberculosis, a committee due to the Minister of the Interior. M. Combes has decided that the function of the committee is merely to occupy itself with the protection of healthy individuals against disease and that it shall leave to others the care of the sick. M. Bourgeois has been discoursing on social duty as regards tuberculosis and demonstrates how society ought to protect the individual against his own ignorance and against all causes which may act unfavourably upon him from outside, whence the germ of tuberculosis may spring. After having enumerated these causes M. Bourgeois as the conclusion of his discourse lays down a scheme of work. The committee is divided into eight subcommittees—namely: (1) education (Presidents, M. Buisson and Dr. Peyrot); (2) food (Presidents, Professor Debove and Professor Manoury); (3) housing (Presidents, M. Jules Siegfried and M Germain); (4) personal environment (Presidents, Dr. Grancher and Dr. Albert Robin); (5) general environment (Presidents, Professor Brouardel and Professor Masson); (6) conditions of work (Presidents, M. Millerand and Dr. Emile Roux); (7) social defences against outbreaks of disease (Presidents, Dr. Bouchard and Dr. Armaingaud); and (8) ways and means (Presidents, M. Strauss and Dr. Villejean).

Marmorek's Antituberculous Serum and the Pasteur Institute.

M. Marmorek, the head of the staff of the Pasteur Institute, was announced to read a paper at the Academy of Medicine on Nov. 10th but to the surprise of everyone no paper was forthcoming. It appears that the directors of the institute had notified to M. Marmorek that they did not intend that the institute should identify itself with any work of his which was carried out not under their control and that they preferred that he should not read his paper unless he resigned his connexion with the institute. A similar situation occurred at the recent Congress of Hygiene at Brussels and then M. Marmorek determined not to read his paper. But at the Academy of Medicine the members of the institute held a meeting in one of the committee rooms and decided again to put the alternative before M. Marmorek who this time decided to read his paper and to give up his post. The facts are grave but merit close attention. Many years ago M. Marmorek brought out an antistreptococcic serum which did not come up to the expectations formed of it. Owing to M. Marmorek's official position at the institute which prepared and sold this serum its failure brought discredit on all the preparations of the institute. Certain members of the medical profession who decry all serum treatment and are always rejoiced when any failure occurs with antirabic serum, accused the institute of being merely a serum shop which made large profits at the expense of the pharmaceutical chemists. The real truth is that the institute, that admirable nursery of scientific workers, never has a balance on the right side without the help of private charity. Its members live like Benedictines, draw very small salaries, and entirely give up private practice The recent attacks have evidently affected them to a certain degree and after the failure of the antistreptococcic serum, for which the institute was in no way responsible, they naturally wished to leave the responsibility of the new serum entirely with its creator, not that they necessarily consider that it is of no use, but they wish M. Marmorek's name alone to be associated with it and not that of the institute. On Nov. 17th M. Marmorek read his paper.[1] In brief, he said that he had formed the opinion that the tuberculin of Koch was not the real toxin fabricated by the bacillus tuberculosis but an accessory substance which excited the bacillus to secrete that toxin. He now considered that he had been able to isolate the true toxin from cultures of the bacillus. This toxin he injected into horses and finally obtained a serum containing either the attenuated toxin or an autotoxin secreted by the horse. This he tried upon animals and was enabled to render them refractory to large doses of a virulent culture of Koch's bacillus. He then tried it on human beings. In cases of tuberculous meningitis he obtained no success except that the symptoms became less grave and he is therefore of opinion that if used early the serum might exert a favourable action. In cases of pulmonary tuberculosis the patients improved. In six cases of tuberculous pleurisy the effusion rapidly disappeared. In surgical tuberculosis patients suffering from tuberculous glands and tuberculous caries of the bones recovered under the serum treatment alone. M. Marmorek concluded by saying that he took the whole responsibility for these statements on himself. The communication was, however, somewhat coldly received by the Academy and astonishment is no longer expressed that *M. Roux* and *M. Metchnikoff* have declined to associate themselves with M. Marmorek in these experiments.

Banquet to Dr. J. Rivière.

Dr. J. Rivière, the physico-therapeutist who was recently decorated with the Legion of Honour, was fêted recently at a banquet at the Hôtel Palais d'Orsay, Paris, at which the Deputy for Réunion, M. Brunet, presided. Dr. Rivière, who in spite of his French name is an English subject, is one of the foremost living authorities in physicotherapy and it will be remembered that he read a paper not long ago on the treatment of cancer before the Medical Congress held at Madrid. The gathering was a brilliant success and a number of members of the Academy of Medicine were present, including M. Lancereaux, the President, to whom M. Brunet paid a warm token of esteem in his speech. Dr. Rivière was brought up in the Mauritius and was educated at the lycée of Réunion, under M. Combes, a letter from whom was read by M. Brunet. Other speakers were M. Lancereaux, Dr. Mazery, Dr. Bérillon, M. Edgar Gallet, Dr. Besançon, Dr. Foveau de Courmelles, and Dr. Cogrel, all of whom united in expressing their esteem and affection for Dr. Rivière, who ended his speech of thanks with these simple words: "To all, then, both absent and present, my masters, fellow students, compatriots, and friends, I offer my heartfelt thanks"

Nov. 18th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Goldberger Prize.

DR. ALFRED COHN, *privat-docent* of histology in Prague, has been awarded the Goldberger prize for his researches on chromaffin cells and paraganglions, his investigations having led to an improved knowledge of the sympathetic nervous system and internal secretions.

Argentum Colloidale in Sepsis.

Dr. Loebl in a communication to the Gesellschaft der Aerzte reported some encouraging results in the treatment of sepsis and thrombo-phlebitis with Credé's argentum colloidale administered as a clyster. He used this colloid silver solution—"collargol," as it is called—twice a day for a week in quantities of from 15 to 30 centigrammes in 75 grammes of distilled water. The clyster has the same effect as an intravenous injection but is much easier to employ and is free from all risk. This treatment in apparently hopeless cases of sepsis led to many recoveries.

The Causes of the Hæmostatic Action of Gelatine.

Dr. Moll of Prague has found that the intravenous or subcutaneous injection of gelatine increases the amount of fibrinogen to a maximum of twice the normal. Gelatine also causes agglutination of the red blood corpuscles. The increased amount of fibrinogen in the blood, together with [illegible] gelatine when [illegible] into the blood [illegible] a prophylactic measure some days before an expected loss of blood

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[1] We hope shortly to publish this paper in full.—ED. L.

Appointments

Dr Hermann Schloffer, extraordinary professor in Prague, has been appointed ordinary professor of surgery in Innsbruck. Dr Biernacki has been recognised as *privat docent* of experimental pathology in Lemberg

Treatment of Omphalocele with Injections of Paraffin

In the treatment of infantile omphalocele Dr Escherich uses the method of paraffin injections, first described by Gersuny The surgeon replaces the contents of the omphalocele with the fingers of the left hand and in his right hand he holds a syringe with a curved needle containing eight cubic centimetres of paraffin having a melting point of 39° C He thrusts the needle into the middle of the omphalocele so that the point of the needle being directed upwards should be free in the cavity The assistant then injects the fluid paraffin into the omphalocele and the evaporation of chlorethyl is used to make it solidify This method has been used in 30 cases with very encouraging results

The Medical Profession in Vienna and the Landtag

In my last letter I mentioned that the Landtag had prohibited experiments on animals in the University Hospital which together with any animals kept therein for experimental purposes, is under its control The professors asked the help of the Minister of Public Instruction and his decision was as follows ' The professors are under the control of the Ministry, only the rabbits are under the control of the Landtag Therefore the Landtag cannot prevent the professors making any experiments which they please, it can however, confiscate the rabbits From this it was clear that the Minister did not wish to champion the cause of science so the professors and students held a numerously attended meeting in the university, protested against the suppression of scientific research and after the meeting some riots occurred in the streets and many students were arrested At the next sitting of the Landtag the leaders of the anti Semitic party renewed their accusations against medical science and charged the professors with cruelty to animals and with ill treatment of patients. Dr Lueger, the well known mayor of Vienna afterwards accused Professor Pollitzer, Professor Kolisko and Professor Obersteiner of dishonesty because they had taken some anatomical material from necropsies made in hospitals and asylums which belonged to the city of Vienna and not to the State The governor of Lower Austria did nothing to assist either the medical profession or the university, on the contrary he supported the accusations against the medical men and attacked the association of physicians Disgusted by these proceedings on the part of the governor and the members of the anti Semitic party uncommon even in Austria the association passed a vote for its dissolution These events are causing great excitement in university circles and not less among general practitioners, the newspapers are filled with letters of protest emanating from the aggrieved professors and other leading medical men. The status of the general practitioners is seriously affected because public confidence in the profession in Vienna is much diminished the middle classes being mostly partisans of the anti Semitic party The first sign of this discredit was noticed lately by a surgeon in the State Hospital in Vienna A man brought his child for medical aid and on being told that it suffered from appendicitis and could only be saved by an immediate operation he refused his consent saying "My child is not a rabbit for you to torture ' The child died on the next day The speeches delivered in the Landtag against the medical faculty and the general practitioners are printed by the Landtag and distributed free of cost in order to stir the people up against the medical profession Some periodicals contain pictorial representations of cruelty to animals and ill treatment of patients on the part of the medical men As an example of the value set by the anti Semitic party on science particularly medical science a quotation may be given from Dr Lueger's speech on the medical professors He said "The professors are very conceited, I have said to all the professors that if their science is of any value they should be able to make artificially something like grass to feed cows, if not then their science is worthless '

Changes in the Central Nervous System produced by Whooping cough

Dr Rudolf Neurath making researches on whooping cough found that very various clinical symptoms were produced by it, including cramps and paralysis in the motor nerves and muscles, convulsions palsy of cerebral spinal, or peripheral origin psychoses and neuroses, disturbances in the functions of special sense meningitis, and sometimes sclerosis disseminata multiplex Post mortem hæmorrhage in the brain or meninges, together with some other lesions, may be found Dr Neurath found in 16 out of 17 investigated cases that the pia mater and arachnoid were very much thickened (more than six times as thick as normal) a new proliferation of connective tissue and lymphocytes penetrating the meninges, there were also many hæmorrhages in the pia mater and between the meninges and the brain He was able to see in the grey substance of the brain dilatation of the lymphatics, œdema hæmorrhages of varying intensity hyperæmia, and accumulation of white blood corpuscles along the vessels In some cases œdema of the meninges preponderated and in other œdema of the brain It was quite impossible to find micro-organisms either microscopically or by culture methods There was a surprising correspondence between the clinical symptoms and the result of the histological examination of the meninges and the brain Cases with highly developed nervous symptoms convulsions, phenomena of brain pressure and somnolency showed the above described histological changes especially the accumulation of new cells in the meninges

Nov 16th

AUSTRALIA

(FROM OUR OWN CORRESPONDENT)

The Bubonic Plague

A MAN employed as a deck hand on the steamer *Innamincka* trading between Melbourne and North Queensland died from plague at Townsville on Sept 7th. The case is of some interest in regard to the possible mode of infection The vessel left Sydney on August 29th and arrived at Brisbane on August 31st The patient is reported to have been taken ill on Sept 2nd while the vessel was between Brisbane and Rockhampton At Townsville he was landed and died on the next day A plague infected rat was caught on August 6th and a plague infected mouse on August 11th about 200 yards from the wharf at which the *Innamincka* was berthed in Sydney Thus the patient may have been infected in Sydney, or on board by rats which went on the vessel at Sydney, or at some other plague infected port The Board of Health is making every possible endeavour to investigate the case and to find out the exact method of infection in this case —A Chinaman has died from plague at the Perth Hospital —The President of the Board of Health of New South Wales (Dr J Ashburton Thompson) has published an elaborate report on the second or 1902 outbreak of plague in Sydney Prefacing his report by the statement that the events of the epidemic of 1902 justify and enforce the advice which was given in the report on the outbreak of 1900 Dr Ashburton Thompson proceeds to discuss the causes of the maintenance and spread of plague The observations of 1900 that the epidemic was not caused by direct communication with the sick, nor by diffusion of infected articles nor by place infection have been confirmed and amplified The evidence in support of the theory that the rat is the sole source from which infection is communicated to man has been largely supplemented and the attention of the authorities is now being given to determine the species of the fleas which infest rats in this part of the world, to variations in their frequency on rats at different times, and to examining into their ability to bite man The President of the Board of Health concludes the preface to the report by emphasising the fact that the promise of safety for the future lies neither with attempts to prevent the importation of plague infected rats which must fail from time to time, nor with attempts to exterminate the rats infesting the locality to be defended, which have been found to be practically impossible, though both of these measures have their valuable uses The really safe course lies in habitually excluding rats from inhabited premises Dealing with the history of the epidemic the report states that it declared itself with the third case in January, 1902, and concluded on June 8th of the same year. There were 139 cases, of which 39 ended fatally. Of the 139 cases, 132 occurred among whites, 34 proving fatal, and seven cases among male Chinese, of which five ended fatally. No public and very little detail inoculation was done during this outbreak. Two alone of the persons attacked asserted that they had been inoculated. Out of 286 houses which harboured the plague in 1900 only eight again harboured cases in 1902 Dealing with the origin of the epidemic, the only hypotheses worth serious examination in the opinion of the Board of Health are the two following: either the epidemic depended on a recrudescence of the epizootic of 1900 or upon a second epizootic set going by newly imported plague-infected rats. As to the former, the health department had reason to believe that the epizootic of 1900 died out in the course of that year, but the evidence gathered was insufficient to establish the fact. Still, the recurrence was apparently too long delayed to have been a recrudescence and the balance of evidence at Sydney appears to tell in favour of reimportation. Practically, the local authorities have decided that while there is no pathological evidence that man is infected by feeding there is abundant testimony that he is usually infected by inoculation and that the agent between the rat and man is the flea.

Tuberculosis in New South Wales.

At a meeting of the Actuarial Society of New South Wales a paper on Tuberculosis was read by Mr. J. B. Trivett. As the result of a statistical investigation he concluded :—

1. That the death-rate from tuberculosis in New South Wales has been a serious factor [illegible].

2. That this [illegible] ages, the rates in the adult age g[illegible] the general tuberculosis rate.

3. That for males the rate progressively increases with age for all the wage-earning ages, and for females increases to age 35, and thence diminishes.

4 That in each age group the intensity of the tuberculosis risk has lessened with the progress of time, until on the whole it is about two-thirds of the risk apparent 15 years ago.

5. That the excessive death-rate from tuberculosis in the metropolis has been the main cause of the high rates of former years and the reduction of the rates for the State generally has been entirely due to the lowering of the metropolitan rates.

6 That the risk for the country districts has been practically constant throughout and any further relief in the general rate must apparently be expected from a continued improvement in the metropolitan rate, which is still 40 per cent. higher than that of the country for males and 50 per cent. higher for females.

7. That, arguing from the constancy of the country rates, we may fairly expect to be able to reduce the rate for the State to at least 1 per 1000 for males and to three quarters of one per 1000 for females of all ages, the present country rates.

The Supervision of Milk.

The chairman of the Board of Health of Victoria (Dr. D. A. Gresswell) has drafted a Bill for the supervision of milk to be read and construed as part of the Health Act. It provides for the constitution of "milk areas" to which the Act shall apply. Municipal bodies are to be empowered to prohibit the keeping, grazing, or milking of cows in any part or parts or the whole of their district and may determine by by-laws the distance from any house or from any offensive trade establishment, as defined by the Health Act, 1890, within which no cow shall be housed or kept and no milking be carried on; and any council may prohibit the keeping of any cow for production of milk for sale that is habitually depastured on any street, road, or thoroughfare or that has unrestricted access to any street, road, or thoroughfare owing to the absence of effective fences. Dairies are to be registered and milk produced beyond the milk area is not to be sold within it without a licence. Plans and specifications of new dairy farms or dairies or of alterations in regard to those already in existence in a milk area must be submitted to the council for the district and must be in accordance with by-laws which the councils are empowered to make. All dairymen within a milk area are required twice a year to have examination made by a veterinary practitioner as to the state of health of the animals, the nature of the food and water-supply, and as to any prescribed condition at such dairy farm, and must obtain a certificate setting forth the result of such examination. The board in regard to any portion of Victoria, and any council in regard to its municipal district, may require veterinary surgeons to report concerning every animal that, in their opinion, there are reasonable grounds for believing to be affected with any of the following diseases: anthrax, tuberculosis, contagious pleuro-pneumonia, foot-and-mouth disease, rinderpest, tick fever, bubonic plague, symptomatic anthrax, or black quarter, cow-pox, swine fever, infectious abortion, or with any prescribed disease. Dairymen are also required to report to the local councils the occurrence of diseases amongst their animals and to isolate animals affected with disease. Milk from diseased cows may not be offered for sale and dairy farms and dairies may be prohibited from being used for the production of milk for sale if the board or the council, as the case may be, is of opinion that such milk is injurious to health or unwholesome. Dairymen are required also to notify the councils of disease in their household or amongst their employés and to prevent contamination of milk by persons affected Milk and milk products are to be sold under their proper designations and nothing foreign is to be added to milk for sale.

Lunacy in Victoria.

The annual report of the inspector-general of lunatic asylums in Victoria has been presented to Parliament and a Bill for the amendment of the Lunacy Act has been drafted and circulated by the Chief Secretary of Victoria.

Charges against Dr. W. Ramsay Smith.

The board appointed to inquire into the charges against the coroner and inspector of anatomy at Adelaide—Dr. Ramsay Smith—mentioned in my last communication, has held numerous meetings and investigated the charges most minutely. The board reports: "We dismiss all the charges and in answer to the complaint report that Dr. Smith has not been guilty of any conduct rendering him unfit to remain in the civil service." The board finds that a mistaken view was taken of the law and that the local Anatomy Act is similar to the Imperial Act. The purpose of the legislation had been to facilitate and to regulate the study of anatomy, and it was the duty of a medical man to obtain practise on dead bodies in the interest of science, and medical men, whether private or official, had the right to practise post-mortem examinations. The board considered that the charges against Dr. Smith for breaches of the Anatomy Act, by reason of his not being licensed, had failed. It was part of his duty, in the ordinary course of his medical practice, to remove parts of the body from the living as well as from the dead. How much or how little should be removed was a question of judgment and good taste. Dr. Smith, in removing parts of the bodies, did so either with the consent or non-objection of relatives. On these grounds the board said that Dr. Smith had committed no offence. Dr. Smith was justified in removing the skeleton of an aboriginal. He did no act forbidden by law but was indiscreet and allowed his zeal in the cause of science to outrun his judgment. Dr. Smith is also exonerated for taking the Chinaman's body from the lunatic asylum and sending the head abroad for museum purposes. With reference to the charge that, in his position of coroner, Dr. Smith took improper advantage of certain bodies, the board held that his duty as coroner ceased on giving his warrant for the burial and the charge of mutilation before burial was not proved. The board points out that Dr. Smith did nothing for gain or personal benefit and that his gratuitous labour in connexion with criminal cases had been great. Consideration of the experimental work he had performed as a medico-legal expert should shield him from blame at the hands of the Government. In the House of Assembly the Premier, in reply to a question, said that the Government had had very little time to consider the report of the Ramsay Smith Board of Inquiry but it had decided to advise the Governor to reinstate Dr. Smith in the offices of coroner and chairman of the central board of health. The office of physician to the isolation ward in the hospital the Government proposed to abolish as it was not necessary to renew it. In order that no injustice should be done to Dr. Smith the salary paid for that position would be transferred to his position as coroner. The positions of inspector of anatomy and vaccination officer the Government intended to suggest that Dr. Smith should relinquish. With regard to private practice Dr. Smith had only a consulting practice and the Government considered that this did not affect his position but it would further consider it. The Government would pay all reasonable costs of the inquiry.

Oct. 5th.

SUPERANNUATION ALLOWANCE. — Mr. James Williams, who has recently resigned the post of district medical officer to the Holywell (Flintshire) union, after 50 years' service, has been granted a superannuation allowance.

Obituary.

SIR CHARLES NICHOLSON, BART., M.D., D.C.L., LL D.

THE life of this remarkable man, who died on Nov. 8th, bridges over a considerable period of history, relating especially to British colonial affairs, for he had arrived within a few days of his ninety-fifth birthday.

Charles Nicholson was born at Bedale in Yorkshire. He studied medicine in Edinburgh and took his M.D. degree there, presenting his inaugural thesis, "De Asphyxiâ," in 1833. He was probably the last survivor of the graduates of that year who numbered 109 Amongst his fellows on that list were Scott Alison, Martin Barry, J. Risdon Bennett, [illegible] who afterwards became eminent [illegible] Nicholson went out to Australia [illegible] property belonging to his uncle near Sydney, then a very small town, where he practised medicine for some years. He speedily identified himself with the social and political interests of the colony and carried on his studies assiduously in classical and general literature, accumulating a very fine library. He took a large part in promoting higher education and was one of the chief founders of the University of Sydney. In 1843 he appears to have abandoned practice and entered parliamentary life on election as a member of the first legislative council of the colony. He was on three occasions chosen for the office of Speaker between 1845 and 1856. In 1854 he was elected the first Chancellor of the University, having been knighted by patent in 1854 In 1859 he was created a baronet. On leaving the colony, about 1864, he travelled in India and finally settled in London. He married in the following year a daughter of the late Mr. Keightley, well known as the registrar of the Charterhouse. Always deeply interested in matters relating to New South Wales he carried on his studies over a wide range of subjects. He received the honorary degree of D C.L. from Oxford and that of LL.D. from Cambridge, and late in life the LL.D. of Edinburgh, his old University. On leaving London some 20 years ago he retired to the Grange, Totteridge, in Hertfordshire, where he entertained many of his friends. When he was 90 years of age his house was burned to the ground but nothing daunted he rebuilt it on its former lines and resumed his former studious life. His last illness was of a few days' duration. The funeral took place on Nov. 12th in Totteridge churchyard and was largely attended by many colonial representatives and old friends. By desire of the Principal the University of Edinburgh was represented on the occasion by Sir Dyce Duckworth. Sir Charles Nicholson is succeeded in the baronetcy by his son, Charles Archibald, who has already secured a leading position as an architect. Sir Charles Nicholson's career affords one of not a few instances in which members of our profession have risen to eminence in other walks of life and the history of such lives is always the same, telling of high purpose, indomitable industry, wide capacity, and self-effacement. We may, indeed, be proud to count such men in our ranks. Of this noble career we may well say, "*Finis coronat opus.*"

Medical News.

UNIVERSITY OF CAMBRIDGE.—The Special Board for Medicine of the University of Cambridge has just presented to the Vice-Chancellor a report recommending the establishment in the University of an examination and diploma in tropical medicine and hygiene. The proposal is approved by the State Medicine Syndicate which is prepared to undertake the management of the scheme and the conduct of the examination. The Special Board has accordingly recommended that certain new regulations be added to the ordinances relating to the examination in State Medicine. The regulations are, in short, that an examination be held once or, if expedient, more than once a year; that 12 months shall have elapsed after the candidate has attained a registrable qualification; that a statement of conditions of admission to the examination be published from time to time; that the subjects be the nature, incidence, prevention, and treatment of epidemic and other diseases prevalent in tropical countries; that a candidate passing satisfactorily be entitled to a diploma which is set forth in the board's report; and that candidates pay certain fees. Supplementary regulations are also suggested to the effect that candidates shall present evidence that they have attended a course of laboratory instruction in tropical diseases, a course of clinical instruction in tropical diseases, and a course of instruction in hygiene applicable to tropical countries. Candidates' dissertations and memoirs, if any, concerning tropical diseases may be presented and will be taken into account in determining the result of the examinations. The examinations will be partly in writing, partly oral, practical, and clinical. This departure is approved by the Colonial Office; and it will be noticed that in a recent Colonial Office circular it is proposed that all medical men whose fees are paid by Colonial Governments shall before proceeding to their appointments be required to pass an examination or to obtain a certificate of proficiency in tropical medicine. The scheme was also approved by the late Secretary of State for War who stated that, due regard being had to the exigencies of the service, no obstacle would be placed in the way of officers of the Royal Army Medical Corps desirous of obtaining the new diploma.—Professor Howard Marsh has been elected a professorial Fellow of King's College; he was admitted to the M.A. degree *honoris causâ* on Nov. 12th —Dr. W. M. Fletcher has been appointed Demonstrator of Physiology —At a Congregation on Nov. 12th the following were admitted to medical degrees:—

[illegible] sus; and J. C. Mathews, [illegible]

Under the new Act of Parliament a general committee was on Nov. 16th elected to adminster the affairs of Addenbrooke's Hospital. Eight members are chosen from each of the groups known as the borough, the county, and the University governors respectively. Dr. P. W. Latham was elected as a borough member and Professor T. Clifford Allbutt and Dr. D. MacAlister were chosen as University members.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS—The following have received the Diploma in Public Health after passing the necessary examination:

Hono[illegible]
Pass [illegible]
H. [illegible]
Edi [illegible]

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At the stated meeting of the President and Fellows held on Nov. 13th the following were admitted Licentiates in Medicine of the Royal College of Physicians of Ireland:—

Mrs. Agnes Forbes Saville, M.D., and Thomas Gillman Moorhead, M.D.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—DENTAL EXAMINATION.—The following candidates have passed the final examination for the Licence in Dental Surgery:—

W Hopton, Manchester; H. J. Anderson, Galway; B. D. Black, Dublin; L. C. Pelissier, Clonmel; W. V. Pericho, Cork; and J. Smith, Dublin.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bonn:* Dr. V. Schmieden and Dr. K. Reifferscheid have been recognised as *privat docenten* of Medicine.—*Giessen:* Dr. K. Kisskalt has been recognised as *privat docent* of Hygiene.—*Königsberg:* Dr. Bernhard Rosinski, *privat-docent* of Gynæcology, has been granted the title of Professor.—*Würzburg:* An out-patient department for mental cases has been opened in connexion with the University clinic, under the care of Professor Rieger and Dr. Weygandt.

LITERARY INTELLIGENCE.—It has been decided by the New Sydenham Society to devote almost the whole of its income during the next five years to the production of an "Atlas of Clinical Medicine, Surgery, and Pathology." Of this work eight parts are now ready—viz., Parts I. to IV. for 1901 and Parts V. to VIII. for 1902. Part IX. commences the issue for 1903 It will comprise the subjects of eruptions due to arsenic, urticaria pigmentosa, and leprosy. The council states that if adequate support is given by the profession the rate of issue may easily be doubled. Any member subscribing for himself in one sum five guineas as annual subscriptions beginning with the year 1901 will be entitled to receive the works for the six years 1901–06. All communications respecting the literary part of the work, suggestions, offers of drawings, and the like, should be addressed to the honorary secretary, Mr. Jonathan Hutchinson, at the Polyclinic, 22, Chenies-street, Gower-street, London, W.C.

PRESENTATION TO A MEDICAL PRACTITIONER.—Following on the annual meeting of the Perthshire branch of the British Medical Association the President, Dr. J. Liddell, presented Dr. D. H. Stirling with his portrait on behalf of the subscribers who were his medical friends and colleagues. The portrait is a three-quarter length by Mr. C. S. Sellar, R.S.W., and bears an inscription commemorative of Dr. Stirling having attained his jubilee as physician and surgeon.

EXTIRPATION OF THE UTERUS.—The death is announced of Dr. Karl Martini, a gynæcologist of Breslau who, it has been stated, was the first to remove the entire uterus for cancer. This statement must, we think, be incorrect. The first extirpation of the uterus, whether for cancer or not, was undertaken by Andreas da Cruze as far back as the year 1560, while coming down to times in which diagnosis was further advanced Langenbeck in 1813 and Sauter in 1822 both removed the entire uterus.

SWANSEA AND DISTRICT MEDICAL PRACTITIONERS' ASSOCIATION.—The report of the council of this association for the year 1902–03, the first year of its existence, has just appeared. Among the items of work successfully carried out by the association are the following. A request was sent out to various friendly societies for an increase in contributions. The friendly societies at first demurred and intimated their intention of forming a medical aid association. A conference was called at which the situation was discussed and in the end an agreement was arrived at by which the friendly societies agreed to the demands, slightly modified, which had been formulated by the medical men. At this time the local guardians of the poor sent out a circular with reference to vaccination. The association took the matter up and an arrangement was arrived at which was satisfactory both to the guardians and to the medical men. On various occasions the association has successfully arbitrated in disputes between two medical men. The association proposes during the coming year to consider the question of amalgamation with the Swansea branch of the British Medical Association.

HOSPITAL ACCOMMODATION IN SOUTH LONDON.—The Earl of Dartmouth, President of the Miller Hospital and Royal Kent Dispensary, Greenwich-road, is appealing for a sum of £5000 before the end of the year, to add to £2600 which the hospital received from the Coronation Fund raised in Greenwich, in order nearly to double the present accommodation of the hospital which is the only general hospital between Greenwich and London Bridge. At present the hospital has 25 beds which Lord Dartmouth says are invariably full and he wants to add another 20 beds. The hospital has a large number of out-patients and attends to a great many casualties and this is where its chief work seems at present to lie. The large hospitals, says Lord Dartmouth, are so well known that their wants are continually before the public and he desires earnestly to plead for a small institution quietly carrying on similar useful work. Subscriptions may be sent to the secretary, Mr. James Marks, at the hospital or may be paid to the London and County Bank, Greenwich branch. We would add that we hope that the appeal will be successful and although Lord Dartmouth states that little in this way can be done in the immediate neighbourhood, we should certainly like to see the workmen in some of the factories in and near Greenwich subscribe more largely than it appears they do at present as compared with, say, Poplar, another poor neighbourhood, unless it be that the workmen subscribe individually in Greenwich and not collectively. We think that when a hospital is local and well conducted it should appeal more to local philanthropy and should be able to command local support more than is the case with a large metropolitan hospital where the patients come from all parts. Why should not the inhabitants of Greenwich and Deptford be as proud of their Miller Hospital as of their famous Greenwich Hospital and Deptford Cattle Market? In fact, the Miller Hospital should be made a monument of local enterprise and a thing for the residents to be proud of, and the local Coronation Fund shows what they can do when they try.

THE SANITARY INSTITUTE.—Mr. Thomas W. Cutler, F.R.I.B.A., has been elected treasurer of the Sanitary Institute in succession to the late Dr. W. H. Corfield.

A CENTENARIAN.—Mr. A. F. Whatley, of Cirencester, attained the 100th anniversary of his birthday on Oct. 27th.

THE ZENANA BIBLE AND MEDICAL MISSION.—This body has been asked to undertake a new medical mission in India. The Zenana Hospital was built by a wealthy Hindoo lady some years ago and has been hitherto under the care of a committee. It has more than once been closed for the want of an efficient medical officer and the committee has now handed the building over to the Zenana Bible and Medical Mission. The society is consequently advertising for a qualified lady to act as medical resident. Further information can be obtained from the secretary, 2, Adelphi-terrace, W.C.

CHARING CROSS HOSPITAL.—The new Levy ward at this hospital was opened on Nov. 13th by Miss Matilda Levy, the founder, in the presence of a number of relatives and friends. This ward, founded in 1885, contained originally five beds, all of which were endowed in memory of late members of the Levy family. The ward in the new building contains 12 beds and, like its predecessor, is intended primarily for the reception of female patients of the Jewish faith, though it is not restricted to them. Miss Matilda Levy has endowed three more beds in memory of members of her family who have died since the previous endowment.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, WATERLOO-ROAD, S.E.—This hospital, which was founded in the reign of George III., is now in the course of reconstruction, reorganisation, and enlargement. The board is in hopes of establishing cots, and if possible entire wards, to be supported by various public bodies. Owing to the fact that the new Union Jack Club will shortly be erected in the immediate vicinity it hopes, with the assistance of the various London corps, to establish a military ward to be devoted to the sick children and wives of the rank and file, the name and regimental crest of each regiment being fixed at the head of each cot. 630 shillings, or 30 guineas annually, will support a cot, or the capital sum of 1000 guineas. Already one individual has generously promised to endow a cot on condition that five others will do the same.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent-garden, W.C.
Handbook of Diseases of the Ear. For the Use of Students and Practitioners. By Richard Lake, F.R.C.S. Eng., Surgeon, Royal Ear Hospital, Lecturer on Practical Otology, Medical Graduates' College. Price 6s. net.
Aids to Chemistry. By T. A. Henry, D.Sc. Lond., Chief Assistant Chemist, Scientific and Technical Department of the Imperial Institute, South Kensington. Eighth edition. Price 4s. 6d. net.
The Latin Grammar of Pharmacy. For the Use of Medical and Pharmaceutical Students. By Joseph Ince, F.C.S., F.L.S., F.G.S. Eighth edition. Price 5s. net.

BEMROSE AND SONS, LIMITED, 4, Snow-hill, E.C.
T. B. B. A Story of Real, which is sometimes *Enchanting*, Life. By W. W. Third edition. Price 1s. net.

CASSELL AND CO., LIMITED, Ludgate-hill, E.C.
Silas Marner, the Weaver of Raveloe. By George *Eliot*. With an Introduction by Stuart J. Reid. (Vol. I. of Cassell's National Library. New and improved issue. In weekly volumes.) Price 6*d*. net.

FISCHER, GUSTAV, Jena.
Klinisches Jahrbuch. Elfter Band. Viertes Heft. Subskriptionspreis M.6. Einzelpreis M.7 20.
Die Malaria in Thüringen. Von Privat-dozent Dr. Jul. A. Grober, Assistent der Klinik. (Abdruck aus dem Klinischen Jahrbuch. Elfter Band.) Price not stated.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.
Compendium der Operations und Verbandstechnik. Von Dr. Eduard Sonnenburg, Geheimer Medicinalrat, Professor der Chirurgie an der Universität, und Dr. Richard Mühsam, emer. I. Assistenzarzt an der chirurg. Abteilung des städtischen Krankenhauses Moabit in Berlin. Zweiter Teil: Specielle Operationstechnik. Price M.6. (Bibliothek von Coler, Band XVI.)

Therapie der Harnkrankheiten [illegible] Studierende. Von Dr. C [illegible] Universität Berlin. Dritte [illegible]

Paul Guttmann's Lehrbuch [illegible] Methoden für die Brust- und [illegible] von Dr. Felix Klemperer, P [illegible] Berlin. Neunte verbesserte [illegible]

Das Winterklima Egyptens. [illegible] Nebst Winken betreffs der [illegible] schaften in Wien. Price M 12

Das Röntgen Verfahren mit besonderer Berucksichtigung der militärischen Verhältnisse. Von Dr Stechow, Generalarzt und Korpsarzt des X. Armeekorps. Price M.6.

J. B. LIPPINCOTT COMPANY, 5, Henrietta-street, Covent-garden, W.C.

International Clinics. Vol. III. Thirteenth Series, 1903 Price 10s. 6d. net

A Nurse's Handbook of Obstetrics For Use in Training Schools By Joseph Brown Cooke, M D., Fellow of the New York [illegible] Obstetrics to the New York [illegible] Price 9s net

[illegible] gery. Designed for Students [illegible] ully Vaughan, M.D (Univ. of [illegible] Public Health and Marine Hospital Service of the United States (Lippincott's New Medical Series. Edited by Francis R. Packard, M.D.) Price 15s. net.

LEHMANN, J. F., München.

Atlas der deskriptiven Anatomie des Menschen. Von Dr. med. J. Sobotta, A O. Professor und Prosektor der Anatomie und der Anthropotomischen Anstalt in Wurzburg. I. Abteilung: Knochen, Bänder, Gelenke und Muskeln. Preis M 20. [illegible] Preis M.4. (Lehmann's [illegible] mit Einschluss der [illegible] Gustav Preiswerk, Lektor an der Universität Basel. Price M 14.

Atlas und Grundriss der Ophthalmoskopie und Ophthalmoskopischen Diagnostik. Von Professor Dr. O. Haab in Zürich. Vierte verbesserte Auflage. Price M.10.

MASSON ET CIE, 120, *Boulevard Saint-Germain, Paris.*

Traité de Chirurgie d'Urgence. Par Félix Lejars, Professeur agrégé à la Faculté de Médecine de Paris. Quatrième édition, revue et augmentée Price Fr.30

Cours de Dermatologie Exotique. Par E. Jeanselme, Professeur agrégé à la Faculté de Medecine de Paris, Médecin des hôpitaux. Recueilli et rédigé par M. Trémolières, interne des hôpitaux. Price Fr.10.

NELSON, THOMAS AND SONS, 35 and 36, Paternoster-row, E C.

Royal Portfolio of Pictures and Diagrams for Object Lessons. Animal Physiology. (10 large sheets, each approximately 34 × 30 inches, mounted on rollers.) Price 20s. the set. Accompanied by Handbook by Walker Overend, M A., M.D Oxon., B.Sc. Lond.

RUDALL, CARTE, AND CO., 23, Berners street, W., and 7, Queen-street, Dublin.

The Professional Pocket Book or Daily and Hourly Engagement Diary for 1904. Published according to the plan of the late Sir Julius Benedict. Price not stated.

SIMPKIN, MARSHALL, HAMILTON, KENT AND CO, LIMITED London.

Essays and Notes on Hydrotherapeutics. By Richard Metcalfe, Author of "Life of Vincent Priessnitz," "Sanitas Sanitatum et *Omnia Sanitas,"* &c. *Price 3s 6d. net.*

SPRINGER, JULIUS, Monbijouplatz, 3, Berlin, N.

Lehrbuch der Geburtshulfe. Von Max Runge, Ord. Professor der Geburtshülfe und Gynäkologie und Direktor der Universitats Frauenklinik zu Göttingen. Siebente Auflage. Price M.10.

STEINHEIL, G., 2, Rue Casimir-Delavigne, Paris.

Les Nerfs du Cœur chez les Tabétiques. (Étude clinique et Anatomo pathologique) Par le Dr. Jean Heitz, Ancien Interne des Hôpitaux de Paris. Price not stated.

Traité [illegible] Price Fr.20

[illegible] Publié sous la Direction de [illegible] tut, Professeur de Pathologie [illegible] Par MM Beclère, Bergonié, [illegible], André Broca, Cluzet, Fabre, Gagnière, Guilleminot Guilloz, Imbert, Leduc, LeNoir, Marie, Mignon, Maunoury, Gudin, Ribaut, Ruault, Sagnac, Scheier, Villard and Weiss. Price Fr.30.

STOCK, ELLIOT, 62, Paternoster-row, E.C.

The Home Nurse. A Handbook for Sickness and Emergencies. (Formerly known as "Sick Nursing at Home.") By S. F. A. *Caulfeild, Author of* "The Lives of the Apostles," &c. Third edition, much enlarged. Price 3s. 6d. net.

SWAN SONNENSCHEIN AND CO., LIMITED, Paternoster-square, E.C.

Plant Disease and its Relation to Animal Life. By E. F. Wright, Author of "Tuberculosis," "Rinderpest and how it may be Propagated," &c. Price 3s. 6d.

URBAN AND SCHWARZENBERG, N., Friedrichstrasse, 105B, Berlin; I, Maximilianstrasse, 4, Wien.

Lehrbuch der Klinischen Untersuchungsmethoden und ihrer Anwendung auf die Specielle Aerztliche Diagnostik. Herausgegeben von Prof. Dr. A Eulenburg, Geh. Med-Rath in Berlin, *Prof. Dr. W. Kolle in Berlin, und Prof. Dr. W. Weintraud in* Wiesbaden. Erster Band. (Methodische Diagnostik.) Price M 18. or 21K 60h.

Spezielle Pathologie und Therapie der Lungenkrankheiten. Handbuch für Aerzte und Studierende. Von Prof. Dr. Albert Fraenkel, Direktor der Inneren Abteilung des [illegible] Krankenhauses am U [illegible]

Lehrbuch der Urologie [illegible] krankungen Von [illegible] Universität Berlin. Price M 14.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ABERCROMBIE, PETER H., M.D. Glasg, has been appointed Surgeon to the Central London Throat and Ear Hospital.

BLACKHAM, ROBERT J., L R C P Edin., Royal Army Medical Corps, has been appointed Clinical Assistant in the London School of Gynæcology (the Hospital for Women) Soho square, W.

COWPER, WILLIAM P., L.R.C P., L.R.C.S. Edin., L F.P.S. Glasg., has been appointed Assistant Resident Medical Officer to the St. Mary's Hospital for Sick Children, Plaistow, E.

CROWLEY, J., L.R C.P., L.R.C.S. Edin., L.F.P S. Glasg, has been appointed Certifying Surgeon under the Factory Act for the [illegible]

EVA [illegible] S.A., has been [illegible] Hospital, Great [illegible]

FRAZER TOOVEY, THOMAS E, F.R.C.S. Edin., has been elected Resident Medical Officer to the St. Mary's Hospital for Sick Children, Plaistow, E.

[illegible] Women.

PURCHAS, F. U., M.D. Edin., has been appointed Certifying Surgeon under the Factory Act for the Newtown District of the County of Montgomery.

ROGER, R. R., M.D. Canada, has been appointed Clinical Assistant to [illegible] Assistant [illegible] Assistant [illegible] hest, City-road, E C.

WALKER, HUGH, M.A., M B., C.M. Edin., has been appointed Ophthalmic Surgeon to the Victoria Infirmary and Bellahouston Dispensary.

WY [illegible] M.D. Glasg., has been appointed Assistant Surgeon [illegible] Hospital.

YOU [illegible] appointed Certifying Surgeon [illegible] the Bytham District of the County of Lincoln.

THE Chief Inspector of Factories, Home Office, S W., gives notice of a vacancy as Certifying Surgeon under the Factory Act at Halesworth in the county of Suffolk

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BETHLEM HOSPITAL.—Two Resident House Physicians (unmarried), for six months. Honorarium at rate of £25 each per quarter, with board, &c.

BETHNAL GREEN INFIRMARY AND WORKHOUSE.—Third Assistant Medical Officer. Salary at rate of £100 per annum, with apartments, board, and washing.

BRIGHTON, HOVE, AND SUSSEX THROAT AND EAR HOSPITAL, Church-street, Queen's-road, Brighton.—Non-resident House Surgeon for six months, renewable. Salary at rate of £75 per annum.

CANTERBURY, BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary £140, with board, lodging, and laundry.

DUBLIN, ROYAL HOSPITAL FOR INCURABLES, Donnybrook.—Resident Medical Officer, unmarried. Salary £120 per annum, with board and apartments.

DURHAM COUNTY HOSPITAL.—House Surgeon. Salary £120 per annum, with board and lodging.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Physician for six months. Honorarium of £25, with board, residence, &c

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Surgeon to Out-patients. Also Pathologist. Salary 100 guineas per annum

HEREFORD COUNTY AND CITY ASYLUM.—Senior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—House Physician, unmarried, for six months. Salary £20, with board and residence. Also Clinical Pathologist and Bacteriologist, non-resident. Honorarium 50 guineas per annum.

HOSPITAL FOR WOMEN, Soho-square, London, W.—House Physician for six months. Salary £30.

JERSEY GENERAL DISPENSARY AND INFIRMARY.—Resident Medical Officer, unmarried. Salary £120 a year, with rooms, gas, and attendance.

KIRKMAHOE PARISH COUNCIL, Dumfriesshire, N.B.—Resident Medical Officer and Vaccinator. Salary £30 per annum.

LIVERPOOL STANLEY HOSPITAL.—Senior House Surgeon. Salary £100 per annum, with board, residence, and washing.

LONDON COUNTY ASYLUM, Claybury, Woodford Bridge, Essex.—Junior Assistant Medical Officer. Salary £150 per annum, with board, apartments, and washing.

MARGARET-STREET HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, 26, Margaret-street, Cavendish-square, W.—Pathologist.

NEW HOSPITAL FOR WOMEN, Euston-road, N.W.—Resident Medical Officer (female) in M[illegible]

NORTH-WEST LONDON H[illegible] Resident Medical Officer, also Assistan[illegible] for six months. Salaries at rate of £50 per annum, with board, residence, and washing.

NOTTINGHAM GENERAL HOSPITAL.—House Physician. Salary £100, rising to £120, with board, lodging, and washing.

PARISH OF LAMBETH, NORWOOD SCHOOLS.—Medical Officer and Vaccinator. Salary £200 per year and fees.

ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.—Honorary Physician. Also Honorary Surgeon.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Surgeon to Out-patients.

ST. BARTHOLOMEW'S HOSPITAL.—Assistant Surgeon.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Lecturer on Physiology. Salary £400 per annum.

ST. THOMAS'S HOSPITAL.—Assistant Surgeon.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Anæsthetist Honorarium £20 per annum.

SHEFFIELD CHILDREN'S HOSPITAL.—Lady House Surgeon. Salary £70 per annum, with board, lodging, and washing.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon. Salary at rate of £50 per annum, with board and residence.

TEIGNMOUTH HOSPITAL, South Devon.—House Surgeon. Salary £70 a year with board, lodging, and washing.

UNIVERSITY COLLEGE, LONDON (UNIVERSITY OF LONDON).—Chair of Hygiene and Public Health.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S W.—House Physician for six months. Honorarium of £25, with board and lodging.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician, also House Surgeon, both for six months Board and lodging.

WEST NORFOLK AND LYNN HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

WINCHESTER, ROYAL HANTS COUNTY HOSPITAL.—House Physician, unmarried. Salary £65 per annum, rising to £75, with board, residence, &c.

Births, Marriages, and Deaths.

BIRTHS.

ABRAHAM.—On Nov. 14th, the wife of Dr. P. S. Abraham, of Henrietta-street, W., and Oakhurst Orpington of a daughter.

HELM.—On Nov. 11th, at Munslow, Craven Arms, the wife of William A. Helm, M.B., of a daughter.

MASON.—On Nov. 10th, at Cumberland House, Somers-road, Southsea, the wife of W. Blaikie Mason, M.R.C.S., F.R.C.P. Lond., of a daughter (stillborn).

DEATHS.

COLBORNE.—On Oct. 30th, at Peterhurst, Clevedon, Sarah Ann, the last surviving daughter of the late William Colborne, surgeon, and sister of the late W. H. Colborne, M.D., both of Chippenham, Wilts. aged 79 years.

CRAVEN.—On Nov. 15th, at his residence, 14, Albion-street, Hull, Sir Robert Martin Craven, J.P., F.R.C.S., aged 79 years.

DINGLEY.—On Tuesday, Nov. 17th, at Elm Bank, 277, Camden-road, N., William Dingley, M.R.C S., L.S.A., aged 75 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

AUTUMN MANŒUVRES.

To the Editors of THE LANCET.

SIRS,—Permit me to report in THE LANCET one of the most interesting scenes in bird life I have ever witnessed. Doubtless many of your readers are well versed in ornithology and will appreciate the short narrative I venture to give about the handsome and well-known bird the starling. I had read in a local paper that vast numbers of these birds for some evenings past could be seen resorting to a large pond in a park close to Mere, a hamlet between four and five miles from Lincoln, there to drink before roosting for the night in the neighbouring woods. Wishing to see this process I drove over to Mere Hall park on Oct. 22nd and took up a suitable position to observe anything that might take place.

At first I thought my journey would be fruitless but about 4.15 o'clock the birds began to arrive from all points of the compass and in such prodigious numbers that the flocks darkened the sky like thunder clouds and when they alighted on this, their selected place for concentration, their densely packed bodies made fields, hedgerows, and trees black.

As few of the birds drank of the waters of the lake or the stream that runs into it, with a little imagination it might be fancied that the millions of starlings which congregated here were mustered for their autumn manœuvres and not for the purpose of drinking. The birds did not remain long inactive, but began what might be called their evolutions almost immediately and the flocks which were a little late in coming joined in the affair without resting. The host seemed to be formed into divisions—a large central one and a right and left division—each division no doubt having a commander of its own, for the three occasionally acted independently as well as in unison with each other. The Rev. Mr. Wood in his "Natural History" recognises this fact. He says: "In their flight the starlings are most wonderful birds, each flock, no matter how large its dimensions, seeming to be under the command of one single bird and to obey his voice with an instantaneous action which appears little short of a miracle." The various formations of the birds on the wing at Mere were impossible to follow but the central division on one or two occasions performed most beautiful movements. It alighted on some meadows, instantly blackening them, but in a minute or two it arose, the birds on the west flying towards the east and the birds on the east flying towards the west, thus in their flight making a checker pattern and yet in this crowded state there did not seem to be any collisions. The rising of the whole vast host from the ground and the hedgerows was a sight not to be forgotten.

All the units of the great army were in fine plumage and condition. There were numbers of young birds present which were easily recognised by their brownish colour, as starlings do not attain their rich and "glossy varying dyes" until they are three years old. It was a well-disciplined army that knew how to be silent and also when to be musical, but the music was neither sweet nor pleasant for it resembled the sharpening of thousands of saws, the whirring of the wings occasionally mollifying the rasping chatterings.

As the shades of evening closed the flocks began to retire and with a field glass I could see that many of them in retiring executed a variety of evolutions and did not appear anxious to go straight home to rest.

I am, Sirs, yours faithfully,

Lincoln. WILLIAM O'NEILL, M.D. Aberd., &c.

THE CIGARETTE CRAZE.

To the Editors of THE LANCET.

SIRS,—As my letter to you on this subject has brought forth some correspondence I ask your indulgence to enable me to reply to some of your correspondents. First I must thank you for your reply. From it I gather that you consider, and I quite agree, that inhaling the smoke of the cigarette is the cause of most of the ill-effects. When this is done unwittingly the habit, I think, can be overcome by using a long tube preferably, as suggested by the late Sir Morell Mackenzie, with some cotton-wool or other absorbent in it.

I may have expressed myself badly, but your correspondent "E. A. A." is in error if he thinks I intended to suggest that smoking nine or ten cigarettes a day was excessive. On the contrary I said "he did not smoke half an ounce of tobacco a day" (I find that Virginian straight-cuts have an average of 23 to the ounce) and I consider him an average cigarette smoker, and in my opinion he is running as little risk as the average pipe smoker. "E. A. A." implies that if mild tobacco is coarse-cut it will be cool; comparatively speaking, he is right, but I have myself never found a tobacco cool enough for my mucous membrane unless it was too strong for my nerves. Many men, myself included, can smoke cigarettes all day but cannot smoke two pipefuls consecutively. I should be very glad to know where to obtain the tobacco which "E. A. A." uses and which he finds "very mild" and yet is not hot.

From the closing paragraph of Mr. Scanlan's letter I take it that he agrees with me that it is the abuse, not the use, of the cigarette which has caused its condemnation. I have not met any cases such as he mentions—men smoking 300 cigarettes a week. They must have spent almost all their hours awake at it, and although they may not suffer from any disadvantages now I am certain that they will do so in time. The bad effects of alcohol and tobacco are sometimes insidious and some neurologists consider tobacco to be even more injurious than alcohol. I frequently meet men who say: "I am surprised to see you—a doctor—smoking cigarettes," yet they in many cases have a pipe in their mouths all day, and say: "Oh, my doctor says it is healthier than a cigarette"; yet a leading text-book says that tobacco *amblyopia is common in pipe smokers and unknown in cigarette* smokers—*verb sap.*

You have already dealt with the letter of "M. M." I certainly think "bleaching" tobacco must be very uncommon, if adopted at all. I must now thank you for your courtesy. This discussion has left me—in name only,

Sirs, yours faithfully,

Nov. 3rd, 1903. DOUBTFUL.

COOKERY IN THE FRENCH ARMY.

ACCORDING to *Mr. Punch* and other authorities of eminence the average Frenchman is a born cook. In Crimean days stories used to be told how French soldiers could manufacture appetising and more or less *nourishing dishes out of nothing in particular and so kept fat and* well while our poor fellows were next door to starvation. Be this as it may, the excellence of French cookery is proverbial, but if we may credit Lieutenant Billard of the 8th Battalion Chasseurs à Pied the knowledge and skill of the greater part of the cooks in the French army of the present day leave much to be desired. To meet and to cure this great defect he has compiled a manual which has just been published by M. Berger-Levrault of Paris. The work is small in size and easily carried in the pocket, but contains, nevertheless, within the compass of its 40 pages an adequate amount of information. In the first place a series of culinary recipes is given, each recipe being susceptible of preparation under the conditions which prevail in barracks. The instructions are so clear and precise that if intelligently carried out the resulting dishes should not fail to afford satisfaction. Next, menus for a week are set forth *in detail, variety being aimed at as far as possible. This section con*tains also a table or ready reckoner by means of which the quantity of each ingredient required for 100 men can be ascertained at a glance. The whole of the material is then passed in review, the several items being illustrated as well as described. Instructions with regard to the way to tell good articles of food from bad are contained in this section and also sundry useful hints regarding their purchase and conservation. In conclusion, Lieutenant Billard deals with the management of meals. His remarks are distinctly germane, being calculated to promote good fellowship as well as good feeding.

A NEW APPLIANCE FOR PREVENTING ACCIDENTAL POISONING.

PROMPTED by some remarks which appeared in THE LANCET of Oct. 17th and Nov. 7th under "Medicine and the Law" Mr. Haydn Brown has sent to us some specimens of a new patent appliance for preventing accidental poisoning. It consists of a flat tin disc having the word "Poison" stamped on it, which can be fitted on to the neck of a bottle like a collar, although the eight points made by a corresponding number of scallops in the outer edge of the disc give it more the appearance of a frill. "It is instantly fixed," says the inventor, "by pulling the free ends apart at right angles to the plane and passing it round the neck. It is not easily removed again by those who do not know how. If the persons handling the poison bottle do not prick the fingers at first they are almost certain to do so on replacing the cork or putting the [illegible] one. We presume the discs would have to be made in different sizes to fit different sizes of bottles and it appears to be necessary that the bottle should have a prominent rim at the mouth to prevent the disc from falling off when the bottle is inverted.

MOTOR-CARS FOR MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—As a driver of a car in London for nearly three and a half years perhaps a few details may be of service to your readers. The car was a De Dion voiturette, three and a half horse-power. The distance travelled was from 18 000 to 19,000 miles. The cost per annum was *about £130 (as against £200 for single horse and carriage).*

	£	s.	d.
Tyres, pneumatic	25	0	0
Petrol	20	0	0
Lubricating oil	2	0	0
Repairs	20	0	0
Sundries	5	0	0
Taxes and insurance	10	0	0
Boy at 16*s.*	41	0	0
Rent of stable	15	0	0

I am quite satisfied with the change and do not think I would, in any circumstances whatever, again keep a horse. Only on six occasions have I been stopped on the road by small troubles which I could not immediately rectify myself and two of these were at the end of *journeys of over 100 miles.* I am my own mechanic. In my opinion a motor car is far preferable to a horse and carriage for general practice as it does not tire and mine is always at my command whenever needed night or day. My stable is a minute's walk from my house. I can have my car upon the road without assistance *in three minutes from the time I leave my door.*

The points for consideration in the choice of a car by a medical man vary according to the depth of his pocket. If he be content with a light open voiturette, under ten hundredweights, run upon pneumatic tyres (or solid) and will look after the mechanical parts himself, keeping a lad simply to wash and to oil the car the expense need not be *greater than in my case. But if, on the other hand, he chooses a car* weighing from 15 to 30 hundredweights he would, if a busy man, be compelled to keep a mechanic If he has pneumatic tyres and uses his car as much as I use mine he will find his cost of running comparatively heavy—his tyre bill alone may be anything between £100 and £300 per annum. Not only are pneumatic tyres expensive but to find one's tyre deflated by a puncture just when one has an urgent message is more than annoying. I have had only one puncture (in August, 1903) since January, 1901. My little car is to-day in perfect condition throughout—it is in far better order than when I first bought it nearly new. It is, of course, only a motor-perambulator as cars go nowadays, but I have averaged 15 miles per hour from Birmingham to my house (running time), "three up" and a large portmanteau on board. I have done a mile in two and a half minutes. It will climb any ordinary hill. I have driven it up the West Hill, Highgate, and Aubrey-place, Holland-hill, W. It has twice refused to take me up Netherhall-gardens, it went up empty. When buying a car the medical man should buy one with a good family history, unless he proposes to experiment. If I were going to buy a car now I should certainly get a six horse-power De Dion voiturette.

I am, Sirs yours faithfully,

G. WASHINGTON ISAAC, M.B. Edin.

Gower-street, W.C., Nov. 9th, 1903.

To the Editors of THE LANCET.

SIRS,—In answer to "Tramite Recta" in THE LANCET of Nov. 7th allow me to say that though a motorist and a medical man I would *advise him not to expect too much from motor-cars, for none can climb* a hill of 1 in 3; secondly, not to use pneumatic tyres; thirdly, to get a light car of the Baby Peugeot type, price about £160 or so, with solid tyres and seats for two; also he should not get a car for hilly country to carry four passengers unless he has adequate (from eight to nine) horse-power; lastly, unless he is prepared to understand his machine thoroughly and to carry out small repairs himself "Tramite Recta" will regret ever buying a motor-car. As to tyres, if he does not have ordinary clincher tyres he should have Connolly's Goodrich or Hearthstone (not the ideal or wired on) tyres.

I am, Sirs, yours faithfully,

Nov. 9th, 1903. J. C., M.D.

PS.—As a rule the small American cars and those driven by steam should be avoided.

To the Editors of THE LANCET.

SIRS,—We notice under the heading of "Motor-cars for Medical Men" in THE LANCET of Nov. 7th, p 1337, a letter, over the signature of "Tramite Recta," asking for information respecting a light car. It may be of interest to your correspondent to know that we have supplied several of our smaller cars—namely, five horse-power and seven and a half horse power—to medical men for use in their practice and have *received excellent reports regarding their suitability for this* class of work. We shall be pleased to send you the names of medical men to whom we have supplied cars in order that you may put your correspondent in communication with them.

We are, Sirs, yours faithfully,

WOLSELEY TOOL AND MOTOR CAR COMPANY, LTD.

(H. AUSTIN, Manager.)

Birmingham, Nov. 10th, 1903.

To the Editors of THE LANCET.

SIRS,—I have noted with interest the remarks in the recent numbers of THE LANCET about motor-cars. As perhaps you may call to mind, I had the pleasure of giving my experiences some time ago; probably my subsequent ones may interest medical embryo motorists.

I fully agree with Mr. H. Lupton that many motors are useless to medical men and that no car which runs on pneumatic tyres is (to medical men) worth having Personally I have always used solid tyres and found them to wear well. I have had two cars, both Benz make—the latter a four and a half horse-power horizontal single cylinder, belt transmiss[illegible] *These manufacturers* have now [illegible] ical. I ordered some three week[illegible] om Brown Brothers, Great Eastern street, E., the specifications of which are as follows: two cylinders, eight horse-power, clutch transmission, chain driven, positive feed, mechanical lubricator, three speeds forward and reverse operated by one lever artillery wheels fitted with two-and a-half inch [illegible] with side [illegible] water-[illegible] all the other makes on the market. Its power, build, and simplicity influenced my decision and especially its performance on a trial trip here up a winding hill of 1 in 4. I trust in six months to be able to report well as to its behaviour.

I am, Sirs, yours faithfully,

Woolwich, Nov. 7th, 1903. CHARLES T. W. HIRSCH.

THE EMPLOYMENT OF RESERVE AND DISCHARGED SOLDIERS.

Lieutenant-General Green-Wilkinson, chairman of the National Association for the Employment of Reserve and Discharged Soldiers, writes to us pointing out that men who have served in the army deserve well of their country and appealing to employers of labour, especially county and borough councils, to continue to show their sympathy. He gratefully acknowledges that much has been done by employers in this respect, for after the close of the late war, of 24,000 men registered, 18,000 have been given permanent work. Recently, however, applications for men have been fewer and the candidates for registration are increasing owing to the present service of three years with the colours instead of seven years as heretofore. Openings are required for coachmen, grooms, carmen, timekeepers, porters, labourers, and others. The offices of the association are at 119, Victoria-street, London, S.W. The telephone address is "367 Westminster" and the telegraphic address is "*Employons, London.*"

THE RÔLE OF SOAP.

To the Editors of THE LANCET.

SIRS,—For many years past I have been interested in a personal degree as to "the rôle of soap" on the human skin and have come to the following conclusions. Skins vary according to the constitutions of individuals. Those having an oily skin (chiefly persons of dark type) are more satisfactorily washed by using a certain amount of free alkali in its constitution; on the other hand, the possessors of dry skins (mostly fair-complexioned persons) cannot stand the effect of free alkali and in such subjects a superfatted soap not only removes the dirt but leaves a trace of fat on the surface, thus counteracting the drying and cracking effect of the more alkaline soap. A rough-and-ready mode of testing one of the pure superfatted soaps is to wash the mouth and teeth with it, using a soft brush and warm water.

I am, Sirs, yours faithfully,

Nov. 14th, 1903. H. J C.

THE BRITISH MEDICAL BENEVOLENT FUND.

THE following is a third list of donations received in response to Sir William Broadbent's appeal:—

	£	*s.*	*d.*		£	*s.*	*d.*
Dr. P. H. Pye-Smith, F.R.S.	10	10	0	Mr. B. G. A. Moynihan	2	2	0
Dr. W. S. A. Griffith ...	10	0	0	Mr. S. Evans	2	2	0
				Mr. C. J. Denny	1	1	0

The treasurer is grateful for the response already given to Sir William Broadbent's appeal. Unfortunately the amount of money received still falls far short of the requirements of the fund at the present time and unless the resources of the fund are largely increased the pressing claims which winter always brings will be very inadequately provided for. Further subscriptions and donations are urgently needed and may be sent to the treasurer, Dr. S. West, 15, Wimpole-street, London, W.

THE CHOICE OF A SPHYGMOGRAPH.

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent *re* sphygmograph, I can with confidence recommend Dudgeon's. I have used this instrument in my general practice in all cases of cardiac disease and many others for over 20 years. It has always worked well and never gone out of order. It costs £2 5s. and when care is taken in the selection of the proper paper I think it the best for every-day use.

I am, Sirs, yours faithfully,

Crieff, N.B., Nov. 15th, 1903. D. ROBERTSON DOBIE.

MANUSCRIPTS OF MEDIÆVAL MEDICAL AUTHORS.

Dr. George A. Kostomoiros of Athens, whose valuable researches upon the unedited manuscripts of Greek and Latin medical writers were reviewed in THE LANCET of March 30th, 1895, p. 822, has recently followed up his account of the texts of the more ancient authors by some notes upon three writers of the mediæval period whose books are of importance, not so much for their own researches and compositions, as for the extracts which they made from far older and more valuable medical literature. These three writers—Joannes Tzetzes, Nicolas Myrepsus, and Joannes Actuarius—lived in the twelfth and thirteenth centuries of the present era. The first, who was at once a poet, a grammarian, and an encyclopædic writer, was born in 1110. He included medicine among the many branches of his erudition and there is at Oxford in the Codex Baroccianus, No 88, a little treatise composed by him upon the Urine. Nicolas Myrepsus, of Alexandria, was the writer of a complete "Dynameron" in which between the years 1277-80 he collected all the best recipes he could find in Arabic and Greek treatises, forming a complete pharmacopœia as the subject was then understood. There are 15 manuscripts of it known to exist in Europe; one of them is at Oxford (Baroccianus CLXXI. of the teenth century) and is cursorily described in Daremberg's "Notices et Extraits des Manuscrits Médicaux" published at Paris in 1853.

England unfortunately no longer possesses two of her finest manuscripts of Joannes Actuarius, which were in the library of Sir homas Phillips and are now at Berlin. They contained the Therapeutica and the treatise on the urine. There are, however, at Oxford two others of value and one late and defective codex. In London there are others giving the first and second books of the Therapeutica, two of its unpublished books, and also two codices of the treatise on the urine. It is to be hoped that Dr. Kostomoiros will soon publish further results. Joannes Actuarius wrote about 1250. The number of his known works is five or six, the most important of which are the treatise on the urine, in seven books (see Ideler: "Physici et Medici Græci Minores," II.; 193, Berlin, 1841), and the Therapeutica, in six books prepared for the use of Apokaukos, Chamberlain at the Byzantine Court. Of the latter two books only have been published in Greek by Ideler.

A CHEAP OPEN-AIR SANATORIUM.

"W. E. F. T." asks us to publish a request to our readers for information concerning a cheap open-air sanatorium.

◆

Sufferer.—We do not recommend treatment, but the condition is a very common one upon which any medical man can give sound advice. Our correspondent is especially warned against having recourse to the many mischievous quacks who offer cures. Cure will certainly follow upon the rigid cultivation of habits of self-control, and there is no need for the despondency expressed.

M. P. H. has omitted his name and address. The Medical Directory will give him the information that he seeks.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.).

WEDNESDAY (25th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.) Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M).

THURSDAY (26th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat, (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (27[illegible] [illegible] lomew's (1.30 P.M.), St. Thomas's [illegible] Cross (3 P[illegible] (2 P.M.), [illegible] Northern Central (2.30 P.M.), West London [illegible] 2.30 P.M.), Throat Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (28th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (23rd).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (2 Hanover-square, W.).—7 P.M. Council. 8 P.M. Annual Report and Balance Sheet. Papers:—Mr. W. S. Nowell: A Case of Bilateral and Partial Necrosis of the Mandible.—Dr. H. Tilley: Some Observations upon Empyema of the Maxillary Antrum, with Special Reference to the Diagnosis and Treatment. (The paper will be illustrated by Diagrams, &c. The method of "Transillumination" and "Intranasal Exploration" for diagnostic purposes will be demonstrated upon a patient.)

MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Paper:—Sir R Douglas Powell, Bart: The Action of Medicinal and other Remedies in Cardiac Failure.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND (St. Mary's Hospital).—4 P.M. Annual General Meeting. Election of Officers. Papers:—Mr. F. G. Parsons, Dr. W. Kidd, Dr. A. Keith, Dr. W. [illegible]

[illegible] OCIETY (Apothecaries' Hall, [illegible] ting. 4 P.M. Papers:—Prof. [illegible] id their Alkaloids.—Dr. R. B. [illegible] to the Pharmacology of the Saponins.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Paper: Mr. T. Crisp English: Remarks on Fifty Consecutive Cases of Perforated Gastric and Duodenal Ulcer treated by Laparotomy.

WEDNESDAY (25th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8.30 P.M. Pathological Evening. Exhibition of Specimens.

FRIDAY (27th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Mr. F. C. Wallis: A Case of Chronic Intussusception treated by Intestinal Resections (to be illustrated by the epidiascope).—Dr. F. Taylor: Two Cases of Lymphocythæmia (Lymphatic Leukæmia).—Mr. L. McGavin: A Case of Post-operative Hernia treated by the Introduction of Silver Wire Filigree.—Dr. N. Dalton: A Case of Malignant Anæmia.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MO[illegible]

M[illegible]

Dr. A. Whitfield: Eczema.

TUESDAY (24th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Ball: Practical Points in Anatomy of Ear (with lantern slides). (Second Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. R. L. Bowles: Clinique. (Medical.) 5.15 P.M. Dr. A. Whitfield: Eczema.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. J. Taylor: Degenerative Diseases of the Spinal Cord.

Gl[illegible]

W[illegible]

Affections.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Schorstein: The Commoner Causes of Hæmoptysis and their Treatment.

THURSDAY (26th).—POST-GRADUATE COLLEGE (West London Hospital, *Hammersmith-road, W.).—5 P.M. Dr. Davis: Diagnosis in* Heart Disease (First Lecture.)

MEDICAL GRADUA[illegible]

W.C.).—4 P.M. [illegible]

Mr. H. L. Barnar[illegible]

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3 P.M. Dr. Robe[illegible]

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of Surgical Cases [illegible]

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4 P.M. Mr. Ball[illegible]

NORTH-EAST LOND[illegible]

pital, N.).—4.30 [illegible]

Children. (Third Lecture.)

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7, Fitzroy-square, W.).—5 P.M. Dr. T. N. Kelynack: Sanatorium Treatment of Consumption. (Post-Graduate Course.)

FR[illegible] Hospital, [illegible] s. [illegible] nies-street, [illegible] M. Dr. P. [illegible] IC (Queen- [illegible] generative

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 19th, 1903.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Rainfall	Solar Radia in Vacuo	Maximum Temp. Shade.	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
Nov. 13	30·17	S.W.	0·05	60	55	49	52	53	Overcast
" 14	29·74	S.W.	..	68	54	51	52	54	Overcast
" 15	29·70	W.	0·05	60	47	40	41	42	Cloudy
" 16	29·60	N.W.	...	58	46	37	38	39	Foggy
" 17	29·57	W.	.	58	44	39	39	41	Overcast
" 18	30·09	N.	0·04	63	44	38	40	41	Cloudy
" 19	30·21	N.E.	...	61	46	37	38	39	Cloudy

During the week marked copies of the following newspapers have been received: *Wakefield Advertiser and Gazette, Highland News, Bangkok Times Standard, Bradford Observer, Wigan Examiner, Lincoln Herald, Windsor and Eton Express, Derbyshire Courier, Darlington Echo, Hull Times, Yorkshire Observer, Manchester Despatch, Sunday Times, Liverpool Journal of Commerce, Reading Mercury, Times of India, Aberdeen Weekly Free Press, Westminster Gazette, Scientific American, Engineer, Medical Mirror (New York), Colliery Guardian, &c.*

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A Lecture

ON

THE ADMINISTRATION OF CHLOROFORM TO MAN AND TO THE HIGHER ANIMALS.

Delivered in the Physiological Laboratory of the University of London on Oct. 13th, 1903.

BY AUGUSTUS D. WALLER, M.D., F.R.S.

GENTLEMEN,—On previous occasions, when it has fallen to my lot to replace one of my colleagues in this lecture-room, I have invited you to inspect the work that happened to be in progress in the laboratory, and to the best of my ability I have explained the origin, the state, and the purpose of what you have seen. I shall again employ my lecturer's hour in this way, and lay before you as fully as possible in the time the state of the case concerning the experimental study of anæsthetics, which, as some of you know, has been a principal subject of study in this laboratory during the past year. And whereas last summer I dealt at length with purely scientific aspects of the problem, I shall to-day confine myself to the practical side, which is the direct logical consequence of the scientific side—that is to say, that I shall deal with the administration of chloroform to man and to the higher animals.

Some preface is, however, necessary. Although these lectures are addressed to students of second degree possessing already such primary information as may be acquired in the regular medical curriculum, it has happened that non-medical persons, unacquainted with the first rudiments of medical study, have obtained permission to be present. To anyone who has attended the lectures and practice of the laboratory during the past year it will, I hope, be matter of surprise that two intelligent young ladies should have come here for many days and have neither seen nor learned anything to give them pause from rushing into print with a horrified condemnation of physiology and of physiologists. If the two young ladies under whose name the publication entitled "Shambles of Science" has appeared, came simply to get "copy" the case is easily understood; but I am unwilling to believe this; and, indeed, the case looks to me much more like that of a pair of very ill-advised busybodies supporting each other through a trying ordeal for the sake of what they imagined to be an errand of mercy. I am sorry they came. I should have told them or any other non-professional women that they had better not come to such lectures, for they would run the risk of being misled and pained by experiments where no suffering to living animals was caused. Indeed, one would look very much askance at the young woman who should be able to look on while an animal was, as she imagined, undergoing torture.

For the naked details of even a properly conducted vivisection, ignorantly considered, as must be the case if they are considered at all by an unprofessional person, appear revolting—so do the details of a surgical operation or of the slaughter of an animal for food, or of the proceedings in the dissecting-room and the post mortem room. The minute and graphic account of such details by ignorant women is from every point of view mischievous and deplorable, and I very much regret that these two unfortunate ladies should have obtained the opportunity to torment themselves and their readers by their conscientious misrepresentations. Physiologists, when vivisection is necessary, do not take either pleasure or pain in its naked details, and they systematically take due precautions to fully anæsthetise animals required for experiment. The incredible motives sometimes attributed to physiologists by well-meaning people and the unlimited adjectives and substantives by which they are held up to public reprobation can only be left to the antidote of their own excess. It is really labour lost to be constantly pleading "not guilty" to this, that, or the other quite outrageous statement; we can only wonder that well-meaning people can so quietly harbour such infamous thoughts.

Nor have we failed to question our own conscience. We well know that physiologists are subject to the common laws governing the human mind and that habit must tend to engender inattention and that inattention would be cruelty. We are on our guard against our own inattention, but knowing that we are human we do not resent as indignantly as might be expected of us the reminder to be on our guard that is contained in the denunciations of our critics. We also know that there is evil in the appearance of evil, that things right and proper in themselves but offensive of appearance ought not to be exposed. And if exposure by even competent authority must offend and injure the imaginations of ordinary men and women, how much more injury and offence to the public mind will be committed by incompetent and self-deluded women who have entered what is to their minds nothing more than a chamber of horrors, where in reality the "quivering flesh" and "palpitating heart" and "tortured nerves" are more often than not only the living parts of dead animals, and where in any case an animal, even if alive, has been absolutely deprived of sensation. When one attempts to realise what kind of images must hold possession of an ignorant, prejudiced, and sensitive person—man or woman—who has seen without understanding, he ceases to wonder at bad language, yet what can he hope to say that shall reach the mind of the deluded fanatics whose pity has been fanned to hatred by agitators. And can it be expected of us that we should say anything at all to persons who can employ sensational literature to poison the wells of human sympathy.

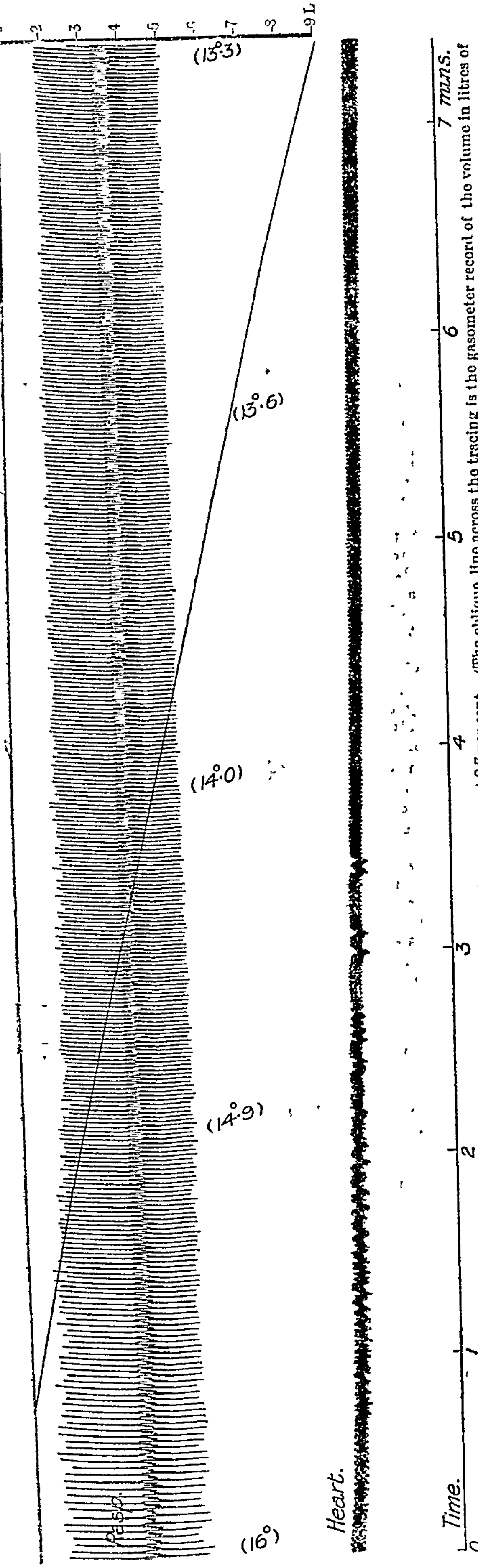
In this laboratory—and no doubt in others—our very first concern is to administer anæsthetics properly when anæsthetics are required. And I make the deliberate statement that animals in this laboratory are anæsthetised with as great certainty and accuracy as are the patients in any hospital in the United Kingdom. Can it be necessary to tell you that we do not juggle with bottles of "colourless and odourless" liquid as imagined and stated by the two ladies who have visited these "shambles"? You shall see for yourselves what takes place outside the lecture-room whenever it is necessary to anæsthetise an animal. I have chosen cats for my demonstration, since the demeanour of these animals is most familiar to us.

Cat No. 1 was anæsthetised three hours ago by the inhalation of chloroform and air at 2 per cent. and has during the last three hours been maintained in profound anæsthesia in a mixture of between 1 and 1 5 per cent. I now pass it round the class, so that you may all assure yourselves of its state, and when it returns to the lecture table it will be left to recover. Its recovery will take place in not less than half an hour nor more than three-quarters of an hour, and will, I believe, be complete within an hour. By complete recovery I mean that state in which the cat will drink milk and purr, and a saucer of milk is therefore placed by the cat as its normal test. You will have understood from this illustration that complete anæsthesia can be, and regularly is, established as long as necessary for the purpose of experiment; and you will hardly need to be told that the anæsthesia can be kept up by a continuous administration, or strengthened if it should at any moment appear to be weakening.

On Cat No. 2 you will see how anæsthesia is induced, and Cat No. 3, which has been left upon the operation table for another purpose, will serve to let you see how the anæsthesia has been maintained throughout an operation. Cat No. 2 has been borrowed for the purpose of this lecture on the understanding that it shall be returned intact. It is to be fully anæsthetised by a mixture of chloroform and air at 2 per cent. according to the regular custom of the laboratory. The induction of complete anæsthesia will take not less than five minutes nor more than ten minutes, and the recovery will be complete in half an hour. I shall also show you how we verify that the mixture is at or about 2 per cent., and in so doing I shall have demonstrated to you how we ascertain the percentage of any unknown mixture of chloroform and air.

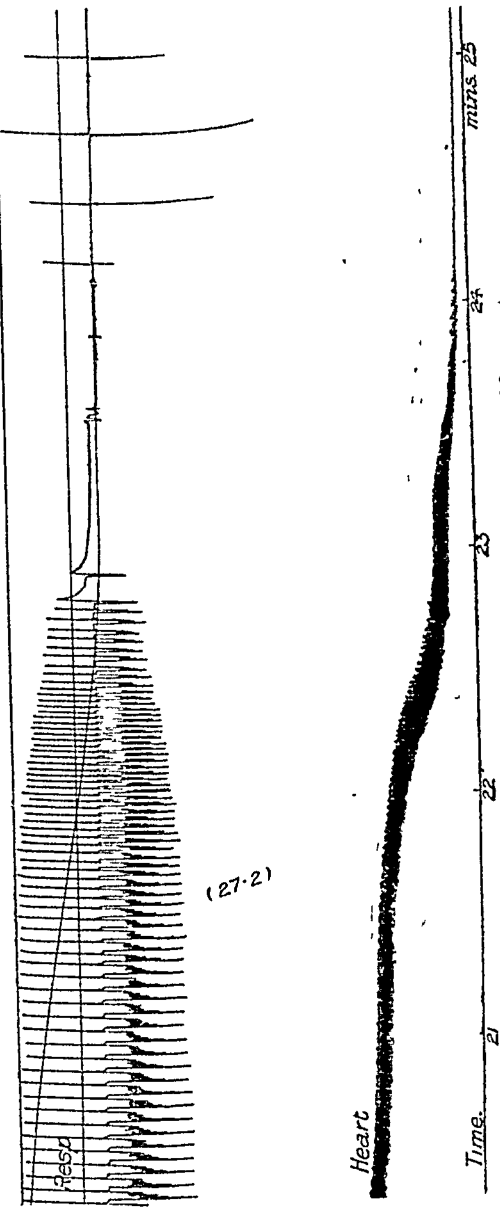
Cat No. 3, now upon the operation board, is dead, having just served for an experiment in which we measured the amounts of chloroform inspired and expired (1) during a normal induction of anæsthesia by chloroform at a low percentage and (2) during a normal production of death by chloroform at a high percentage. Throughout this experiment we have observed and recorded the respiration and the blood pressure, the percentage of chloroform in the inspired and expired air, and the total volume of air breathed per minute

The results of the experiment are contained in the record now on the cylinder (Figs. 1 and 1A) and in the numbers



Experiment of Oct. 13th, 1903 (Part 1). Cat weighing 2 9 kilos. Anæsthesia by chloroform vapour at 2·7 per cent. (The oblique line across the tracing is the gasometer record of the volume in litres of air breathed by the animal. The numbers in brackets signify the temperature of the chloroform.)

FIG. 1A.



Experiment of Oct. 13th (Part 2). Death by chloroform at 14 2 per cent

written on the blackboard (*vide infra*). The remainder of my lecture will be occupied by an explanation of the exact manner in which these several observations have been carried out, and by a very few concluding remarks concerning the anæsthesia of the human subject.

Experiment made on Oct. 13th on a Cat weighing 2·9 kilos.

Part I.—Induction of complete anæsthesia by nine litres of chloroform and air at 2·7 per cent. $CHCl_3$ in 7 minutes 40 seconds. The frequency of respiration was 70 per minute with an average depth of 16 cubic centimetres per respiration.

Inspired ...	2 7 per cent.,	i.e.,	243 cubic centimetres of $CHCl_3$ vapour in 9 litres of air.	
Expired ...	2·1	,,	189 cubic centimetres.	
Retained ...	0·6	,,	54 ,, ,,	(or 0 27 gramme).

Part II.—Death by two litres of chloroform and air at 14·2 per cent. in three minutes.

Inspired ...	14·2 per cent.,	i.e.,	284 cubic centimetres of $CHCl_3$ vapour in 2 litres of air.	
Expired ...	7·9	,,	158 cubic centimetres.	
Retained ...	6·3	,,	126 ,, ,,	(or 0·63 gramme).

Of course, such an estimate of the total quantity of chloroform absorbed during a given period would be more immediately satisfactory if that total quantity could be directly measured. But I have ground for concluding that the result obtained by calculation from the percentage of given samples and the total volume of air used, does actually represent a close approximation to such total quantity In a series of trials made last year of the delivery by an apparatus recently proposed for clinical anæsthesia I measured (1) the total volume of air drawn over a weighed amount of chloroform, (2) the loss of weight of the chloroform, and (3) the percentage of chloroform in the issuing air by densimetry The percentage as given by the densimeter sample is very nearly that afforded by the quotient of total air divided by total chloroform —

1 Total of air in litres	2 Loss of $CHCl_3$	Percentage calculated from (1) and (2)	3 Percentage by densimetry
25 2	2 38 (476 c c)	1 89	1 90
12 6	1 56 (312 c c)	2 48	2 30
8 4	1 29 (258 c c)	3 07	3 10

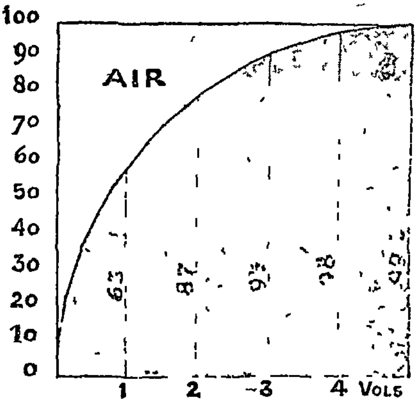
All three cats have gone through the proceeding you witnessed in the case of the borrowed cat—it is our regular laboratory procedure for cats dogs, rabbits, rats, mice pigeons and frogs—and the differences of susceptibility to chloroform exhibited by these various animals are so small that we are justified in translating to the human subject the knowledge we have acquired at their expense The animal is placed under a glass bell jar through which chloroform and air of known percentage are pumped The pump is one originally devised by Professor R Dubois of Lyons for the *anæsthetisation of the human subject and has proved very* valuable as a laboratory instrument The only objection to its use is, as far as I can ascertain, its price—£20, but as a matter of fact as a laboratory instrument it is commercially economical We have never lost an animal by chloroform since it has been in use, and the amount of chloroform employed in the laboratory has been comparatively small, the certainty and safety with which anæsthesia has been induced have very materially lightened the preparations for an experiment, it has enabled us to keep animals in complete anæsthesia for as long as 12 hours

At each stroke of the pump four and a half litres of air are delivered at the outlet and an equal amount is drawn in at the inlet The inlet is by an open bottle into which each stroke automatically delivers 0 3 cubic centimetre (five minims) of liquid chloroform, equivalent to 90 cubic centimetres of chloroform vapour, the whole of which is drawn into the pump at one stroke and delivered at the next stroke Thus at one, two three or four strokes per minute the delivery is 4 5, 9 13 5 and 18 litres per minute of a 2 per cent mixture of chloroform and air, and whether the pump is worked quickly or slowly (within reasonable limits) the percentage remains at this figure, which is the maximum value afforded in the automatic working of the apparatus (but can be lowered to 1 6 and 1 2 per cent by turning a cam or raised to between 3 and 4 per cent if demanded)

The nominal delivery of this (or of any other apparatus) is readily tested by the densimetric method [1] A 250 cubic centimetre bulb, previously counterpoised on a balance, is placed upon the delivery tube, filled with the mixture closed, and replaced upon the balance It is found in the case now before us that an addition of 22 milligrammes is required to the counterpoise—i e, that the percentage of chloroform in the sample is 2 2. The data upon which this method of estimation is based are as follows Each cubic centimetre of chloroform vapour is four milligrammes heavier than one cubic centimetre of air, so that 2 5 cubic centimetres—i.e, 1 per cent in the 250 cubic centimetres flask—are ten milligrammes heavier Ten milligrammes signify, therefore, 1 per cent and 22 milligrammes 2 2 per cent.

It will be worth while to realise the way in which the percentage of chloroform in a reservoir rises to that of a chloroform plus air mixture delivered through it. Fig 2 will help you to do so You may see from it that a reservoir through which once, twice, thrice its own volume of a mixture has been slowly passed, contains a more dilute mixture at 0 63 0 87 0 95 of the percentage of the original mixture, and that when five times the volume has passed, the *percentage in the reservoir is practically equal to that of the* supply For a bell jar of 30 litres supplied by a chloroform mixture at 2 per cent at a rate of 30 litres per minute (seven strokes per minute of the Dubois's pump are more than sufficient for this) the percentage in the jar at the end of the one, two three, four, and five minutes will be 1 26 1 74 1 90 1 99, and 1 99 And as regards the densimeter bulb by which we just sampled the percentage of supply, a single stroke driving ten times its volume of gas through the bulb is obviously more than sufficient to give a full strength sample of mixture in the bulb

FIG 2



To illustrate the rate at which the air of a receiver is replaced *by chloroform mixture of any given strength When the* receiver has been traversed by once twice three times &c, its volume of mixture the contents = 63 mixture + 37 air 87 mixture + 13 air &c The mixture is practically at its full strength when the receiver has been traversed by five times its volume

Let us turn our attention to the results obtained on Cat No 3 It was first anæsthetised under the bell jar, a cannula was then placed in the trachea connected by a tube with a Woulfe s flask containing chloroform so that the inspired air was charged with an unknown amount of chloroform vapour by which the anæsthesia was maintained. This is the ordinary laboratory method of keeping up anæsthesia but it is a dangerous method and one that is not used in this laboratory except for the actual study of chloroform, we prefer ether for ordinary use In the present case, the purpose of the experiment being to get at the percentage and amount of chloroform administered, a densimeter bulb is placed on the inspiration tube and the total amount of air inspired is measured by a gasometer In the present case the total amount of air inspired was nine litres (in seven minutes 40 seconds) and the percentage of chloroform vapour in that air was 2 7 The total volume of chloroform vapour taken into the lungs was therefore 243 cubic centimetres, or rather more than one gramme of fluid chloroform

Was all this chloroform vapour retained? Probably not, or rather evidently not since the expired air of the animal smelt strongly of *chloroform How much then was the* amount of chloroform rejected in the expired air? To *ascertain this* was a *rather more troublesome matter*, a Chauveau s valve (Fig 3) connected with two densimeters, one on the inspiratory and the other on the expiratory side, was ultimately found to answer the purpose extremely well The flaps of the valve act perfectly with inspirations and expirations ranging from 10 to 1000 cubic centimetres and the "dead space of the apparatus is as small as possible so that the column of air moved to and fro with respiration is not much greater than that of the large air passages We have to prevent any condensation of water vapour from taking place in the expiration bulb To this end it is placed in a metal chamber kept at between 40° and 50° C by an incandescent lamp and to *keep things equal* the inspiration bulb is placed by its side in the warm chamber A slight increase of weight (1 3 milligrammes per 1 per cent) in the expiration bulb by reason of the CO_2 expired is either allowed for or estimated separately Its accurate determination might be of importance in low percentage estimates; but in high percentage estimates, like the present the error due to this source may be disregarded. Thus 5 per cent. of chloroform is signified by 50 milligrammes and 4 per cent. of CO_2 is signified by 5·2 milligrammes; for ordinary purposes then it is well to subtract five milligrammes from the weight of the expiration bulb as the average value of the CO_2 weight in expired air.[2]

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[1] Proceedings of the Physiological Society, 1903

FIG 3.

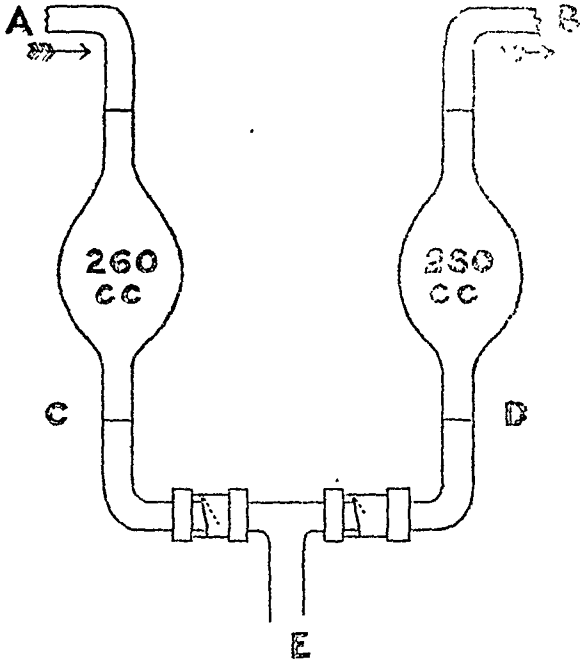

Diagram to show the arrangement of apparatus for the estimation of chloroform in the inspired and expired air. Tube A is attached to a chloroform flask, tube B to a gasometer. Tube E of the Chauveau valve is connected with the trachea. Two densimeters are attached to its inspiratory end C and to its expiratory end D. (The warm jacket enclosing the densimeters is not shown.)

We are now in a position to draw up a more complete balance-sheet showing the pulmonary absorption of chloroform during a given period, the excess of income over output representing what has been retained in the body during that period. In the case before us the percentage of chloroform in the expiration densimeter was 2 1, or 189 cubic centimetres of chloroform vapour were rejected in the nine litres of expired air. So that we have :—

Chloroform inspired	...	243	cubic centimetres.		
,, rejected	...	189	,,	,,	
,, retained	...	54	,,	,,	(= 0·27 gramme).

That has been the story of the induction of profound normal anæsthesia by chloroform vapour at a rather high, but not in itself a dangerous, percentage. The amount of chloroform rejected was greater (and of that retained was smaller) than I have seen in other similar experiments. I attribute this to the character of the breathing which was rapid and shallow—above 60 per minute.

Turn now to the second part of the experiment, when the cat was deliberately sacrificed by the inhalation of chloroform at a high percentage, all arrangements being made as before to record the movements of respiration and the blood pressure, the percentage of chloroform in the inspired and in the expired air, and the total volume of air breathed. Death occurred, as in the great majority of such cases, by failure of respiration, followed by failure of the heart The percentage of chloroform as given by the inspiration densimeter was 14 2, by the expiration densimeter 7·9 (corrected for 2 per cent of CO_2 determined volumetrically). The total volume of air breathed was two litres in three minutes, when respiration ceased. We have in this normal death by chloroform at a high percentage the following result.

Chloroform inspired	...	284	cubic centimetres.		
,, rejected	...	158	,,	,,	
,, retained	...	126	,,	,,	(= 0·63 gramme).

Commentary is hardly necessary; the facts speak for themselves. In Part I. an animal was fully anæsthetised by chloroform absorbed at the rate of 27 milligrammes per minute. In Part II the same animal was killed by chloroform absorbed at the rate of 210 milligrammes per minute.

For the sake of comparison with the results of to-day's experiment I have set out for your inspection the principal data of a similar experiment made two days ago on a dog.

Experiment made on Oct. 11th on a Dog weighing Seven Kilogrammes.

Part I.—Induction of complete anæsthesia by 8·5 litres of chloroform and air at 3·1 per cent. of $CHCl_3$ in four minutes 30 seconds.

Inspired ...	3·10	per cent.	......	263·5	cubic centimetres.	
Expired ...	1·86	,,	......	158·1	,, ,,	
Retained ...	1·24	,,		105 4	,, ,,	(= 0 527 gramme).

Part II.—Death by eight litres of chloroform and air at 13·2 per cent. $CHCl_3$ in three minutes.

Inspired ...	13 2	per cent.	......	1056	cubic centimetres.	
Expired ...	6 66	,,	......	533	,, ,,	
Retained ...	6·54	,,		523	,, ,,	(= 2 615 grammes).

One accident, and one only, has occurred in this laboratory since the procedure which you have just witnessed has been regularly adopted. It was not due to the procedure but to its absence. The accident was so strikingly instructive that I shall give you an exact account of how it occurred and of what we learned from it. The animal—a cat—had been fully anæsthetised and transferred to the operating table when the operator was called to some other more urgent matter. On his return he found the animal undergoing artificial respiration which failed to restore it. Death had taken place. The animal had shown signs of recovery from the anæsthetic and had been re-anæsthetised by "*a few drops of chloroform on a cloth*" which had caused sudden arrest of the heart and of respiration. The accident was obviously a case of early cardiac death of the kind well known to physiologists and dreaded by surgeons. I believe that it can only occur when a sudden wave of concentrated chloroform vapour reaches the lungs and pulmonary blood, and I adopted the following device to ascertain whether the conditions under which the accident had just taken place were compatible with the reason given.

An open glass tube was placed between the teeth of the dead animal and connected with a densimeter bulb and an aspirator that drew two litres of air through the bulb in two minutes. A few drops of chloroform were poured on a cloth which was wrapped round the head of the animal as previously for the production of anæsthesia. The percentage of chloroform found in the air aspirated through the densimeter was found to be 11·2. A second trial with the cloth more loosely applied gave the percentage 2·5 A third experiment with the cloth held away from the head of the

FIG. 4.

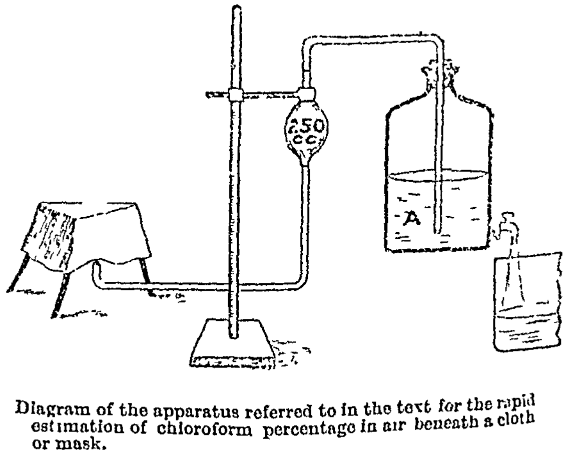

Diagram of the apparatus referred to in the text for the rapid estimation of chloroform percentage in air beneath a cloth or mask.

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[2] A respiratory quotient of 0 9 has been assumed in the calculation of the densimetric value of CO_2 in expired air.

animal gave the percentage 1·2. The tube was then removed from the animal and clamped under a tripod on which the cloth was placed. Chloroform was then put on the upper surface of the cloth drop by drop and the aspirator A was set going for two minutes so as to draw two litres of air *plus* chloroform vapour. The sketch (Fig. 4) will show you exactly how the cloth, the tube, the densimeter, and the aspirator were disposed. The distance between the cloth and the mouth of the tube was three inches, the temperature of the room was 18·5° C. (65·3° F.), and the barometer stood at 768 millimetres of mercury. The percentage by the densimeter was 0·8. In subsequent trials the percentage was 0 7, 1·0, 0 8 with the cloth loose over the tripod, and 1 9 with the cloth more closely wrapped round it. I now understand as I never understood before how it is that an "open method" *involving the administration of "plenty of chloroform with plenty of air" is a relatively safe method.* It is relatively safe because under the ordinary physical conditions of the method, with due skill and unflagging watchfulness on the part of the administrator, the amount of chloroform vapour in the mixture of chloroform and air offered to inspiration is as a rule between the desirable limits of 1 and 2 per cent. It must be obvious to you that this simple apparatus places in your hands the means of studying the kind of chloroform percentage offered to the inspiration of a patient by any of the various masks and other apparatus that are in use for the chloroformisation of the human subject.

The relative danger of a closely fitting mask, even when the *chloroform is given drop by drop, cannot but be evident* to you. The reason of the relative safety of the Edinburgh practice—plenty of *chloroform with plenty of air*—will be no less intelligible. Lawrie, the most convinced and persistent advocate of this method, gives "doses" of chloroform that are enormous, but he is careful that the amount he uses shall not reach the patient's lungs. There is no special virtue in any mask; one towel is not more dangerous than another, nor is there any good reason why it should be *preferred to a piece of lint. That method is safest* which best secures that the patient shall continuously inspire a mixture of chloroform and air with not less than 1 per cent. and not more than 2 per cent. of chloroform vapour in the mixture.

I have naturally and almost without noticing the transition passed to the last and most important head of my lecture—the application of our laboratory knowledge acquired on animals to clinical practice applied to ourselves. Not much time remains to me *for all there is to say; perhaps I may* be permitted to deal more fully with the many questions that come up for answer under this head on some future occasion.

The words "and the higher animals" have expressly formed part of the title of this lecture. Under "clinical practice" I include "veterinary practice." Personally I should be almost as willing to expend thought and money to insure the safe anæsthesia of a favourite animal that required operation as *to insure that of an unknown man*, woman, or child. Happily, however, there is here no antagonism of interests nor protection of commercial privileges at stake; here anything benefiting a dog or cat must also benefit man, and anything benefiting the man must also benefit his friends among the animals. Men have paid and are still paying a heavy price in return for the boon of anæsthesia conferred upon them 60 years ago by Wells, Morton, Soubeiran, Flourens, Simpson, and Snow. The annual returns of the Registrar-General *exhibit* the *picture shown in Fig.* 5 of the increasing price paid in human lives from 1863 to 1901. It is an unnecessary price, inasmuch as the chief reason of its payment consists in the ignorance of the most elementary principles of anæsthesia. Anæsthetists explicitly assert that they are not acquainted with chloroform in arithmetical terms, as 1, 2, 3, and 4 per cent., and that they judge of its power solely from its clinical signs and symptoms.

Experience is, no doubt, the great teacher. The empirical anæsthetist of to-day who has witnessed the clinical signs and symptoms presented by patients in danger of death, or actually put to death, under his method of administration is, no doubt, a less dangerous administrator than the instructed scientist quantitatively acquainted with the power and properties of anæsthetic agents. But the scientific man does not desire to trespass upon the domain of the practical anæsthetist; he only wishes to bring to the common melting pot his own contribution of experience in the belief that it will prove to be an important ingredient of the practical knowledge of future anæsthetists.

You may have heard about that worthy nurse who did not hold with "those new-fangled thermometers" but preferred to regulate the temperature of the bath by the colour of the baby's skin. She was probably a better nurse than some of her younger sisters—better acquainted with thermometers than with babies—not perfectly sure perhaps about Fahrenheit and Celsius—but she is certainly a still better nurse when she has learned to count on a bath-thermometer. Chloroform anæsthesia is of greater importance to us all, and *even an experienced anæsthetist is a safer anæsthetist if* he can count the chloroform he gives us, and if he is accustomed to think about chloroform in concrete numbers, instead of judging by symptoms only and recognising (or not) that a danger signal is in sight.

FIG 5.

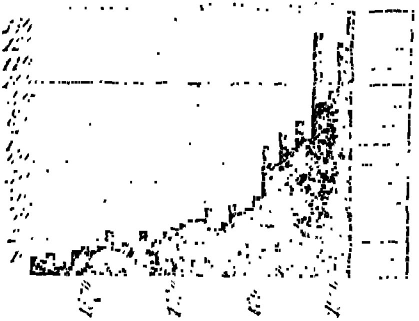


Diagram of the annual numbers of "deaths from anæsthetics" in England in the years 1863 to 1901 constructed from the returns of the Registrar General.

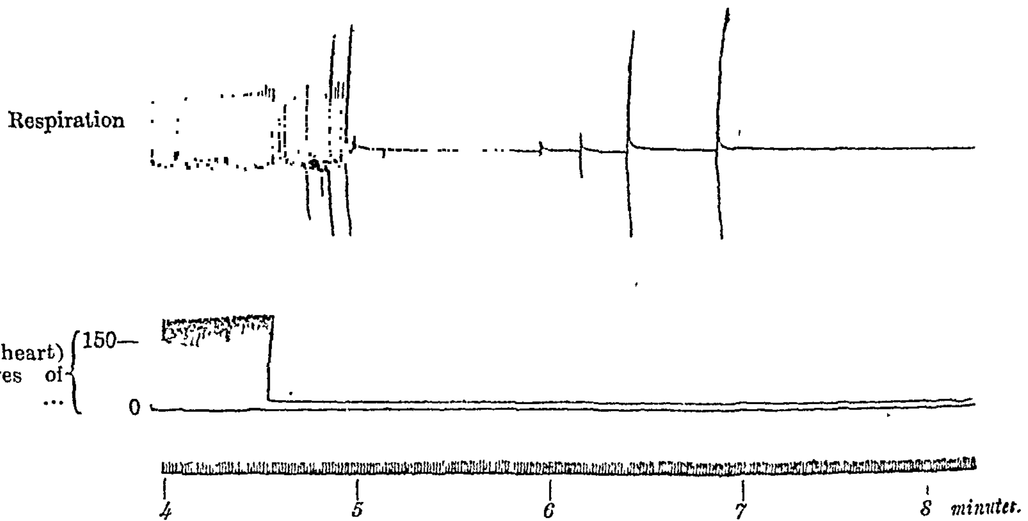
To return for a moment to the death-rate diagram. The unsifted figures of such returns are not, I am well aware, unimpeachable scientific evidence of actual numbers of deaths directly caused by anæsthetics. The numbers may be *too high or they may be too low, they may include cases not* caused by anæsthetics but that have occurred from other causes during anæsthesia; or they may fail to include actual cases of death really caused by anæsthetics, but certified—and quite honestly certified—as caused by that disease for which the services of the surgeon and of the anæsthetist had been invoked. And this remark is applicable to continental as well as to English returns. I think that the returns are, however, sufficiently voluminous to be amenable to the "law of large *numbers*" and to justify us in regarding the actual figures, inclusive of their plus and minus errors, *as fairly representative* of the state of the case as regards the death-rate by anæsthetics in past years. The figures are at least arranged by unprejudiced machinery, and I cannot but regard as disingenuous the assertion that such figures are worthless and the demand for their detailed analysis. Detailed analysis is impossible and even if possible would be *misleading*, for if faults of commission might be detected, faults of omission would be beyond correction. It can only be in a few cases that analysis and criticism are possible. I [illegible] the period 1896-7 in a presid[illegible] of Anatomy and Physiology [illegible]sociation held at Montreal si[illegible]quote from the year that has just elapsed two cases which, with full knowledge of the details of both cases, I characterise as unjustifiable accidents directly due to the maladministration of chloroform. The first case occurred in London and the second in Germany.

CASE 1.—A healthy, powerful man went to the out-patient department of a London hospital to have a piece of glass *removed from his hand, was chloroformed by the* "towel method" by the *dresser in charge, and could not be brought* round. The verdict returned at the coroner's inquest was "Death by misadventure."

CASE 2.—A young woman went into hospital to be operated upon for appendicitis. After due preparation and the patient being in an otherwise healthy state, chloroform was administered by the Esmarch method. Within a few minutes her heart stopped. The statement made in the medical certificate was "Death by syncope."

Both of these most lamentable accidents, which occurred during the last year in the limited circle of my own cognisance (I was not present), were the direct result of chloroform vapour ignorantly administered. No regard was paid to the concentration of chloroform in the air inspired; it may have reached any percentage short of the saturation point of a solution of chloroform vapour in air at the then room temperature. Presumably a deep breath or two of such a mixture were taken, whether few drops or many of liquid chloroform had been dropped on the towel in the first case and on the Esmarch mask in the second, and the wave of chloroform to the pulmonary sheet of blood overpowered the heart directly, or at least placed it in that critical state where any, even the smallest, bulbar disturbance from any afferent channel is to be dreaded. They were early deaths by primary cardiac syncope during the period of induction of anæsthesia; their mechanism is illustrated by this tracing of the blood pressure and respiration of a cat that was being anæsthetised by chloroform at 5·75 per cent. (Fig. 6.) Sudden arrest of the heart, causing sudden fall of blood pressure, took place in coincidence with the slamming of a door. I expressly use the expression "in coincidence with" because I cannot be certain that the slammed door was really the cause of the sudden cardiac arrest and I have failed to reproduce the accident in subsequent trials.

FIG. 6.



An early death by sudden cardiac arrest (primary syncope). Cat under chloroform at 5·75 per cent. No recovery possible. The four gasps apparent on the respiratory record are the terminal anæmic convulsions characteristic of a cardiac death. In the human subject they may arouse hope, whereas in reality they are the last sign of life.

In conclusion, let me repeat a statement made five years ago to the Society of Anæsthetists. "The evidence in point shows that it is necessary, and within reasonable limits of error practicable, to secure dosage in the administration of chloroform and I should like at once to characterise and earmark that argument by the statement that successful chloroform anæsthesia requires the regular respiration of air in which the chloroform vapour is maintained between the limits of 1 and 2 per cent." Nothing has happened within the last few years that should lead me to modify this statement.

The anæsthetics' death-rate as given in the Registrar-General's returns has not diminished. Cases of death in which it has been possible to analyse and to consider details of procedure remain as unpardonable as ever. And I have shown you as clearly as was possible that animals in a physiological laboratory are as a matter of course anæsthetised by chloroform safely as well as effectively.

What is the cause of the greater danger to which men, women, and children are exposed? Is it fear acting upon a nervous system more highly organised than that of animals, or "idiosyncrasy," or "impure chloroform"? These are perhaps contributory causes, but as I know from the experience of the laboratory that 5 per cent. is "dangerous" and between 1 and 2 per cent. is sufficient, I do not think it proper to give importance to possible secondary influences until the principal condition of safety has been secured.

PS. (Nov. 7th).—By the intermediation of my friend Dr. P. M. Chapman and through the courtesy of the surgical staff of the Herefordshire General Hospital I have received an opportunity of applying to the human subject in the operating theatre the method of anæsthesia that the experience of the laboratory has shown to be so satisfactory in the case of animals. Dr. Chapman will no doubt publish his notes of the clinical features of the cases. I may be permitted to state now that the cases were five in number and unselected, that the induction was effected in from six to ten minutes, and that anæsthesia of required depth was maintained for the required periods without untoward symptoms. The nominal delivery of the pump throughout was 2 per cent. (except in the first case, where it was commenced at 1·2 per cent.), and after the period of induction the percentage actually inhaled was reduced by occasional removal of the face piece. The total duration of the five administrations was 100 minutes, the total amount of chloroform employed was 100 cubic centimetres (= 30 litres of chloroform vapour), the total volume of air delivered by the pump was 1400 litres (30 in 1400 is equivalent to 2·15 per 100). Densimetric determinations of the delivery taken before, during, and after administration came out between the limits of 1·6 and 2·4 per 100. The determinations were made in an ordinary balance with a half-litre bulb and weights made by dividing two-grain slips of metal into eight parts; each eighth part (= a quarter of a grain) was taken as indicating 0·8 per 100. If I should have occasion to repeat such determinations I should prepare weights = one-eighth of a grain to represent steps of 0·4 per 100. For finer determinations it would be preferable to employ a skilled assistant.

On Nov. 16th, by the courtesy of Dr. F. W. Hewitt, and under his responsibility, I anæsthetised four unselected cases at St George's Hospital by the Dubois's pump. The induction at 2 per cent. was normal and uniform and was completed within the limits of five and ten minutes (except in the case of an infant when the period of induction was between two and three minutes). Anæsthesia of required depth and duration was maintained at 1·6 and 1·2 per cent., with occasional brief intermissions as judged desirable by Dr. Hewitt. The delivery of the apparatus as tested by densimetry immediately before use was as follows:—

Nominal percentage.	Observed percentage (averages of four trials).
2·0	1·975
1·6	1·600
1·2	1·188

ABSTRACT OF

An Address

ON

THE PRESENT STATE OF THE IRISH POOR-LAW MEDICAL SERVICE.

Delivered at St. Vincent's Hospital, Dublin, on Oct. 6th, 1903, at the Opening of the Medical Session,

BY R. F. TOBIN, F.R.C.S., M.R.C.P. IREL.,
EXAMINER IN SURGERY, ROYAL COLLEGE OF SURGEONS IN IRELAND; SURGEON TO ST. VINCENT'S HOSPITAL, DUBLIN.

[AFTER a few introductory remarks Mr. Tobin said :—]

Thinking of a special subject for this address the two that present themselves to me as being uppermost in our minds at present are the state of the weather and that of the Irish Poor-law medical service. Both are equally bad but as the weather is a more difficult and more of a medical subject I shall leave it for Dr. McHugh next year and consult with the lately qualified students as to whether they should or should not take dispensary appointments under the present conditions. This subject is not grateful to me. First, it is threadbare. Had I all the eloquence of the Irish Bar it would not be possible to say of it anything more or in a better way than has been said by others—notably by my colleague Mr. McArdle from this very desk five years ago. Secondly, I have to commend to you a line of action that is foreign to us alike as men belonging to a generous race and a generous profession. However, this matter is pressing. There is unanimity amongst us that something must be done to improve the position of Irish Poor-law medical officers and therefore I think that it is the duty of each one of us to bring the subject before the public on every possible occasion and to continue to hurl truisms and commonplace facts into the street till those in authority give active consideration to them. What is the case of the Poor-law medical officers? A price, they say, was put on our services which at the time it was fixed was certainly not too high. Since then the cost of education has doubled and our market value has doubled, yet we are refused any increase either of privileges or pay.

[After quoting from an article on the medical profession which appeared in the *Cornhill Magazine* of June, 1903, Mr. Tobin continued :—]

In this paragraph is to be found the explanation of the present discontent. A man after five or six years of arduous study and after seeing many fall upon the way completes his course. He takes employment in the Poor-law medical service and he find himself treated as regards pay and consideration as if he were a Bob Sawyer. The inadequacy of the pay of the dispensary medical officer has been set forth in various ways. For instance, it has been shown that in many districts if these medical officers were allowed merely the rate of car-hire given to other Government officials and no pay whatever they would be better off than they are now. To myself the condition of things was brought home very forcibly in this way.

[Mr. Tobin here quoted a case showing the superiority of the army medical service over the Irish Poor-law medical service even before the inauguration of the improved condition of the former. He went on :—]

Now, as regards the cause of the present quarrel—and indeed of all quarrels where the profession demands higher terms than the public are prepared to give—when we look closely into it we find that it is due to the fact that while we offer to the public certain high-class goods, not low in price but of excellent value, what they, the men in the street, want from us is a low class article that would be dear at any price. You who have been recently qualified or are about to be so have probably uppermost in your minds as regards your profession ideas such as the following. You find yourselves anxious to go on adding indefinitely to the knowledge you now possess, to put that knowledge at the service of the public for payment when you can, gratuitously when occasion demands, and whether for payment or no payment never to give anything but your best. But form what conception you may of your rôle in life you will find a large number of the public, a number daily growing larger, who have made up their minds as to what they will have of you and you will deny it to them at your peril. In the minds of such men the medical man seldom looms larger than one who prescribes a mixture, a pill, or a blister, to which armoury have of late been added Roentgen rays and tabloids. It has been so in the past; it is so to-day with the cultured as well as with the illiterate.

Let us take cases. We always study here from cases. Now if I ask you to look back through the last few centuries and to tell me what man stands out pre-eminently as a great block of sense I have no doubt most of you will answer Dr. Johnson. His wisdom is embodied in our household words. He stands great because he *was* great and because Boswell has preserved him for us in a living shape. It is a life one never tires of reading. Every first-year student should buy that book and, dividing it into parts, have it bound up with Birmingham's "Anatomy," Kirkes' "Physiology," and Tobin's "Synopsis of Surgery." For surely it is not by anatomy and physiology and surgery alone that a man grows wise—no, nor even by a study of Fraser's great work on the topography of the brain—but by keeping himself in touch, as far as he can, with the great men past and present in every branch of literature and of art. Well, anyhow, Johnson was a wise man except on the subject of medicine. Having had a "paralytic stroke" he writes to Mrs. Thrale as follows: "I suppose you may wish to know how my disease is treated by the physicians. They put a blister on my back and two from my ear to my throat, one on a side. The blister on the back has done little and those on the throat have not risen. I bullied and bounced (it sticks to our last sand) and compelled the apothecary to make his salve according to the Edinburgh dispensatory, that it might adhere better. I have now two on my own prescription. They also give me salts of hartshorn which I take with no great confidence. But I am satisfied that what can be done is done for me." Is not that true to life or rather to sickness? You see it is to the blisters as amended by himself, made according to the "Edinburgh dispensatory," that he pins his faith. These adhering he feels—oh! thrice blessed phrase—that "what can be done is done." That once said, whatever the result the physician walks out with his head in the air

That is Case 1. Now for Case 2 Once upon a time a young fellow just married bought a practice in a manufacturing district in England where I was quartered. He gave for it £1000, the fortune he got with his wife—being at the rate of one year's purchase. He was probably a St. Vincent's man, for he knew his work well and was full of enthusiasm and the highest ideals. At the end of 15 months he moved away with his wife but without her fortune. Asking the people amongst whom he practised the cause of his failure I was told that he was a humbug and that he knew nothing. Why, it was said "he would sometimes take a quarter of an hour to examine you, whereas the man he bought the practice from could see his job the moment he looked in your face." To be looked in the face and to get a bottle were all they wanted from their medical attendant.

The third case is more up to date. It presented itself while I was sitting a few days ago in a railway carriage, in the shape of one of [illegible] during the first pa[illegible] people present and people not present. For instance, he told a lady who said she had a child at home with a sore-throat to give him a tabloid, which she could get at any druggist's, of five grains of phenacetin and to repeat the tabloid in three hours when she would find all the symptoms relieved. After this he read for a time his evening paper and struck by something in it he turned to me and said: "Now, doctor, how do you account for the high mortality of Dublin?" Seeing me trying to hide a smile in my book he added: "It is no laughing matter, my dear fellow."

Now, gentlemen, if the Irish poor are to be treated simply with blisters that will stick, or with mixtures after they have been looked in the face, or with tabloids after they have described the nature of their disease, we are, I think, all agreed that the pay of the dispensary medical officer is sufficient for the occasion. But is this, then, the practice of medicine? It is not the practice of medicine as it was generally known in Ireland till we became infected with ideas from across the water. We are continually being told how they manage things better in England and how our system of medical relief pauperises the people. The facts are that unhappily a large number of our people *are* paupers or so poor that no decent man would expect a fee from them, but it was not the medical profession which made them so. Secondly, in no land does the medical profession stand higher or conduct its practice better than in Ireland. At a time when in England a medical practitioner had to take his way through the back door of his wealthy patients his fellows in Ireland were associating on terms of perfect equality with everyone in this land. Why is this? Simply because we have always treated, and the public have always encouraged us in treating, our rôle in life as a profession and not as a trade.

Now, what is the difference? Well, you will find one in the resolution which I took for granted just now was in the minds of each of our newly qualified men—viz, that whether for large fees or small fees or no fees at all he would never give anyone he prescribed for anything but his best. Now, this requires in most cases a full examination of your patient and a careful consideration of his case. There is a sum of money, it may be two guineas or one guinea or 5*s*., which taking into account your position, your necessary expenditure, and other things, fairly represents what has been done. If you take less you are inclined to scamp your work. I speak not absolutely but with the relativeness which applies to all things human. Well, so working always at your best you establish a habit; there is but one class of article in your shop and if a poor person comes along you give him either that article or nothing at all. The well-to-do public, at least the more enlightened of them, join with us in taking this view of the question. They see that they must suffer from any deterioration in our profession, that they are often benefited by the skill gained by those who practise amongst the poor, and this combined with less selfish motives makes them satisfied to pay fees not based on purely mercantile considerations. So there comes to be between the well-to-do, the poor, and the medical men a mutual helpfulness, the interchange of which constitutes the salt that saves us from putrefaction.

[Mr. Tobin here referred to counter prescribing as not necessarily objectionable and continued:—]

Now that motor-cars are about a better idea of things may become prevalent. When a man has spent three hours on his back looking up into the works of his car, taking it to pieces and putting it together again, and then walks sadly to the nearest railway station, the complexity of some machines, amongst which he may rank the human body, may dawn upon him, and with it may come an inkling that the human body cannot be properly attended to when out of order for a sum that a mechanic would refuse for almost any job. But as all have not motor-cars would it not be well if the profession were to formulate what it considers the province of a dispensary medical officer to be, and to hold up this definition before the public on every occasion? It is, however, no easy task to do so in a clear and simple way. In place of defining its limits it is easier to ask, whither do they not extend? What is it which does not influence our health? The air we breathe, the water and food we consume, the work we do, the sights we see, the games we play, everything which acts upon us comes within the scope of the medical practitioner. This is no vague generalisation but a hard practical fact. The cultured and well-to-do are, it is true, becoming educated in domestic hygiene, but it is not so with the poor. To limit the treatment of their ailments to a bottle of medicine is a mockery and a crime. The part therefore that the dispensary medical officer has to play is a very large one. He is many specialists in one. There is practically no limit to the good he can do if he is a man of sense, ability, and skill. It is his to guard against the occurrence of disease, to limit its spread, to help those attacked in their struggle with it, to raise the physique and to forward in every way the comfort and well-being of those committed to his care. This is no mean task and surely the man who is called upon to undertake it may put forward the three demands of the Irish Medical Association—viz, firstly, a competence (£200 a year) while he works; secondly, a moderate pension when he is no longer able to do so; and thirdly, a month's leave of absence every year in which to recuperate his health or to attend a post-graduate course so as to keep himself *au courant* with the advance of science.

At the outset of this address I remarked that the necessity to remedy the present condition of things is urgent. There is, however, another reason for pressing on with energy just now. It is that we have in office a Chief Secretary and an Under Secretary possessing, as we believe, the will and the ability to help us. Their records fill us with hope. How can we best lay our case before them? If only you, Mr. Chairman, could take them for a drive in a motor-car through the scenes of your early labours. It would be a pleasant tour, for it would be through many beautiful places, but it would also be a sad one, for at every turn there would be something speaking to thoughtful minds of present misery and neglected opportunities. The ruined cabins on the hillsides must awaken thoughts of the brave men born and reared in them and so of battles fought and battles yet to be, of a chain of emigration so much gone over the ship's side that one stands in dismay lest the whole should follow. With these thoughts uppermost you would naturally turn to see what was being done to preserve the remaining few. In the houses you enter there is not much of all that the twentieth century is proud of. On every side you see signs of disease spreading unchecked. The young maimed or dying from tuberculous disease, the old dying from cancer; lunacy on the increase; typhoid and typhus fever calling forth heroism and striking down those who display it. Perhaps in some cottage you may come across a dispensary medical officer doing what he can to cope with the difficulties. It may be a sore-throat which if not isolated at once would spread diphtheria or scarlet fever far and wide—one which my friend of the railway carriage would treat with five grains of phenacetin; or it may be a crippled child for whom a Thomas's splint is necessary. If the latter, the medical officer will be trying to collect 25*s*., the price of the splint. No doubt the Chief Secretary will give £1. Perhaps when you get outside he may ask, "Where will the other 5*s*. come from?" Be sure you tell him the custom of the country, "The doctor will give that himself," and do not fail to add, "and well he may out of his fine salary."

A dispensary medical officer: what a quantity, what a vast, unmeasurable quantity, of grand unselfish work is covered by that name. Here and there, it is true, are to be found a few careless and intemperate in many ways. The casual observer is impressed by them, he goes his way ignoring the hundred others who day and night are expending their best energies in the service of the poor. Some pathetic incident gives the general public a glance at this everyday life and they forthwith stand amazed at the heroism therein displayed. It does not detract from the honour of those who wear the Victoria Cross to say that thousands who have shown an equal bravery are going unregarded through life. Could we but resuscitate and have amongst us for this occasion the late Mr. William Smyth of Burtonport, how his manly heart would respond and glow with pride to my saying that the work he died in doing is being done in the same heroic way by practically every dispensary medical officer in Ireland whenever occasion demands. To how many a one could not we who know them apply the words of Browning inscribed on a tablet erected in Templecrone Church in memory of Mr. Smyth:—

"One who never turned his back, but marched breast forward,
Never doubted clouds would break,
Never dreamed, though right were worsted, wrong would triumph,
Held we fall to rise, are baffled to fight better,
Sleep to wake."

In saying this I am not indulging in mere verbosity. I am simply stating matters of fact. From the *Londonderry Sentinel* of August 25th I learn that at least Dr. Brendan MacCarthy, a man of whom we at St. Vincent's Hospital are justly proud and who worked with Mr. Smyth on the memorable occasion two years ago, is still marching as he had always marched, "breast forward." I read from that paper:—

> Dr. MacCarthy, addressing the guardians, said, as they were aware, typhus had reappeared in Arranmore. He was on the island last week and visited not only the houses in which the outbreak occurred but the houses upon which he had occasion last year to report unfavourably and he did not find any real improvement. Typhus fever was essentially a disease of dirt and overcrowding. It was the scourge of gaols and armies before the [illegible] of cleanliness and air space was understood. Typhus w [illegible] ace of the globe because it could not stand for [illegible] fresh air, and soap and water. But in different parts of Ireland [illegible] ouses were of an unhealthy description. The windows were not of a proper or sufficient size to let in God's [illegible] the floors were of clay, the roof defective, and the wal [illegible] was huddled and crowded in the house, and la [illegible] s, with which they were all familiar. Those wo [illegible] eeding typhus and naturally they had outbreak [illegible] very cause for such was there, and very plain [illegible] n, when there was such a loathsome and infectious [illegible] in the house, the priest or the doctor who went into that house did so at the imminent

risk of his life. But that same case could be visited and nursed with comparative safety if the fresh air and sunlight were allowed to come freely into the house and dilute the poison.

[After comparing the attention given by the State to munitions of war with its neglect of the individual man Mr. Tobin concluded as follows:—]

The all-importance of the issue and the lethargy of our rulers necessitate, and constitute the justification of, the attitude of the profession towards the Irish Poor law medical service. Not in the interest of the individual—though his lot, however inadequately set forth by me, is hard indeed—not in the interest of the profession, but in that of the public weal do I say to you: join the Irish Medical Association and, for the present at least, leave the Poor-law medical service alone.

Presidential Address

ON

SOME QUESTIONS IN SEASIDE CLIMATOLOGY.

Delivered at Westgate-on-Sea before the British Balneological and Climatological Society on Oct. 30th, 1903,

BY ALFRED F. STREET, M.A., M.D., D.P.H. CANTAB.

> "ὦ δῖος αἰθὴρ καὶ ταχύπτεροι πνοαί,
> ποταμῶν τε πηγαί, ποντίων τε κυμάτων
> ἀνήριθμον γέλασμα, παμμῆτόρ τε γῆ,
> καὶ τὸν πανόπτην κύκλον ἡλίου καλῶ."
>
> "[illegible]
> On you I call"

GENTLEMEN,—When I realised that one of the duties of the responsible office to which you have done me the honour of electing me would be the production of an address I decided that I would attempt to deal with some topic relating to the sea. For inspiration I consulted an eminent Fellow of the society and his reply was as follows: "I should consider the factors of a bracing climate, because yours is about the most pronounced specimen of the sort that I know." What follows will therefore concern certain questions which have long and deeply interested me with regard to the air of the north east corner of Kent in which I have the good fortune to live, air which the late Dr. Ord has called "singularly pure and invigorating," and which Dr. I. Burney Yeo tells us has "important tonic properties," a locality of which Dr. W. Ewart wrote that it has a soil drier than almost any other in England, which is the last to be visited by the storms which come to us from the Atlantic, which owing to the absorbent qualities of its soil has its land wind more than usually free from moisture, which enjoys almost the full advantage of the warmth of the Gulf Stream and in this respect excels the more northerly east coast watering places of Great Britain, and against which his only indictment is that it is "hyper-ventilated," for it is on record that the average number of calm days in the year is only 38. That close observer, the late Sir James Paget, said to me nearly 20 years ago that his experience was that many scrofulous patients would get well there when they would not get well elsewhere. He frankly admitted that he could not say what special property the air had but as to its effects he entertained no doubt, and though his claim may not be universally admitted that point may be waived.

[illegible] d I hoped to [illegible] has not come [illegible] -day point to facts which may to some extent explain the essential causes of differences of climate such as do not find full explanation by the barometer, the thermometer, and the other ordinary [illegible] For it has been very truly said [illegible] ke so there are no two places [illegible] The factors of climate are [illegible] distance from the equator; (2) the distance from the sea; (3) the height above the sea; and (4) the direction of the most prevalent winds. But this is only a very partial statement of the truth; for instance, it takes no cognisance of so potent a factor as the Gulf Stream to which we in these islands are indebted for the advantage that though London has the latitude of Labrador it has a far higher mean winter temperature. Nor does the statement that "weather spells climate" carry the whole truth, for there are many other factors in climate, at any rate in local climate, which after all is what chiefly concerns our patients. Besides such local influences as the Gulf Stream there are the configuration and inclination of the land; the character as to porosity or drainage of the soil; the presence or absence of vegetation, of cultivation, of plantations, or of forests; the degree of protection afforded by trees, by mountain ranges, or merely by higher ground in the vicinity; the density of population, the neighbourhood of manufactories and their nature, and so on. It would be *more true to say that* climate depends upon soil, air, temperature, moisture, solar radiation in all its many forms, and possibly on electrical and other even less known conditions. Can we make any notable advance towards that clearer insight which enables us to replace empirical by rational knowledge?

In considering the claims of any locality with reference to the cure of any disease the first question which presents itself is, to what extent the disease in question prevails among those born and bred in the locality? If we take scrofula as an example it must be conceded that the north-east corner of Kent, for instance comes out exceedingly well. Those who practise there find very little home grown tuberculosis and imported cases commonly do well. In the face of the prolonged experience of many careful observers extending over many years it would surely be unreasonable to deny the claims of various localities to be credited with various cures, and the further question arises as to what factor or combination of factors a particular locality owes its influence. We all know that in the case of a spa the popular answer is "to the waters" and in the case of most seaside places "to the air." When a visitor comes to the seaside it matters not whether he feels better or worse. The cause so far as he is concerned is "the air"; perhaps he calls it "the strong air." He does not know what he means by the epithet "strong" but it has the advantage of being capable of conveying either praise or blame. Indeed, one constantly finds it considered capable of producing diametri- [illegible] people. One has diarrhœa. [illegible] "the strong air." Another [illegible] his personal negligences [illegible] and so on. But we here have no concern with the vox populi; we seek for facts and for legitimate deductions from them and, finally, if possible, for explanations of them.

We cannot credit the air alone with antituberculous virtue, we must give due weight to sunshine and dryness of soil and to many other climatic factors. Relative humidity is a very thorny subject not now to be especially considered, but its importance may be judged from the calculation that every pound of water condensed from vapour liberates heat sufficient to melt five pounds of cast iron. Yet it does appear that there is in the air of certain localities a quality which cannot be expressed by chemical symbols and yet of which some of us are conscious. I cannot better express it than by the term "briskness," for it is not coldness, neither the coldness measured by the thermometer nor the other coldness so especially appreciated by the skin. It is felt by night as well as by day and is therefore not wholly dependent upon sunshine. It is most pronounced during the prevalence of winds which are not westerly and which have come from over the sea either directly or nearly so. It has been truly said that "each health resort is distinguished from all others by [illegible] its own," and the more closely [illegible] ore differences do we find beyor [illegible] of latitude and longitude; in fact, Professor A. Buchan declares that "we are only on the threshold of a rational inquiry into the true character of seaside climates." We are told by a writer in the last number of our journal that "few seaside places are really bracing," but he will not carry that proposition *nemine contradicente.*

Let us now consider how geographical position affects the physiological effects of air. Is there, for example, a greater percentage of ozone? Now ozone has long occupied a commanding position in this connexion but one of the objects of this address is to submit to you that ozone is, like many other prominent folk, an impostor. There is no question of denying its existence or of doubting its constitution, nor its willingness to part with its odd atom in the good cause of oxidation, but is there convincing evidence that it is produced in nature except during thunderstorms as was known to Homer by what he calls the smell of the thunderbolt? In a recent article Professor Abbé asserts that there is no such evidence. Yet its presence should be determinable beyond doubt since Hartley, Chappuis, and Schöne agree in saying that it has a definite absorption spectrum. Professor W. A. Miller wrote as follows: "The existence of traces of ozone in the atmosphere, probable though it is, cannot be said to have been unequivocally proved." Other observers have asserted that it is formed in nature in various ways. Thus M Peyron found that papers moistened with a solution of starch and iodide of potassium and suspended over a patch of growing lucerne acquired a deeper colouration than similar papers similarly suspended over a neighbouring plot of ground free from vegetation. Now this test was hopelessly discredited years ago, for it can easily be proved that such papers react to peroxide of hydrogen and to nitrous acid and to other bodies often present in the atmosphere, and that unless the iodide of potassium has been freed from iodate even the carbonic anhydride of the air in presence of water will discolour the paper. There is the further difficulty that the so-called iodide of starch is said to be volatile, especially in presence of much moisture, and, at any rate, ozonoscopes are found to fade on continued exposure. The fact is that no satisfactory test for ozone in air has yet established its position.

It is asserted that ozone is formed when electricity is generated by the friction of waves beating on rocks, it has even been asserted that it is formed during the combustion of carbon in air. There are many other tests for it, such as red litmus paper moistened with a solution of iodide of potassium, paper moistened with a solution of thallous hydroxide which it turns brown (probably peroxide of hydrogen does the same), or by one of manganous chloride, and in the laboratory chromic acid will decompose peroxide of hydrogen and not ozone, but this test has not been applied to the atmosphere.

Again, ozone may be distinguished from both peroxide of hydrogen and nitrous acid by the red colour which, according to Erlwein and Weyl, it alone gives with metaphenylene diamine in the presence of an alkali, but this, too, has not been used in the case of atmospheric air. From spectroscopic observations Schöne concludes that there is no more than a probability of its presence in the atmosphere, and Sir W. Ramsay, a great authority on subjects connected with the atmosphere, states in a recent work that "the occurrence of ozone in the air is still a matter of dispute." Yet most books on climatology not only confidently assert its presence but distinguish between places and seasons in which it is more or less prevalent. Thus we are told that there is more in mountain air than in sea air and *vice versâ*, and more in the spring than at other seasons, and more in forests than over plains, and one third more in air from over the sea than in that from over the land, and it is stated by Würster that it is formed by the action of sunlight on clouds and by silent atmospheric electrical discharges. Though the ozone produced by electricity in the laboratory is destroyed by heat this is probably due to the fact that the electricity has subjected it to strain and that it has thus been formed in excess of the equilibrium value for ordinary temperatures. Guntz believes that he has shown that the ozone formed by lightning is generated not by the electricity but by the heat which results from the electrical discharge, and Professor Nernst at the recent German Congress of Applied Chemistry has pointed out that owing to the enormously high temperature and great gravitational pressure the oxygen in the sun is probably wholly in the condition of ozone, and this view is borne out by the fact that being an endothermic body it becomes more stable the higher the temperature to which it is raised. So ready is ozone to part with its loosely attached atom and so universal is the presence of oxidisable matter in the localities where ozone is said to be produced that it is hard to understand how sufficient can escape destruction to enable us to detect its presence except perhaps by means of the spectroscope, for it is said that it is never present in greater quantity than 1 part in 700,000 It would indeed relieve us of many of our sanitary difficulties if ozone were produced by nature in large quantity.

Apparatus for the production of ozonised air in the sick-room is advertised by instrument makers, but apparently the demand for it, and perhaps also the utility of it, is not very great, for according to the late Sir B. W. Richardson even small percentages of ozone in inspired air cause inflammation of the respiratory tract, and it is possibly for this reason that it does not seem to have been considered advisable to add it to the oxygen which is manufactured for use in cases of pneumonia. Oudin asserts that the inhalation of ozonised air causes a rapid increase in the hæmoglobin of the blood, though he does not indicate how this is effected. In places where the difficulty of dealing with dead seaweed is insuperable it is locally said to exhale ozone, and I remember that on visiting a resort where the retreating tide exposed many acres of sewage-polluted mud I was asked to believe that the mud generated ozone. The so-called ozone of pine forests may be due to peroxide of hydrogen, but there is evidence that it is camphoric acid and not ozone at all.

In connexion with the claims of ozone there are those of peroxide of hydrogen to be considered, but we know scarcely more than that chemists have been aware of its existence in atmospheric air since it was discovered by Schönbein in 1840 He found that it was formed together with ozone during all the slow oxidation processes in course of which the latter is formed and also during its electrical production. It has no smell. It has been found by Clermont in most unexpected places—in vines, in lettuces, and even in tobacco juice. There are special chemical reasons for believing that it is present in the atmosphere, for Fenton has shown that tartaric acid in the presence of iron gives when exposed to air and sunshine the characteristic reactions of dioxymaleic acid, and he finds that sunshine and air may in this reaction be replaced by peroxide of hydrogen but not by ozone nor by nitrous acid, so that he very plausibly argues that peroxide of hydrogen is formed by the action of the sun on the air. But books on climatology disregard it and no one seems to have concerned himself about its influence whether climatological or physiological, though Meissner in 1863 claimed to have detected its constant presence in atmospheric air and Struve found it in water and in snow. There is not much probability that it will succeed to the reputation which ozone does not deserve, though such influence as it has is no doubt good, because like ozone it is always ready to hand on its extra atom of oxygen.

It has been supposed that the chloride of sodium diffused in the air by spray from the sea has a tonic effect but it seems hardly reasonable to think that a very minute quantity of a chemically inert body should have an important effect on the body which is permeated by fluids which contain it in plenty. Iodine and bromine have also been brought forward, but in what compounds and in what quantities we are not told, and considering the usual medicinal doses of their compounds the quantities possibly present in the air must be quite unimportant. A consideration of what is known of argon, helium, krypton, neon, and xenon shows them to be extraordinarily inert, for they are said to form no known compound and therefore to have no polarity. One is inclined to wonder if there is not here an exception to what is said to be the only undisputed maxim in philosophy—namely, "Natura nihil agit frustra"—but in the hands of Professor G. D. Liveing and Professor J. Dewar the spectroscope has shown that in the case of krypton at any rate the maxim still holds good, for krypton is probably responsible for one of the green rays of the aurora borealis. The same observers tell us that in the spectrum of the gas which separates from atmospheric air solidified by liquid hydrogen, and which has so far proved to be incondensable, there are a vast number of rays which are most brilliant at the violet end and which belong to elements hitherto unidentified. This spectrum suggests the presence of more than one unknown substance in the most volatile portion of the atmosphere Can there be here any gas of climatological or physiological importance? Is there a yet undiscovered element minute as it must be in proportion but potent in action? When we remember the wonderful properties of the most minute fragment of a compound of radium or the powerful physiological action of very small fractions of a grain of hyoscine or of adrenalin it is not impossible to think that an element or compound as yet unknown may be responsible for important therapeutic effects.

Professor Buchan tells us that the fundamental element of climatology is the temperature of the air. Only 50 per cent. of the total solar radiation due, so to speak, on a given area at the sea level ever reaches that area. Even when the sun is at the zenith the amount which arrives is very much less than 100 per cent. and by no means all of this is heat, especially as our atmospheric envelope is more transparent to the rays of shorter than to those of longer wave length Now the temperature of this air is one of the few things we need not argue about for it has been observed daily steadily and systematically for some 23 years by the indefatigable observers of the Royal Meteorological Society The maxima, the minima, the average, and many other data are on record, and the facts are that the average daily range is moderate (namely, 11 3° F), as that of every seaside place must be owing to the moderating influence of the sea, and that the average temperature equals that of London, partly no doubt owing to the fact that the sunshine average is over 20 per cent more at the former than at the latter place Owing to the influence of the Gulf Stream aided by the preponderating prevalence of south west wind the winter isothermal lines of Great Britain lie nearly north and south instead of east and west The isothermal line of January slants across England from Dover to North Wales and passes thence along the west coast of Scotland The greater frequency of barometric variations near the sea may tend towards the attainment of that perfection of organic life which is said to depend on the alternations of excitement and repose

There remains to be mentioned hydrogen which is undoubtedly present in our atmosphere , but for every gas there is an altitude at which as many molecules diffuse outward as inward in unit time, and recent physical deductions lead to the conclusion that such hydrogen as the earth exhales, so to speak, into its atmosphere from the pores of certain minerals leaves the extreme confines of our atmosphere on its way through interplanetary space to join the atmosphere of the sun, the gravitational attraction of the earth's mass being overcome by that of the sun, but even if it stayed with us it is not clear what physiological effects it would have except as a diluent of oxygen

Is there a greater percentage of oxygen in sea air than in land air? I know of no evidence that there is, though Dr Angus Smith found 0 92 per cent more than the average in the air of the Western Highlands, and though volume for volume there is of course more oxygen in sea air than in mountain air But if there be any such preponderance, however small, it would be likely to exert a stimulating effect, just as we know that a small decrease of the normal proportion of oxygen is depressing and it is certain that there are variations in the proportion of carbonic anhydride Thus there is less in exposed than in sheltered places and less in air from over the sea than in that from over land, more by night than by day, and more in summer and winter than in spring and autumn Just as it is not possible to predicate the therapeutic effects of a given water from a consideration of a laboratory analysis of it, so it is not at present possible to explain the difference in physiological effect between the apparently similar air of different places At one of the earliest meetings of this society Dr W V Snow very rightly told us that it was not so much to the composition of a water that we must look as to the results upon the patient that experience had shown could be obtained We must not neglect the teachings of experience only because we cannot explain them and this applies to air quite as much as to water, and we have to remember that the best chemical analysis would be eluded by a hitherto unrecognised element, and it is only recently that the very existence of several normal constituents of the atmosphere has been established Helium is an apparently inert element but is it certain that its presence and that of argon in the water of one of the Bath springs have no influence on the therapeutic effects of that water? Can it be certain that it is there merely in solution? If not it may in combination be capable of results as astonishing as those of some compounds of the typically inert nitrogen

Is it lawful to surmise that some as yet unknown element gives its peculiar character to the air of some localities or shall we find our explanation in the new and mysterious property introduced to us by Becquerel as radio activity? It is true that hitherto the chief sources of radium and polonium, the best known of the radio-active bodies, are minerals such as pitch blende and chalcolite and not the ocean, but Wilson has proved the existence of a radio-active substance in filtered rain water and in snow and hail, especially during a thunderstorm, and it is not destroyed by heating the containing vessel to dull redness Professor J J Thomson has extracted at least two radio-active gases of great density from many different deep well waters and has shown that their radio activity is different in kind from that of radium in that they render radio active a negatively electrified surface and not an unelectrified one Strutt finds radio activity to be widely diffused and that there is some in most metals Sir Oliver Lodge surmises that radio active emanations (the so called α rays) which are believed to consist of actual atoms of matter may proceed from many substances without our being yet aware of their existence Rutherford and Allen have found that a negatively charged body exposed in the air becomes radio active and they conclude that therefore there is some radio active substance in the atmosphere Sea water has not, it seems, hitherto been subjected to examination as to its radio active properties, but it is reasonable to suppose that in this respect it is more likely to resemble well water than surface water Before the discovery of radio activity Dr Julius Hann wrote "There can hardly be any doubt that there are still other modifications in the composition of the atmosphere which have some influence on the human organism but which have not yet received any attention"

May we expect [illegible] variations in the electrical [illegible] localities which Dr S E [illegible] nt? The mysterious and elusive character of electricity and magnetism tempts us to ascribe to them any characteristics which are apparently not otherwise explicable, just as the ancients invoked the aid of magic, and it may be that we shall find in them the answer to this problem, for undoubtedly some people are especially sensitive to abnormal atmospheric electrical conditions and it has been experimentally shown that strawberries ripen sooner and in greater numbers when grown under the influence of an electrical field A beneficial effect has been observed in the case of plants grown under one of the poles of a Wimshurst machine and this cannot be ascribed to ozone, which is formed chiefly at the positive pole, whereas the plants in question did best near the negative pole Elster and Geitel have arrived at the conclusion that free ions exist in the atmosphere and if this is so they may be of physiological importance Now we are told that the average amount of electrical force is least when the wind comes from a point midway between north and north-north west—that is to say, from a point midway between the true and the magnetic north poles—and yet this is the wind which seems to me to deserve more than any other the epithets brisk, bracing, and stimulating But Professor P G Tait writes that "our ignorance of the source of atmospherical electricity is singularly complete"

Let it be granted, then and granted I think it must be, that the atmosphere of some localities has special properties, and let it be admitted that we cannot at present express these properties in terms of any known element or force, then there arise two questions Firstly, in what circumstances are these properties therapeutically valuable? and secondly, can we in any way preserve intensify or diffuse [illegible] wer the first of [illegible] seems appo ite— [illegible] al conditions are of little moment apart from personal comfort.' On the other hand what patients would derive benefit from such a climate and for what patients would it be undesirable?

When we try to work out the answer to these questions we find ourselves in the position of the medical man who is called upon to prescribe a diet not for a disease but for a patient It is comparatively easy to prescribe for an abstract disease—that is what the text books do—but how difficult for a concrete patient and one, too who probably has strong and inconvenient leanings and antipathies or idiosyncrasies such, for example, as an unusual sensibility to diminished atmospheric pressure similar to the case of cats which, according to Dr Burney Yeo, cannot be acclimatised in certain localities of high elevation The determination of principles for the selection of climates is one of the most vitally important services which this society can render to our profession, for it is impossible to trust most of the hard-and fast rules which are offered for our guidance Is it not rather common to hear a patient say 'I was sent to such and such a place but I hated it all the time I was there,' or "I went and I did all the doctor told me to do and I came away worse than when I went." If not an *opprobrium medicinæ* this is at any rate an *opprobrium medici* and when we have taken off a large discount for the exceptionally foolish and the merely mistaken, is there not an appreciable residue? The public, of course, label places with the names of certain diseases just as they label consultants and there is a real difficulty before us when we try to avoid the same pitfall.

May we not rightly argue that owing perhaps to the strain and stress of modern existence and the constantly increasing proportion of town-dwellers there is more need for, and advantage to be gained from, a climate which is stimulant than from one which is sedative, from strychnine rather than from bromide of potassium? Dr. Burney Yeo maintains that sea air makes less demands upon the organism than does mountain air. A late president of the American Climatological Association describes sea air generally as a "sedative tonic" and he sums up as follows: "Considerations so many and so difficult enter into the fitting of an individual case to the particular climate that it would be a futile effort to prescribe special climates for special diseases." Nevertheless, we may say, as Dr. Leonard Williams has recently very forcibly said, that in the case of some diseases certain climatic combinations are to be avoided. There are constitutions in which a stimulant atmosphere produces a feeling of general discomfort and there are people who have idiosyncrasies with respect to climate just as others have with respect to drugs.

Now just as those who make the fewest mistakes in the prescribing of diet are those who consider the likes and dislikes and who know the ordinary mode of life of a patient, so shall we most successfully give advice in respect of climates if we carefully consider not only the name of the patient's disease but his climatological likes and dislikes. The man of open windows is likely to thrive best in stimulant air and the man who is sensitive to draughts may be better suited by a more sedative climate, for in some persons the automatic control of the vaso-motor system is clearly either undeveloped or too slow. Nor can we afford to lose sight of the great importance of aspect. How often it happens, especially in the spring, that there is one climate on the north side of a wall and another on the south side. There is no need to insist on the need of avoiding dry cold wind in cases where damaged kidneys are able to do only part of their duty or for pulmonary cases enfeebled by prolonged suppuration, nor does anyone in England need to be reminded that one cannot in England reckon on summer weather in summer time nor, indeed, upon winter weather in winter time. Most children are the better for a stimulant climate and of the people best suited by a sedative climate a large proportion are aged.

My second question is soon answered. "Man," it has been truly said, "cannot change the weather by any device yet suggested," not even by American methods of rain production, yet he does affect climate by removing trees (for vegetation increases the humidity of the air, though not the actual rainfall) and by drying the soil by works of drainage, or by supplying it with water as by means of the Assouan dam, and by the cultivation of previously barren spots. We can preserve the life-giving properties of our air by cultivating the highest ideals in sanitary matters. It is of little use to live at the seaside with shut windows and in air used up by overcrowding and fouled by dust and by pestilential sewers and filthy dustbins, and it is universally admitted, or should be so, that a dry subsoil and clean underground air are essential to high sanitary excellence. Parasitic microbes grow most readily in warm, moist places and it has been calculated that in the course of a single day a man inhales 10,000 litres of air, so that determinations of the number of living micro-organisms present in the atmosphere at the ground level at once assume great importance. Now it has been shown on the one hand that an adult in Manchester inhales in the course of ten hours 37,000,000 microbes and that in London there are present from 80,000 to 210,000 solid particles in each cubic centimetre of air, and on the other hand that in the air of the Western Highlands the corresponding number is only 16. In these respects a great responsibility rests upon our profession, the responsibility of helping to educate and to influence not only our patients as such but all who hold office in the public bodies by which we are more or less misgoverned.

Finally, I would ask you to assent to this proposition. The places in our islands which enjoy most often a pure and *stimulating* atmosphere are those the air of which comes most often from over the sea. The more directly it comes from the sea and the longer it has been away from land the more pure it is. Its stimulating properties depend partly upon its relative humidity, partly upon its temperature, and partly upon factors not yet thoroughly understood. "I speak as unto wise men, judge ye what I say."

A Lecture

ON

PATENT MEDICINES.

Delivered at the London Hospital Medical College on Nov. 10th, 1903,

By ROBERT HUTCHISON, M.D. EDIN., F.R.C.P. LOND.,

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GENTLEMEN,—On a previous occasion I have considered with you the merits—and also the demerits—of the various patent foods and I have asked you to meet me to-day in order that we may study together the kindred subject of patent medicines. I have done so because I feel strongly that this is a subject upon which you ought to be informed. You will be expected by your patients to give opinions on these preparations and your opinion cannot be an intelligent one unless you know something of their composition. And if it should be your duty, and in my judgment it often will be your duty, to condemn patent medicines, you must be prepared to give a reason for the want of faith that is in you. That must be my excuse for burdening you with yet another lecture.

The first question we have to ask ourselves in approaching this subject is, what is meant by a patent medicine? How should one define the term? Now in the legal acceptation of the word a patent medicine should comply with two requirements. It is laid down in the law of the subject first, that it must be a genuine original invention; and, secondly, that a complete description of it must be filed at the Patent Office so as to be easily obtainable by the public. I need hardly say that neither of those requirements is fulfilled by the majority of the preparations to which the term "patent medicine" is applied. If you consider the former—namely, that the preparation must be a genuine original invention—I have merely to read you an account of some patent medicines that I have collected from the records of the Patent Office to show you to what extent such a description is applicable. I find, for instance, that in July, 1892, a patent was taken out for a specific for the alleviation of asthma or bronchial affections, of which the following is the recipe: "Steep crushed eggs in lemon juice so as to dissolve the shells, add some rum and strain." That may be an original invention, gentlemen, but whether it is likely to be curative of asthmatic affections I think is extremely doubtful. In October, 1890, a medicine was patented for the cure of pulmonary affections which is directed to be made by mixing one gallon of extract of cloves, a pound and a half of honey, and one pound of brown sugar-candy. In February, 1895, a certain Mr. Richardson showed great originality by taking out a patent for a medicine for the cure of rheumatism, which consisted of a mixture of sodium salicylate and water. I need not trouble you with further examples other than to mention the original idea of the gentleman who took out a patent for some pills which were to counteract the effect of taking too much alcohol, the pills consisting of powdered coffee. So much for the first of these requirements, that it shall be a genuine original invention. And I need hardly point out to you that the second requirement—namely, that a full description shall be published so as to be readily obtainable by the public—is one which is not likely to be observed in practice. For obvious reasons it is one which would hardly commend itself to the average patent medicine vendor. Hence it is that the majority of so-called patent medicines are not so in the legal sense at all; they are much better defined as secret remedies or nostrum (from the Latin word which means "belonging to us alone"), and I would remark in passing that this word "nostrum" breathes a spirit which is entirely opposed to what is one of the finest traditions of our profession—namely, that if anyone discovers a method of treating a disease which he believes to be new and successful he publishes it at once for the benefit of the profession at large. That is entirely opposed to the meaning of the word "nostrum," and that is where we, the legitimate healers of the public, come into direct conflict with the spirit which animates the charlatan or quack. I think, indeed, that it would not be unfair to decribe most of the preparations of which I shall have to speak as "quack" remedies. On referring to a standard dictionary I find that a quack is defined as "one who cries like the common domestic duck," "one who makes pretensions to knowledge, particularly medical knowledge, which he does not possess." And I think it is not unjust to apply such a description to most of the people who sell the so-called patent medicines.

I turn next to consider the question of the stamp duty which is levied on patent medicines. In the year 1783, when the Exchequer was depleted after the war with the American colonies, the then Chancellor of the Exchequer looked around for sources from which to raise revenue, and he decided that patent medicines would be legitimate objects of taxation. Carrying out that idea a tax was levied by means of a stamp placed upon the bottle or box, and many of the preparations which I have upon the table show such a stamp. The ignorant part of the public naturally supposed that anything which bore a Government stamp must be something of peculiar value and presumably genuine, but it was not until the year 1885 that an effort was made to dispel that idea by printing upon the stamp the words, "No Government guarantee" Whether this addition has succeeded in its intended object is, however, more than doubtful. Such is the history of the introduction of the stamp duty on patent medicines and nostrums Recently the Board of Inland Revenue has recognised that a number of preparations are escaping the payment of the stamp duty and it has tried to spread wider its net and to make such preparations pay duty also, for there has always been a degree of uncertainty as to which were taxable. In a recent decision by Mr. Justice Wills[1] it was laid down that remedies which are taxable are those which are recommended for the cure of any particular ailment. If, for instance, a man sells a box of pills labeled "antibilious pills" that thereby renders the box liable to stamp duty, because the word "antibilious" means that the pills are intended to cure the particular condition known as biliousness. On the other hand, with that extraordinary want of logic which often characterises things legal, such a mixture as "soothing syrup" is exempt from duty because it does not specify exactly what it is intended to soothe The same is true of "tonic mixture," because no indication is given of what it is designed to tone up. That is at present the law on the subject, so far as I understand it. I do not anticipate that this extension of the duty to preparations which are intended to cure particular diseases will do much to discourage the use of patent medicines, but it will certainly add to the revenue obtained by their sale; and one is surprised in these days of tariff reform that the makers of patent medicines do not form a "Free Medicine League" and advocate the entire removal of duties from patent medicines, pointing out to the public the advantage of the large medicine bottle as opposed to the small!

Such being the history of the tax on patent medicines we may next look at their composition. I have placed in your hands a sheet which represents the approximate composition of a considerable number—but not by any means all—of the better known patent and proprietary preparations or nostrums. I wish it to be clearly under-tood that my analyses make no pretence to perfect accuracy. The analysis of many of these preparations, particularly such as are of vegetable origin, is often a very difficult matter and it has been found impossible to give quantitative results I believe, however, that I have succeeded in representing the active constituents in most, if not all, cases.

APPROXIMATE INGREDIENTS OF VARIOUS PATENT AND PROPRIETARY PREPARATIONS.

Aperient and Liver Pills.

Beecham's Pills—Aloes, ginger, and soap.
Baillie's Pills.—Aloes, colocynth, oil of cloves, and soap.
Bile Beans—Cascara, rhubarb, liquorice, and oil of peppermint, coated with gelatin.
Cockle's Pills and Barclay's Pills—Aloes, colocynth, and rhubarb
Carter's Little Liver Pills.—Podophyllin (one eighth grain) and aloes soc. (one-third grain) in each pill.
Dixon's Pills.—Taraxacum, podophyllin, jalap, and soap.
Holloway's Pills—Aloes, rhubarb, saffron, Glauber's salts, and pepper.
Page-Woodcock's Wind Pills—Aloes, oleum carui, and soap.
Scott's Pills.—Aloin and cascara with a soap basis.
Whelpton's Pills.—Rhubarb, aloes, ginger, pulv. ipecac., and soap.

Saline Aperients.

Eno's Fruit Salt.—[illegible] of potas- [illegible] phate of magnesium, and sugar.

Cough Mixtures and Lozenges.

Congreve's Elixir.—Benzoic acid, infusion of elderberries, alcohol, and allspice.
Keating's Cough Lozenges—Ipecac., lactucaria, squill, liquorice, tragacanth, and sugar.
Owbridge's Lung Tonic.—Balsam of tolu, oil of aniseed, and oil of cloves
Balsam of Aniseed—Contains aniseed and other ingredients with one-tenth of a grain of morphia in every ounce

Preparations for Gout and Rheumatism.

Eade's Pills.—Salicylate of sodium, guaiacum, and aloes.
Gloria Tonic—Colchicum, guaiacum resin, and iodide of sodium.
Blair's Gout Pills.—The active ingredient is colchicum.

Preparations for Headache and Neuralgia.

[illegible] cannabis [illegible] of tolu, and alcohol.
Kapuline.—Antifebrin and sugar (coloured).
Kay's Tic Pills.—Sulphate of iron, quinine, and soap.

Preparations for Asthma.

Crevoisier's.—Belladonna, foxglove, stramonium, sage, and nitrate of potassium in equal parts.
Hair's Cure.—Iodide of potassium and tar water.
Plant's Cigarettes.—Leaves of stramonium, lobelia, and green tea.
Tucker's Cure.—Atropine, cocaine, hyponitrous acid, and various balsamic extracts, administered by means of an aeriser.

Remedies for Obesity.

Trilene Tablets.—Sugar and a vegetable constituent of unknown nature.
Grey's Specific—Contains 47 2 per cent of free sulphur and a bitter (? gentian)
Mrs. Frost's Anti Obesity Remedy—The active ingredient is extract of fucus vesiculosus.
Russell's Anti Corpulent Cure.—Citric acid (20 grains to half an ounce), glycerine, and water. The Pink Tablet = saccharine.

Miscellaneous Preparations

Bucr's Piles Cure—Ointment Gall and hamamelis with lanoline basis Powder: Precipitated sulphur and carbonate of magnesium.
Californian Syrup of Figs.—Senna (active constituent), syrup of figs, [illegible] (liver pills) [illegible] coated (back- [illegible] benzoin). [illegible] of gentian and chloroform water
Dalby's Carminative—Pulv. rhei, magnes. carb., glycerine, sugar, [illegible] potas- [illegible] chloroform water
Pink Pills—Sulphate of iron, an alkaline carbonate, and liquorice, [illegible] grains to the [illegible] anethi, sugar, [illegible]

Drink Cures

Mrs. Terry's.—Sugar (98 per cent.) and salt (2 per cent).
Antidipso.—Chlorate of potash and sugar.

For convenience I have divided the various preparations which I have examined into different groups. The first comprises the aperient and liver pills which are amongst the most largely used of all patent medicines. The popularity of this group is a sign of the immense prevalence of chronic constipation and all its attendant ills. You will observe that most of these pills contain aloes as one at least of their active ingredients. Now aloes has, as you know, been long recognised as a useful habitual laxative and to most of the members of this group no objection can be raised on the ground of composition. Many of them are skilfully compounded and undoubtedly possess the aperient action to which they lay claim, but I need hardly point out that prevalent though constipation is it is by no means the only possible cause of all the symptoms which most of these preparations are supposed to be able to cure. The saline aperients are all effervescent preparations consisting of bicarbonate of soda on the one hand and tartaric acid or citric acid on the other. They are "elegant" and pleasant saline laxatives—only that and nothing more. The most striking point about the cough mixtures is that their makers have recognised what we, I am afraid, are sometimes slow to recognise—that most coughs are due to irritation of the pharynx and not to affections of the bronchial tubes. In most of them, therefore, the "demulcent" constituents predominate. That they are well adapted to relieve a pharyngeal cough need not be doubted, but that they can exert any curative influence in such a disease as phthisis is, of course, a mere delusion. The preparations for gout and rheumatism present one point of special interest. Colchicum and salicylate of sodium one is not surprised to find in them, but I confess that I was rather surprised to find that two of them contained guaiacum. And yet I believe the makers are right. Guaiacum is a drug which has probably fallen too much into disuse amongst ourselves. At all events, speaking from my experience in the out-patient room, I can confidently say that I have often found it afford great relief in chronic gout and in the so-called chronic rheumatism of old people. The preparations for headache and neuralgia are mostly of recent introduction and depend, to a large extent, upon a judicious exploitation of the virtues of the coal tar derivatives. The indiscriminate use of some of these is certainly not devoid of danger. Remedies for asthma have long been popular with the patent medicine vendor, and some of them, it must be admitted, have attained a wide and not undeserved reputation. I have indicated the composition of a few typical specimens, the composition of which, however, is already pretty well known.

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[1] *Times* Law Reports, No. 22, vol. xix.

The obesity preparations have given me more trouble than any of the others. In the case of some, at least, I was entirely unable to discover the exact composition. I fully expected to find that some of them would contain thyroid extract but in that I was disappointed. One of them consisted mainly of extract of fucus vesiculosus (bladder-wrack) which has long been believed to have a tendency to diminish stoutness, though its claims rest on no very strict scientific basis. Another consisted chiefly of citric acid, which is interesting when one remembers the popular belief that sucking lemons makes one thin. As regards several of the others I confess to being puzzled. This only I must say in fairness, that I had the curiosity to write to some of the people who had supplied testimonials to the makers of these remedies and found that, so far as I could discover, the testimonials were genuine and that those who supplied them believed at least that their weight had been reduced by the medicine. I can only say that I wish I knew of any remedy which could be counted upon safely to reduce weight in the absence of any change of diet.

Under "Miscellaneous preparations" I include a number of interesting and widely known nostrums of which, however, I have not time to speak in detail. This only I would point out, that a preparation which depends for its activity on iodide of potassium cannot be described as harmless; nor is one which contains considerable quantities of nitrate of potassium in any true sense "safe." Of "drink cures," perhaps the most objectionable product of the quack, I have examined only two. Their composition, unless I have entirely overlooked some other ingredient, is more eloquent than any words of mine could be. I would only say that in each case the preparation is intended to be given as a powder smuggled into tea or coffee without the patient's knowledge and is alleged to remove the craving for alcoholic drink and that for 24 little packets of the former I had to pay 5*s*. Oh, the eternal gullibility of the British public!

If, then, gentlemen, as the analyses have shown, these preparations contain nothing new and nothing mysterious why is it that they are so popular and that the revenue from their sale amounts to no less a sum than £300,000 per annum? I think, in the first place, that this popularity points to the existence of a great deal of minor illness for which people do not think it worth while to consult a medical man. To this I do not see that we have any reason to object because we cannot hope to possess a monopoly of attempting to cure people. It is open to anyone who thinks he can do it to try to cure somebody else if that person is foolish enough to allow him to try his hand; and so long as diseases exist people will try to find remedies for them without the intervention of the medical man. That one must admit. But apart from that I think there is a subtle psychological reason for the success of patent medicines. None of us like to confess that he has failed in the treatment of a case and that is specially true of the man who tries to cure himself. A patient buys a bottle of patent medicine and becomes his own physician. If he gets well he is immensely pleased with himself and at his discrimination in selecting (as he thinks) the proper remedy and he goes and tells his friends what a clever fellow he is. But if he fails and feels no better as a result of the purchase he says nothing about it. Hence the successes of patent medicines get talked about and their failures are buried in obscurity. By far the chief reason, however, of the success of patent medicines is, as I need hardly point out, persistent and audacious advertisement. The extent to which such advertisement is carried is almost incredible. Even in the middle of last century, which was before the great days of advertising, the patent medicine people were early in the field. It is said that when Dickens was at the height of his fame a firm of patent medicine makers offered him £1000 if he would mention their pills in one of his novels. He declined. When this was told to Thackeray he said that it was foolish to refuse, for he could have pocketed the cheque and killed off the villain with an overdose of the pills!

The subject certainly has its humorous side, but of many of these advertisements it is difficult enough for us who know the facts of disease to speak in temperate terms. It seems to me monstrous that people should be allowed for their own ends to produce in the public mind a true pathophobia or exaggerated dread of disease, to raise false hopes in the unfortunate sufferers from incurable maladies, and to obtain money from those who can often ill afford it by holding out illusory promises of cure. If people assert, for instance, that pills containing sulphate of iron and bicarbonate of potash will cure tabes, or that pain in the back is frequently a symptom of renal disease, they are saying a thing which is not true, and if they sell a remedy on that basis then if that is not getting money under false pretences that phrase has lost its meaning. Against such a state of things we ought as a profession to protest. The time is ripe, indeed, it is over-ripe, when we ought to make some organised effort against it and I look forward to the day when there will be appointed a committee or official body of some sort, representing, say, the British Medical Association or the General Medical Council, whose business it will be to inquire into the composition of these so-called remedies and to expose them. I do not think it is right that this should be left to the initiative of private individuals; it is a matter which concerns the profession as a whole. I am afraid, however, that the time is still far off when that will come about and in the meantime we must all do what we can in our private capacity to fight this evil. I believe, gentlemen, that there are two ways in which we can do so. First of all we must educate the public. After all, people still look to us, and rightly, to inform them about these as about other matters relating to their health. If necessary, we may have to educate the public in the elements of physiology so that they will realise what at present they seem incapable of realising, that the same set of symptoms may be produced by many totally different diseases, and will distrust the man who claims to have some panacea which will immediately effect a cure no matter what may be the cause. But if we are going to begin such a process of education we must begin at the top. Believe me, quackery is not confined to any particular section of the community; it would be entirely wrong to suppose that it is found simply among the more ignorant classes. It is as rife, nay, I venture to say it is more rife, in Belgravia than it is in Bethnal Green. The upper classes, the so-called cultured classes, have a belief in patent medicines and quackery generally which is almost incredible. And if we are ever to get legislation on the subject we must begin by educating our legislators.

The other weapon for fighting this evil we already have in our own hands. It ought never to be possible for a patent medicine vendor to say with truth that he has succeeded in curing a case where a medical man has failed and if he is to be unable to say that it means that we must give more attention to the treatment of disease, and particularly the treatment of minor ailments, than I think we do at the present time. You who are here have the opportunity in this great hospital of studying scientifically the diagnosis and treatment of disease and I ask you to use it well

I take blame to myself that one does not always explain the treatment of cases in the wards as carefully as one might, perhaps because there is so much else to do. But in the out-patient room here you have an immense material for study, embracing examples of every form of disease. See to it that yor gently and wisely, and if that when you go out int to fear the competition of the charlatan and the quack.

ON ALBUMINURIA AS AN ACCOMPANIMENT OF DIABETES MELLITUS.

BY F. W. PAVY, M.D. LOND., LL.D. GLASG., F.R.S.,
CONSULTING PHYSICIAN TO GUY'S HOSPITAL.

ALBUMINURIA has long been recognised as a frequent accompaniment of diabetes but widely different estimates of the frequency of the association have been given by different authorities. It is not surprising that this should be the case as grounds exist upon which variability may arise. Much depends upon the closeness and the exactness with the albumin is looked for. Much also depends upo length of time attention is given to the case that is the subject of observation and upon the class of case that is dealt with. Should the record be founded only upon one or two observations the absence of albumin might have to be reported, whilst if the observations had been carried on over a lengthened period its presence might have to be entered in connexion with the case. Cases also in an advanced stage of the disease are more likely to be attended with associated albumin than those belonging to an earlier period. It may be considered sufficient to say that albuminuria without any doubt constitutes a notably frequent accompaniment of diabetes. No useful purpose is served by going further. The frequency of the association is such as to preclude its constituting a merely incidental phenomenon and it is not permissible to do otherwise than conclude that there must be a connecting link between the two. Diabetics are not exempt from the supervention of other maladies as independent affections and, no doubt, albuminuria sometimes holds this position in connexion with diabetes, but it is inconceivable that it can do so in more than a minute proportion of the instances that present themselves. If we look at the cognate disease—diabetes insipidus—we do not meet with the supervention of albuminuria in the manner we do with *diabetes mellitus*. There is an absence of a factor which may be regarded as of prime importance—viz., the abnormal transit of sugar through the system.

Before proceeding further with the subject matter to be dealt with I will take the opportunity that is here presented of offering some remarks upon the clinical examination of the urine and of giving the results of my own experience upon the point. At a former period I entered closely into the question of the relative merits of the various tests for urinary albumin and came to a conclusion which time has only served to strengthen. Innumerable tests have been proposed and fresh ones continue still from time to time to be suggested. Only a few can lay claim to eligibility when looked at all round and amongst these the ferrocyanic test occupies, I consider, a first place in most satisfactorily meeting what is wanted. For many years it has been employed as my ordinary test and experience therefore enables me to speak with precision about it. In chemical works it is highly commented upon as a delicate and reliable test for albumin. Acetic acid and the ferrocyanide of potassium are the agents ordinarily employed. In applying the test to the urine the acetic acid in small quantity is first added and then the solution of ferrocyanide of potassium is dropped in. Ferrocyanic acid is liberated and if albumin is present a precipitate appears. The test ranks as one of the most sensitive known and at the same time one the reaction of which is least likely to lead to a fallacious conclusion. There are certain principles, nucleo-proteids (including mucin), uric acid, and oleo-resinous matter from drug administration, that are liable to be thrown down by any acid, no matter whether organic or inorganic, and these may appear as a precipitate from the ferrocyanic test; but no real difficulty is here encountered, all that is necessary to guard against fallacy being to use the acetic acid first and to take note before using the ferrocyanide if any sign of precipitate appears. If a precipitate does appear it cannot consist of albumin. It is only the precipitate that falls as a result of the addition of the ferrocyanide that does so. If any doubt exists comparative testing may be had recourse to in a couple of tubes, one with the acetic acid alone and the other with the acetic acid and ferrocyanide. It frequently happens that nucleo-proteid and albumin are present together. When this is the case the nucleo-proteid is thrown down in the tube with the acetic acid alone and the albumin is revealed by the extra amount of precipitate noticeable in the tube where the ferrocyanide is present. I consider a great advantage belonging to this test, in addition to its other qualities, is the avoidance it affords of the employment of anything of a corrosive nature like, for instance, nitric acid. Further, the test is susceptible of being put into the portable form of pellet. Many years ago Mr. Cooper, of 66, Oxford-street, at my suggestion, made these pellets for supply to the profession and they have ever since been sold by him. The citric takes the place of the acetic acid for one pellet and the other pellet consists of the ferrocyanide of sodium, this being used on account of its giving a product which dissolves with much greater facility than the potassium salt. In the n, in which it is always con- is necessary is first to drop dissolve, and then to drop in the other and similarly shake and dissolve, when the result becomes at once apparent. By the lamina method of testing a recognisable indication may be afforded when none is perceptible with the ordinary mode of procedure. This test lends itself well to this mode of application. A few of each of the pellets are dissolved in a small quantity of water in a test-tube so as to produce a concentrated solution, on to the top of which the urine is trickled down. The faintest amount of albumin is in this way brought into view by the lamina formed at the line of contact of the two liquids, and with the ferrocyanic test an indication may be perceived when none is discernible with nitric acid used in a similar way, on account of the obscuring effect of the colour that may be developed in the latter instance.

Since the introduction of the centrifuge the microscopic examination of the urine has been placed upon a much more satisfactory footing than it held previously. It is certainly a great advantage to be able to carry out the chemical and microscopic examination of urine at the same sitting as can now be done. Centrifuging for seven or eight minutes is found to suffice for fully meeting what is wanted. Whilst the hand machine may be made to serve the required purpose where no other power is available, much tedium and labour are saved by the adaptation of water or electric power. Two or three years ago I obtained from Messrs. R. and J. Beck, of 68, Cornhill, a centrifuge worked by an electric motor connected with the house electric supply and nothing could be desired to answer better. I should say from my experience that besides the advantage afforded in relation to convenience the centrifuge gives greater reliability to the examination than is otherwise attainable.

In albuminuria as a concomitant of diabetes the amount of albumin is ordinarily not large; indeed, more frequently than not only quite small. An appearance is sometimes given of an increase occurring with the decrease of sugar arising from the effects of treatment. It may happen when a case first falls under observation that only a slight indication of albumin is perceptible. Later a much more pronounced precipitate is noticeable. With this, however, the urine has become diminished in amount, and here lies the explanation of the apparent increase. In proportion to the decrease in the amount of urine so is the apparent increase in the amount of albumin. It stands as a result of lessened dilution.

As I have said, experience shows that albuminuria is of notably frequent occurrence in association with diabetes. From this it may be taken that some condition or other connected with diabetes tends to affect the kidney and to lead to the production of albuminuria. It does not, however, follow that in all instances this is the case. Albuminuria may become developed in the diabetic from the causes that lead to its development in the non-diabetic and thus constitute a purely independent affection. In this way we may have albuminuria on the one hand occurring simply as a concurrent malady, and on the other as a consecutive phenomenon attributable to the diabetes. As a rule, a supposed to be able to cure. The saline aperients are all effervescent preparations consisting of bicarbonate of soda on the one hand and tartaric acid or citric acid on the other. They are "elegant" and pleasant saline laxatives—only that and nothing more. The most striking point about the cough mixtures is that their makers have recognised what we, I am afraid, are sometimes slow to recognise—that most coughs are due to irritation of the pharynx and not to affections of the bronchial tubes. In most of them, therefore, the "demulcent" constituents predominate. That they are well adapted to relieve a pharyngeal cough need not be doubted, but that they can exert any curative influence in such a disease as phthisis is, of course, a mere delusion. The preparations for gout and rheumatism present one point of special interest. Colchicum and salicylate of sodium one is not surprised to find in them, but I confess that I was rather surprised to find that two of them contained guaiacum. And yet I believe the makers are right. Guaiacum is a drug which has probably fallen too much into disuse amongst ourselves. At all events, speaking from my experience in the out-patient room, I can confidently say that I have often found it afford great relief in chronic gout and in the so-called chronic rheumatism of old people. The preparations for headache and neuralgia are mostly of recent introduction and depend, to a large extent, upon a judicious exploitation of the virtues of the coal tar derivatives. The indiscriminate use of some of these is certainly not devoid of danger. Remedies for asthma have long been popular with the patent medicine vendor, and some of them, it must be admitted, have attained a wide and not undeserved reputation. I have indicated the composition of a few typical specimens, the composition of which, however, is already pretty well known.

The obesity preparations have given me more trouble than any of the others. In the case of some, at least, I was entirely unable to discover the exact composition. I fully expected to find that some of them would contain thyroid extract but in that I was disappointed. One of them consisted mainly of extract of fucus vesiculosus (bladder-wrack) which has long been believed to have a tendency to diminish stoutness, though its claims rest on no very strict scientific basis. Another consisted chiefly of citric acid, which is interesting when one remembers the popular belief that sucking lemons makes one thin. As regards several of the others I confess to being puzzled. This only I must say in fairness, that I had the curiosity to write to some of the people who had supplied testimonials to the makers of these remedies and found that, so far as I could discover, the testimonials were genuine and that those who supplied them believed at least that their weight had been reduced by the medicine. I can only say that I wish I knew of any remedy which could be counted upon safely to reduce weight in the absence of any change of diet.

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Looking upon the toxicity of the sugar traversing the system as the prime factor at the bottom of the albuminuria it should follow that more or less relationship between the two should be traceable, and such, from a broad point of view, it may be said, *is found to be the case* At the same time, however, there is sufficient diversity in particular instances to show that there must be some other factor playing a part in connexion with the matter and it may be presumed that the constitutional predisposition, as in other circumstances of an allied nature, contributes a share in the determination of the result We know that predisposition is capable of exerting a *marked influence in connexion with disease*, and it is conceivable that with the sugar in the system acting as the prime cause a modifying influence may be exerted upon the result by the constitutional disposition existing The following cases illustrate the amount of diversity that may be met with

Although not usual it may happen that albumin soon shows itself after diabetes has set in Much as regards this depends upon the character of the case with respect to severity In a case (a man, aged 26 years) which had set in sharply and suddenly two weeks previously and which was attended with very acute symptoms the urine, besides being highly charged with sugar and giving a reaction with the ferric chloride test contained a trace of albumin In a female patient, 35 years of age, after the existence of diabetes in an uncontrolled and severe form for six months, traces of albumin with hyaline casts were *found in addition to diacetic* acid and the *sugar* In a boy, aged 13 years, after diabetes had existed acutely for nine months, the urine contained traces of albumin accompanied with granular casts The acetone series of products were present in large amount in association with the sugar *In a young man, aged 23 years*, when first seen by me a year and nine months after the onset of the disease in an acute form, the urine, besides sugar and the acetone series, contained a faint trace of albumin and revealed the presence of hyaline and granular casts In another case, that of a woman, aged 43 years, when *I* first saw her on April 8th, 1903, the urine to begin with was free from albumin but contained a large quantity of sugar Diacetic acid and acetone were also present From the history given her diabetes had presumably existed about nine months The patient possessed an anxious temperament and notwithstanding some improvement at first she *failed* afterwards to make satisfactory progress Up to August the urine was free from albumin but in October it contained a trace accompanied with granular and hyaline casts

In the chronic class of case the diabetic condition may run on for a long time before albumin appears if it does so at all Much depends upon the extent to which the sugar is kept down and if not kept within moderate bounds sooner or later albumin may be expected to appear When a case is persistently and pretty closely watched it is often to be noted that when albumin has commenced to show itself it is found for awhile to be at times discoverable and at other times not, before it becomes continuously present The following cases may be cited to show the kind of course that may be witnessed to be taken

CASE 4 —The patient was a woman who was 64 years old when first seen by me She had been the subject of diabetes for ten years At first she made satisfactory progress and there was then no albumin to be found in her urine After

under and in

itself After

etimes not it

became persistently present in small amount A brother of *this patient has also* been under my care for diabetes I first saw him in May, 1894 at which time he was 64 years of age His disease has been fairly kept under control and his urine had not, up to May, 1903 given any indication of the presence of albumin

CASE 5 —The patient, a man, was first seen by me on Sept 29th, 1885 He was then 48 years of age His disease was of recent and mild onset and for a long time there was no difficulty in keeping the urine free from sugar by moderately careful attention to diet He even regained carbohydrate assimilative power sufficient to enable him to take as freely of ordinary bread as he desired without passing sugar *Later* a retrogression occurred and a reduction of the amount of bread was required to prevent the appearance of sugar in the urine This reduction was not always carried out and sugar became more or less constantly present in the urine In these circumstances the decline of assimilative power advanced and in the course of time the urine always contained sugar, and sometimes a large quantity when much dietetic deviation, as happened now and then, occurred In this way matters proceeded till 1899, 14 years after the patient's first visit to me, when a little albumin became discoverable in the urine In 1900 diacetic acid became also present and at the last interview, in October, 1902, I note that besides the sugar a trace of albumin, diacetic acid, *and acetone are recorded as having* been found

CASE 6 —This patient was a woman, aged 57 years at the time of the first interview on *Dec 24th, 1887 Diabetes* had existed for one year and the

of sugar but was free from al

and

afterwards maintained and a

presence sometimes of a very

large amount of sugar, ran on Previously to 1899 there was only an occasional record of a trace of albumin but after that time albumin was persistently found and in somewhat larger quantity The last entry is for Dec 9th, 1902 Granular casts had then made their appearance

CASE 7 —This patient was a woman who was 37 years of age when I first saw her on June 13th, 1891 She presented a family history of diabetes and from her personal history she had herself probably been the subject of diabetes in a mild *form for about six years* She was not on a properly restricted diet and her urine contained a considerable quantity of sugar It also contained a slight trace of albumin The sugar fell and I observe from the entry in December, 1891, that there was then none present I likewise notice that upon no occasion after the first till 1896 was albumin found and then a sharp increase of the diabetic state had set in From this time onwards albumin was invariably discovered and in the entry for the last interview, in June, 1903 it is

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as yet become present

CASE 8 —The p

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a severe one

Up to 1894 nothing *specially out of the usual* course was noticeable except perhaps *a less active advance of the disease than is general at the patient's age* The urine was then free from albumin but upon a few occasions previously traces were noted as having been found In 1895 the patient was still living but in a very weak state The urine at this time contained traces of albumin in *conjunction* with the sugar which was only moderate in amount. I now lost sight of the patient till 1901, when I received a letter from Dr Bond of Havant informing me that the patient had been for some time under his care and that he was still living, though *reduced to an extreme state of* emaciation and weakness His diabetes had lately entirely disappeared and the fact was brought to light in an interesting and peculiar way In the summer of 1900, through atony of the bladder, it was necessary to have recourse to catheterism and subsequently to continue it *In the course* of time the urine acquired an effervescent character like that of ginger beer Toruloid cells had reached the interior of the bladder and these acting upon the sugar contained in the urine descending *from the kidney* led *to the occurrence* of alcoholic fermentation I have upon a few occasions in the course of my experience come across this phenomenon, and when once the process is set up it continues whilst the urine remains saccharine, or unless an agent having the power of arresting *fermentation* like, *for instance*, the sodium salicylate be administered. A spontaneous disappear-

to occur in the

sugar was not brought back by a free supply of starchy food In the presence of these circumstances I was afforded the opportunity of personally examining the urine A specimen was sent to me for the purpose and I found it to have a specific gravity of 1008 and to give no reaction of sugar. The ferric-chloride test also gave no reaction, but a trace of albumin, corresponding with what I had noticed before I for awhile lost sight of the patient, was present. After the lapse of a few months I received a notification that death had taken place from general exhaustion.

(To be continued.)

FRACTURE OF THE FIFTH CERVICAL VERTEBRA; RECOVERY.

BY W. E. F. TINLEY, M.D. DURH., M.R.C.S. ENG.,
SURGEON TO THE WHITBY PUBLIC DISPENSARY;

AND

A. R. JONES, M.R.C.S. ENG., L.R.C.P. LOND.

AS recoveries from fracture of the spine in the cervical region are rare the following case may be of interest.

On August 2nd, 1902, a man in the employ of the North-Eastern Railway Company fell from a bridge on to a slope beneath, a distance of 40 feet, and then rolled on to the road below. He was carried home on a ladder and dragged up an awkward staircase on it. As the house was three miles from this town some considerable time elapsed before he was seen, when he was found to be in a semi-conscious condition with almost complete loss of power in the legs, some loss of power in the arms, and complaining of pain in the back of the neck. His pupils were contracted. He had no hæmorrhage from the nose, the ears, or the mouth. He was kept quiet and a sleeping draught was administered. In the evening he was conscious but otherwise his condition was unchanged. On the following morning he had retention of urine and a catheter had to be passed; he was then quite conscious and a fuller examination was possible. There was complete paralysis of the lower limbs with loss of the patellar and superficial reflexes. Well-marked priapism was present. The epigastric, cremasteric, and other superficial reflexes were absent. Respiration was difficult owing to paralysis of the intercostals. The right arm lay in the position of abduction; the elbow was flexed and supinated. The fingers and the wrists were motionless on the right side; this was less so on the left but in a day or two the loss of power was as complete on this side as on the right.

On August 6th the patient began to have incontinence of urine in place of retention and as the nursing was not of the best bedsores began to develop in spite of all care. His temperature during the first few days varied from 101° to 102° F. The most tender spot on the spinal column was over the fifth vertebra, where there was an irregularity, but it was not thought advisable to move the head much to make further examination. The only medicinal treatment was the occasional administration of morphia, chloral, and bromide. He was kept perfectly quiet and his head was steadied with sandbags. He took liquid food fairly well but he had difficulty in swallowing and seemed afraid of "choking." His bedsores got much worse and his general condition became critical and a fatal result seemed to be inevitable unless he could be removed to some place where he could obtain good nursing. He was therefore removed to the Whitby Cottage Hospital three miles away. He was placed on a stretcher and through the window on to a scaffolding that was erected and he was carried by hand to Whitby, placed on a water-bed, and with good nursing the bedsores on the back began to improve but one on the right elbow gave much trouble and remained open till he got out of bed. The arms were flexed and could not be straightened owing to their spastic condition and the fingers were obstinately flexed.

For some months his condition remained very much the same but the superficial reflexes returned and he became extremely hypersensitive; his patellar reflexes were very much exaggerated and he developed ankle clonus. He complained of involuntary contractions of his leg muscles which gave him great pain when they came on. He was able to retain his urine until the urinal was brought but could not retain his fæces until the nurse came to him. About March he began voluntarily to move his feet; later he was able to raise his knees and in June to move his arms a little. The faradic current was used for a short time each day and he had massage for the arms, the fingers, and the legs. He was allowed to sit up in bed in July and was put on a mattress instead of the water-bed and shortly afterwards he was lifted into a chair but could not help himself in any way. In August he was able to take a few steps with help and when he left the hospital in September he walked to a cab but with a distinctly spastic gait. The day before he was discharged the following was found to be his condition. He had good movement at the ankles, the knees, and the hips, and greatly increased knee-jerks; the superficial reflexes were normal; the intercostal muscles still lacked power. He had control over his urine but occasional want of control over his motions. He was able to flex and to extend his fingers to some extent but some of the joints were quite ankylosed. The left shoulder and the elbow were capable of movement to almost the normal extent but his right elbow was nearly fixed at a right angle. He could feed himself and hold a paper to read. The nutrition of the body was fair; that of the skin was good. Over the fifth cervical vertebra was a distinct boss of bone as large as a walnut and he carried his head bent forward and stiff.

When heard of recently the patient's condition was very much the same as when he left hospital. His recovery was to a large extent accounted for by the excellent nursing which he received from the nursing staff at the hospital as he was in a dreadful condition when he reached that institution.

Whitby.

A CONFIRMATORY TEST FOR THE PRESENCE OF MECONIC ACID.

BY F. N. WINDSOR, B.A., M.B., B.C. CANTAB., B SC. VICT.,
CAPTAIN, I.M.S.; OFFICIATING CHEMICAL EXAMINER TO THE GOVERNMENT OF THE PUNJAB.

IN cases of opium poisoning frequently the amount of meconic acid separable from organic matter is so small that it is difficult to determine whether addition of ferric perchloride causes a reddish tint or whether the colour is only yellow. In performing this test a "control" is always carried out with distilled water equal in volume to that of the suspected liquid. This volume is usually about three drachms and test-tubes of small calibre are used to obtain as long a column as possible to look through. Two drops of ferric perchloride solution (B.P.) are added to each tube and the colours are compared. If the reddish tint of the suspected liquid be not distinct then one drachm from the contents of each tube is boiled for 30 seconds. In each case the colour changes to a deep reddish-brown. If to each of the hot solutions four drops of dilute nitric acid (strength 1 in 5) or dilute hydrochloric acid (strength 1 in 7), preferably the former, be added the colour of the ferric meconate solution fades until in 12 hours the solution is colourless while that of the ferric perchloride (in which is a soluble hydroxide) is little or not at all affected.

THE REMOVAL OF KING'S COLLEGE HOSPITAL TO SOUTH LONDON.—The site of 12 acres, at present known as "The Sander's Estate," which has been presented to King's College Hospital in South London, is at the foot of Denmark Hill, close to Camberwell Green, and in close proximity to the three railway stations of Denmark Hill, Loughborough Junction, and Camberwell New Road. In addition to this convenience the main electric tram lines run from Deptford, New Cross, Peckham, right through Camberwell Green, and a further line is now being laid down which will pass the doors of the new hospital, so that the situation is one rapidly and easily accessible from every district of South London. By reason of its position and extent the site affords an opportunity for the building of the most scientifically constructed institution of the kind in England, and it is very earnestly to be hoped that the appeal which is now being made for the £300,000 required to carry out this truly necessary scheme will meet with the hearty support of all generous benefactors throughout the metropolis.

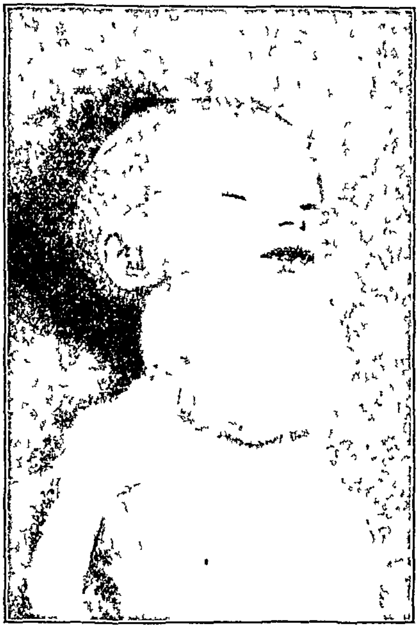
A CASE OF TERATOMA OF THE NECK

BY F BOLTON CARTER, M S , M D LOND , F R C S ENG ,
HOUSE SURGEON TO THE LEICESTER INFIRMARY

THE following case merits publication on account of its rarity The child, a female, was born at full term with a large multilocular semi cystic semi solid tumour of about the size of a small cocoanut occupying the whole of the front of the neck (Fig 1) It caused no trouble during parturition The child only lived one month, the mass being dissected out after death , the hyoid bone was partly included within its structure and most of the muscles of the front of the neck were inserted and lost in the tumour Microscopically it was *seen to consist of glandular spaces lined with epithelium,* cartilage fibrous and connective tissue (Fig 2), and was described by Mr J H Targett of the Clinical Research Association as a true teratoma of the neck

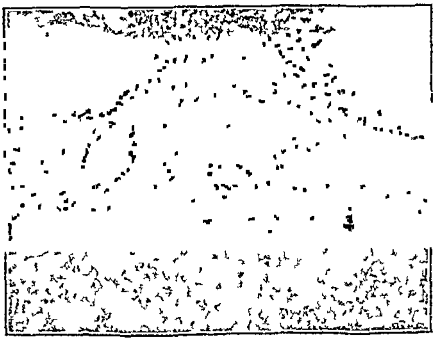
Leicester

FIG 1



Teratoma of the neck.

FIG 2

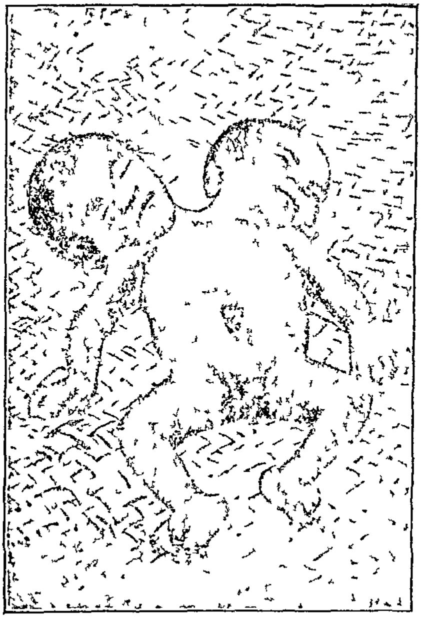


NOTE ON A DICEPHALOUS MONSTER

BY ALEXANDER M ELLIOT, M B , C M EDIN

THE malformation shown in the accompanying illustration may be of interest to some readers of THE LANCET The child was brought to the civil plague hospital in Karachi where I was at the time medical officer in charge It was *most perfectly formed The genital organs, not very clearly* defined in the illustration were quite normal (male) I asked the father if he would part with the child but he would not do so under £50 and eventually the body was buried From what I can gather it was a foot presentation *the right foot coming first The child lived for three hours* The mother made a good recovery

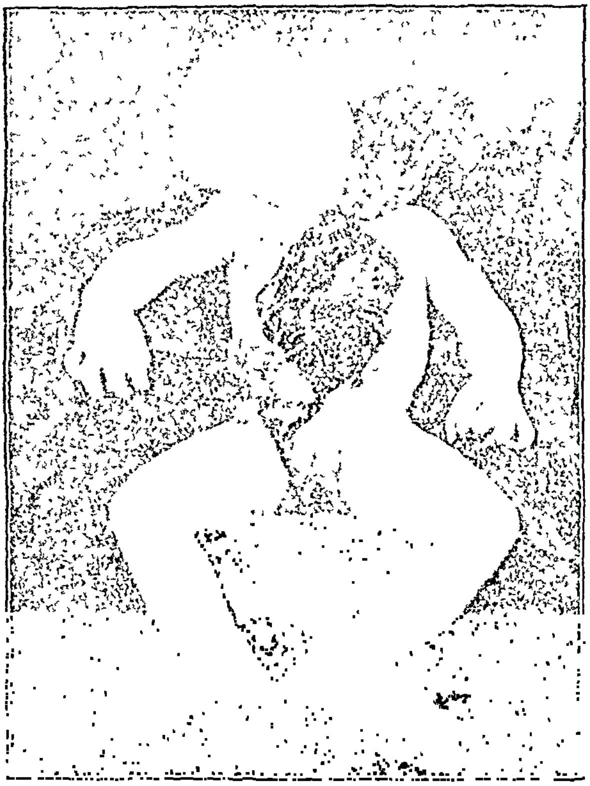
Karachi India



REMARKABLE TRANSPOSITION OF THE VISCERA

BY JOHN C THOMSON M A., M D EDIN

A NEWLY born female child was brought to the public mortuary Hong Kong in 1901 showing a remarkable transposition of the viscera The heart was displaced to the right side, the stomach and the whole of the intestine, excepting the descending colon, occupied the left pleural cavity , and the diaphragm was intact giving passage to the descending colon in the usual position of the œsophagus The lungs, which had not breathed lay behind the viscera named and other abdominal organs occupied their usual positions. The child was well-developed. The illustration shows clearly the stomach in the usual position of the heart and the coils of intestine higher up in the left side of the chest, while the heart appears as a dark body on the right side above the liver.



Transposition of viscera.

Hong-Kong.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

GREAT NORTHERN CENTRAL HOSPITAL.

A CASE OF ULCERATIVE COLITIS ENDING FATALLY.

(Under the care of Dr. H. W. SYERS.)

A MARRIED woman, aged 29 years, was admitted to the Great Northern Central Hospital on Sept. 6th, 1903. Her health had always been good until about a month before admission. At that time, and without apparent cause, she began to suffer from diarrhœa. There was abdominal pain of a griping character, followed by an imperious necessity to defecate. The motions were at first of a light colour but later became darker, of a chocolate tint. As a rule the bowels had acted as frequently as every two hours. No bright-coloured blood had been observed in the evacuations. As these symptoms continued to trouble the patient she soon began to lose flesh and strength. There had never been any similar illness and the patient had not suffered from enteric fever. She had never been abroad. There was no complaint of cough at any period, either during or before the illness. The family history was quite unimportant. On admission the patient was pale, with a prominent flush on the malar bones; she was very thin and lay in bed on her back with both knees drawn up. The temperature was 100° F., the rate of the pulse was 120, that of respiration being 24. There was no dyspnœa and the pharynx presented a normal appearance. The breath was offensive and the tongue was coated but moist. She complained of eructations, frequent diarrhœa, and of griping pain in the abdomen. The chest was found to be in all respects normal, both as regards the heart and the lungs. The abdomen was distended and tympanitic on percussion. It was generally painful on palpation, the pain not being referred to any special locality. There was no eruption of any kind on the abdomen or elsewhere; the liver and the spleen could not be felt and there was no fluid in the abdominal cavity. No tumour or swelling of any kind could be detected in the cavity of the abdomen. Rectal examination gave a negative result. The motions were of a chocolate colour, were very offensive, and were streaked with bright red blood. The urine was acid and free from albumin and sugar; the specific gravity was 1020. During the first day in hospital the bowels acted five times. On Sept. 10th the abdomen was more distended and was very tender to pressure. The patient complained of severe griping pain. The highest temperature was 101 6°. Sleep was light and broken. Vomiting occurred once only. On the 13th the diarrhœa continued as before, the motions being of a dark-brown colour and quite fluid. No red blood could be detected by the eye but spectroscopic examination revealed the presence of oxyhæmoglobin in the evacuations. The temperature was 102·4°. The patient until this date had taken fluids well but now evinced a repugnancy to all forms of nourishment. The bowels acted five times in the 24 hours. Two days later (the 15th) the temperature was 102·8°. The general condition was less satisfactory, for in spite of treatment the diarrhœa was more frequent, the appetite was very poor, and there was difficulty in getting the patient to take sufficient fluid nourishment. Examination of the abdomen showed less distension and there was less pain on pressure. No mass could be felt. On the 17th the temperature rose to 103·4°. The fever was of a hectic type with an evening rise and a morning fall. The bowels acted ten times in the 24 hours and on one occasion a slough was passed together with a little free blood. There was occasional sickness and the pulse was 144. During the next three days the temperature fell somewhat, being normal on the 20th. At the same time the diarrhœa became rather less frequent. The improvement was, however, of very short duration, for on the 21st the temperature rose to 101·8° and the diarrhœa was again severe, the bowels acting 22 times in the 24 hours. The abdomen continued very tense and was always tender on pressure. Sickness occurred from time to time but was never an urgent symptom. The patient was now in a very debilitated condition though she took food well. On the 26th there was a very marked increase of abdominal pain and tenderness and the expression became somewhat anxious and drawn. Clearly perforation had occurred, for the temperature fell in a few hours from 101·4° to 97° and a distinct fulness, almost a feeling of a mass, could be detected in the right iliac region where the pain and tenderness were most acute. The patient now rapidly lost ground; the teeth became covered with sordes and there was much annoyance from the escape of saliva from the mouth. The temperature did not again rise above 101°; the diarrhœa persisted and the evacuations presented the same character as before. Death ensued from exhaustion on Oct. 4th. That acute general peritonitis had ensued upon the perforation which took place on Sept. 26th was perfectly obvious, though the signs and symptoms of this complication were not marked, as is so often the case when peritonitis supervenes in a patient already worn out with a long and serious illness.

Necropsy.—The post-mortem examination was performed about 24 hours after death. The body was greatly emaciated; rigor mortis was passing off. There was much distension of the abdomen which was tympanitic on percussion. On opening the abdominal cavity a large quantity of very offensive fæcal matter escaped from the wound. The intestines were matted together by acute adhesive peritonitis, which was general and characterised by the presence of flakes of lymph lying on the intestinal coils. A large quantity of fæcal matter was present, the greater portion having found its way into the space between the layers of the great omentum, the latter being converted into a sac containing much of the intestinal contents. The resulting mass was chiefly situated in the right iliac and pubic regions and clearly explained the sensation of fulness to touch, to which reference has already been made in the history of the illness. On separating the coils of intestine it was found that a perforation had occurred of the size of a shilling, the opening being situated in the ascending colon immediately adjacent to the cæcum. The whole of the large intestine was greatly distended with gas, filling the lower portion of the abdominal cavity. The small intestines were in a normal condition save for the presence of slight catarrh, the whole of the abnormal appearances being practically limited to the large bowel. On opening the latter it was found that the whole of the internal surface from the cæcum to the rectum was in a very marked condition of ulceration. Indeed, the mucous membrane was to all intents and purposes destroyed, for it was merely represented by shreds adhering to the surface here and there, these fragments being situated between enormous areas from which the mucous membrane had disappeared altogether, except that in places small fragments still adhered to it in the form of sloughs. The whole surface of the large intestine was of a greyish-black colour. The ulceration did not apparently involve the muscular coat except at the point where perforation had occurred. It may be said, in short, that the whole mucous membrane of the colon was replaced by a vast ulceration, hardly a square inch of healthy membrane being left. The other organs, both abdominal and thoracic, were healthy.

Remarks by Dr. SYERS.—This case is clearly one of those instances of ulcerative colitis which are met with at long intervals and which are by no means easy of explanation as regards their remote and immediate cause. Here we have a woman who had never been out of the country, whose health had always been good, and who without any obvious cause began to suffer from looseness of the bowels of no particular severity, but in whom nevertheless the symptoms presented became rapidly worse and in spite of all treatment in about two months led to a fatal termination. In this instance the most searching inquiry failed to elicit any reason why the patient should have been attacked; there was nothing in her mode of life or surroundings to suggest any definite cause for the malady. It is, of course, very easy to attribute such a case to the ravages of the bacterium coli, but it is scarcely necessary to point out that if the malady were due to the assault of this micro-organism there can be no reason why the disease should not be extremely common, whereas it is by no means frequently met with, being indeed one of the rare intestinal lesions. It is impossible to explain the reason of the occurrence of the malady in this patient and attempts to solve the riddle are merely guesses at truth. Practically every kind of treatment likely to be of use in controlling the disease was employed and one and all failed completely. The ordinary astringents, with bismuth and opium, failed to exert any influence upon the constant diarrhœa; the only drug which had the least effect was nitrate of silver. This was given by the mouth and also injected per rectum A trifling alleviation followed the administration of the remedy but in no long time even this slightly favourable effect was lost. A few days before death it was perfectly obvious that perforation had occurred, for there was marked increase of abdominal pain and tenderness at the same time that a distinct swelling appeared in the right iliac region. This swelling was irregular in shape and somewhat indefinite in outline; it was clearly due to the extravasation of the contents of the large intestine found post mortem. Although it was perfectly certain that perforation had occurred the question of the necessity of laparotomy did not of course arise, as no good result could have been anticipated from surgical intervention The post-mortem findings entirely confirmed the accuracy of this view of the matter. It must be admitted that in this malady, which certainly deserves to be classified as a separate and distinct affection with well-defined symptoms and morbid appearances, no kind of treatment is of any avail and it must unfortunately be regarded as an inevitably fatal disease. Luckily such cases are distinctly uncommon and on this account only it is important that every well-observed instance in which a post mortem examination has been made should be put on record. To Mr G A. Upcott Gill and to Mr. A. de Morgan, house physicians, I return my thanks, being indebted to them for the notes of the case.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

50 Consecutive Cases of Perforated Gastric and Duodenal Ulcer treated by Laparotomy.

A MEETING of this society was held on Nov. 24th, Mr. ALFRED WILLETT, the President, being in the chair.

Mr. T. CRISP ENGLISH read a paper based upon 50 consecutive cases of Perforated Gastric and Duodenal Ulcer treated by Laparotomy at St. George's Hospital, the majority of which he had had the opportunity of observing and taking notes upon The value of hospital statistics was referred to. Acute perforations only were dealt with; of these, 42 occurred in gastric ulcers, 22 of the patients recovering; and eight in duodenal ulcers, with two recoveries. The question of premonitory symptoms was dealt with. These were found to occur in 20 per cent of the cases and conclusions were drawn from an analysis of these cases. The occurrence of a "quiescent period" after the primary collapse was discussed and illustrative cases were quoted. The frequency of vomiting, the condition of the hepatic dulness, and the situations of the perforation were next referred to. The incidence of complications after operation was analysed. Complications occurred in 13 of the 24 successful cases and in eight of the fatal cases which survived the first 24 hours after operation. Parotitis, pleurisy, thrombosis, hæmatemesis, and other conditions were referred to. Such cases were quoted presenting the symptoms and signs of perforation which was proved by laparotomy not to have occurred. Various details in the operation were referred to. The increasing tendency to dispense with drainage was mentioned. In order to ascertain the after-condition of the patients 17 of the 24 successful cases had been followed up The results of this investigation were given: in 12 cases there had been no return of gastric symptoms, four had had slight dyspepsia readily amenable to medical treatment, and one was troubled with symptoms of extensive peritoneal adhesions.

Mr G R. TURNER said that seven of the cases referred to in Mr. English's paper had been under his care He had used drainage in all of these cases and he had drained the kidney region, Douglas's pouch, and also in some cases the seat of the perforation He considered that it had been beneficial in all his cases Two of the seven cases had died; the first was an almost hopeless case at the time of the operation and died shortly after the operation was completed. The second had on admission acute peritonitis and that case also died shortly after operation. The five cases in which recovery occurred were females and in two of them thrombosis of the veins of the left leg had taken place. He always stitched up the ulcer as soon as possible so as to prevent any further extravasation of stomach contents into the peritoneal cavity and after that was done he put in the Lembert's sutures and tucked in the ulcer. In one case he had opened the abdomen and found absolutely nothing abnormal. This was a case of pure neurosis simulating organic disease In another case of ruptured œsophagus the symptoms exactly resembled those which occurred in perforation of a gastric ulcer

Mr. J WARRINGTON HAWARD said that hospital statistics were of special value as they were unselected and included the unsuccessful as well as the successful cases. He thought that, as a rule, the symptoms of perforation were sudden in onset and they came on more frequently after food than after exertion In cases, however, in which adhesions were present it was not unusual for perforation of a gastric ulcer to occur after exertion. The situation of the pain gave no hint as to the point where the perforation had taken place, but if the case was seen before perforation had occurred then the superficial tenderness was of diagnostic value. He thought that the frequency of the pulse-rate was [illegible] and if the pulse-rate [illegible] that an operation [illegible] that the pleurisy which so frequently occurred was due to the passage of septic material by means of the lymphatics passing through the diaphragm to the pleura. He considered that drainage was advisable in those cases in which a considerable period had elapsed after the perforation had taken place.

Dr. J. F. H. **BROADBENT** mentioned two cases of traumatic rupture of the duodenum. The first was that of a child who fell across a chair. No immediate symptoms were produced. Shortly after this she took a glass of milk and had severe pain in the abdomen with obvious symptoms of perforation. The child died and it was found that there was a rupture of the third part of the duodenum. The second case was that of a man across whose abdomen a ladder fell. There were no immediate symptoms but on the following day the patient complained of pain in the right iliac fossa. The abdomen was opened in this region but no perforation could be found. A week later he suddenly had signs of acute peritonitis and died. It was found that the duodenum had been ruptured posteriorly and that an abscess had formed behind the peritoneum. The abscess had ruptured and given rise to the acute symptoms. He thought that duodenal ulcers usually occurred in men in good health and that the "quiescent period" was likely to be more marked than in cases of perforation of gastric ulcer.

Dr. H. S. **FRENCH** asked what was the cause of the parotitis in these cases and whether it had been less frequent since attention had been paid to the mouth. In dealing with the diagnosis of the perforation no mention had been made of locomotor ataxia. He referred to a case of locomotor ataxia in which perforation of a gastric ulcer had occurred. He mentioned cases of dissecting aneurysm and thrombosis of the superior vena cava which had simulated perforation of a gastric ulcer. He doubted whether the after-results of operation were always so favourable as those mentioned in the paper. In one case a man had suffered from severe pain after operation for nearly two years.

Mr. C. R. B. **KEETLEY** said that since 1899 he had operated on nine cases of perforated gastric ulcer; six patients had recovered and three had died; the six who recovered had been operated on within 30 hours, while the three who died were not operated on for three or four days after the perforation. In one of the fatal cases a second perforation was found and in another profuse hæmorrhage occurred and the patient died in a few hours. With regard to the advisability of performing a gastro-enterostomy he did not think that it was needed in most cases but it might have prevented the fatal result which had occurred in his second case from hæmorrhage.

Dr. G **NEWTON PITT** said that he had seen several cases of perforation of gastric ulcer operated on and thought that irrigation of the peritoneum was unnecessary; much, however, depended on the virulence of the fluid in the peritoneum He thought that the "quiescent period" was dependent upon the fact that owing to absence of movement of the diaphragm the pumping action in the lymphatics was not maintained and the toxic substances from the abdominal cavity were not conveyed into the general circulation. He suggested that the examination of the blood might be of some value in distinguishing the cases of pure neurosis from those of actual perforation.

Dr. S **VERE PEARSON** referred to the frequency of diminution of liver dulness which he had found to be present in about one-third of all cases admitted for hæmatemesis. The condition could not be explained by general distension of the intestine nor was it due to a dilated stomach. He thought the most likely explanation was that it was due to a dilated colon, though even this explanation was hardly adequate

Mr. H. J. **PATERSON** said that he was adverse to irrigation and even mopping of the peritoneum. He was in favour of using simple gauze drainage. He believed parotitis to be due to the dry condition of the mouth and since he had used an antiseptic mouth wash he had not seen that complication occur. Three reasons had been given by Mr English for not performing a gastro-enterostomy: (1) that it increased the length of the operation; (2) that it increased the risk; and (3) that it was unnecessary. He, however, could not agree with these reasons and considered that gastro-enterostomy was of advantage, first, because it gave the stomach physiological rest; secondly, because it facilitated the healing of other ulcers, if present, in the stomach; and thirdly, because it was possible to feed the patient earlier.

Mr. T. **CLINTON DENT** said that there were two points with which he would deal: first, he was of the opinion that the less irrigation was used the better; and secondly, he considered that gastro-enterostomy was unnecessary and did not fulfil the objects stated by the last speaker. He considered it of special importance to feed patients at an early period after the perforated gastric ulcer had been closed.

Mr. **ENGLISH** replied.

MEDICAL SOCIETY OF LONDON.

The Treatment of Cardiac Failure.

A MEETING of this society was held on Nov. 23rd, Dr. F. DE HAVILLAND HALL, the President, being in the chair.

Sir **RICHARD DOUGLAS POWELL** opened a discussion on the Action of Medicinal and other Means of Treatment in Cardiac Failure. He said that he would limit his remarks to cases of acute heart failure and would only discuss the mechanism and treatment of three or four of the more important kinds. He gave an instance of sudden death in aortic regurgitant disease, pointing out that the death in this case arose from syncopal failure of circulation in the brain due to failure of the heart during the diastolic period. In a second, an anginoid, variety of cardiac failure in aortic regurgitant disease death was threatened during an attack of vaso-motor angina. But in this condition the mechanism was different, the peripheral vessels were contracted not dilated, and although the strain upon the ventricle unsupported by the aortic valves was very great, still the blood was retained in the arterial capillaries and nerve centres and the syncopal failure of the heart might be delayed until remedies could be applied. These remedies were of the class of nitrites to release arterial spasm, with strychnine and perhaps morphia to support the heart and to relieve pain. Further attacks were to be prevented by looking to the visceral causes of vaso-motor storms and correcting them. Another variety of acute and fatal heart failure was instanced in a man with mitral stenosis who after the relief of urgent symptoms by rest and treatment had gradually been fed up to the point of plethora and one morning after a large breakfast he fell dead. In this case the venous flood had been rising against the narrowed isthmus at the mitral valve and finally the right heart became acutely over-distended and failed. In such a case a prompt bleeding might have saved the patient but the disaster might have been avoided by a spare dietary and the use of laxatives. The adverse conditions affecting the heart in severe cases of pneumonia were somewhat similar although more complex; a weakened heart, an impaired lung function, and an actual impediment in the lungs from extensive stasis of capillaries were the factors. The oncoming over-distension of the right heart could be noted in its increased dimensions and the loud second sound, coupled with the limited output as recognised in the small quick pulse at the wrist, which failed during each inspiratory period. Venous stagnation was further witnessed in the fulness of the liver and the albuminous urine. Sir Douglas Powell urged the importance of carefully guarding against over-feeding patients in this condition. The chief preventives against heart failure in pneumonia were careful feeding, occasional laxatives, strychnine, and oxygen. With regard to strychnine he had not the slightest doubt, from clinical experience, that it was a direct and powerful heart stimulant, although it was maintained by pharmacologists that it raised blood pressure by its effects in contracting the arterioles, not by its direct effect upon the heart. If this were so it would be of doubtful value in pneumonia, whereas he thought all physicians would agree as to its usefulness The main value of oxygen inhalation was as a cardiac stimulant and it should be administered at stated times. The blood charged with free oxygen passed directly to the heart, refreshed its muscular power, and prevented the accumulation of waste products. Digitalis was chiefly valuable in cases in which the heart rhythm became disordered. Caffein might supplement or replace strychnine in some cases. In cases of heart failure in Addison's disease, in hæmorrhage, and in collapse after abdominal injury or operation the blood pressure became very low and there was a tendency to transfer the blood from the arteries into the veins. To combat this tendency ergot, suprarenal extract, and saline injections were of value according to the cases, the object being to raise arterial tension and to retain more blood in the arteries and the nervous centres. The heart would still require support by strychnine, digitalis being in most cases contraindicated. The merits of rectal, subcutaneous, and intravenous injections were touched upon.

Opium was referred to as a most valuable aid to other remedies in all cases of what might be described as cardiac shock or cardiac pain, in cases of painful as apart from syncopal angina, and in irregular, tumultuous or inhibited action of the heart attendant, for instance, upon the initial shock of extensive pleurisy or acute pericarditis. Again *in that peculiar condition of cardiac agitation attended by* restless dyspnœa and air hunger that often preceded the appearance of dropsy morphia subcutaneously was often the only remedy that afforded relief.

Sir WILLIAM BROADBENT said that he had followed with interest the different causes of cardiac failure alluded to by Sir Douglas Powell Cardiac dilatation might also be secondary to inherent decay of the heart and to diseased con*ditions of the aorta, causes which were perhaps some of the* most common they met with. Genuine cases of angina might arise from disease of the coronary arteries. As regards sudden death in mitral stenosis, it might not only be caused by venous congestion but it might also be due to the mechanical distension of the stomach pressing directly on the right side of the heart as in a case which he mentioned. Bleeding was an admirable remedy in some cases of *pneumonia. Strychnine was a most valuable remedy in* cardiac failure. Five grains of calomel were a prompt and efficacious remedy in many cases.

Sir LAUDER BRUNTON, referring to sudden death in mitral stenosis, thought that it might very often be due to mechanical effects produced by the stomach. This was the explanation of the death of people by making them drink large quantities of bullock's blood in the Middle Ages. Cardiac *distress very often arose from distension of the stomach* by wind or other causes. He believed the heart might actually be tilted upwards upon itself. It was very important to avoid fermentative substances in the diet and to avoid fermentation by the administration of carbolic acid and other remedies. He had seen great advantage in occasional bleeding in pneumonia when the right side of the heart was distended. By pharmacological experiment he had found *that strychnine* was a *direct stimulant of the cardiac* ganglia; thus he concurred with what previous speakers had said. Reference was made to a case of pneumonia in which the continuous administration of oxygen was very successful Rest in bed was, in his belief, the most efficacious of all methods of treatment of cardiac failure.

Dr. JOHN MITCHELL BRUCE, referring to acute failure of the heart in mitral stenosis, advocated venesection, especially when hæmoptysis appeared, which *was nature's indi*cation for this plan, or failing this 12 leeches might be applied along the sternum. In both acute pneumonia and chronic valvular disease the cardiac embarrassment might be due to an overloaded stomach when emesis and calomel were the best remedies. In pneumonia far too much food was generally given. He advocated the continuous rather than the intermittent administration of oxygen in pneumonia and it should be started before urgent symptoms set in. It might be given through a tube opening just under the patient's chin. Digitalis was an invaluable drug in the cardiac failure of chronic valvular disease and in Bright's disease. It should be given in large doses (from ten to 15 minims of the tincture every four hours) and the dose might be increased if moderate doses failed or produced a fluttering pulse The daily amount of urine passed should always be gauged; it was the most certain measure of the efficacy of the drug and of the progress of a case of chronic valvular disease.

Mr. A. E. J. BARKER, speaking of the cardiac failure following operation, said it might be immediate, as in shock, or remote, occurring a day or two after the operation. The remote variety might be due to toxæmia In the cardiac failure of shock the blood pressure was very low and this low pressure could be increased by handling the abdominal organs roughly. The infusion of normal saline solution was useful Glucose (up to 5 per cent) might be added. Adrenalin might be given subcutaneously.

Mr. A. W. MAYO ROBSON thought a great deal could be done to prevent shock and cardiac failure by measures adopted prior to operation—namely, by preserving the warmth of the patient, by injecting a pint of normal saline solution into the bowel, and by the hypodermic injection of ten minims of strychnine solution. *He had used these measures* several hundred times with success. For the cardiac failure after operation he advocated oxygen and the use of saline injections intravenously and per rectum. Three or four pints might be given during and after an operation. He was satisfied that in certain cases acute distension of the stomach might cause all the symptoms of acute cardiac failure.

Sir DOUGLAS POWELL replied.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

The Relation of Mental Symptoms to Bodily Disease.—The Mental and Moral Effects of the South African War, 1899–1902, on the British People.—Fragilitas Ossium in the Insane

A GENERAL meeting of this association was held at the *rooms of the Medical Society of London, 11, Chandos street,* Cavendish-square, W., on Nov. 18th, Dr. ERNEST W. WHITE, the President, being in the chair.

Dr. NATHAN RAW read a paper entitled "The Relation of Mental Symptoms to Bodily Disease, with special reference to the Treatment of Temporary Forms of Insanity outside Lunatic Asylums." He said that his object was to direct attention to the great frequency with which mental symptoms *were developed in an attack of bodily illness and to the un*satisfactory system obtaining in this country of treating and dealing with persons suffering from temporary mental disease. It was not his purpose to speak of active organic insanity for which the asylum was the proper place, but of those persons who in the course of such diseases as pneumonia, typhoid fever, Bright's disease, toxic poisoning (as by belladonna), puerperal septicæmia, exophthalmic *goitre, gout, and myxœdema required special pro*vision in the shape of nursing and treatment without having recourse to certification and without placing them among those who could be correctly described as of unsound mind. His position could be summed up by such a case as the following. A man without means became temporarily insane during an illness and attempted suicide. His friends could not afford to pay for his treatment, therefore *he was taken to the insane wards of a workhouse infirmary.* The symptoms passed away but the law said that no person should be detained in the insane wards of a workhouse for more than for 14 days; hence the man would be duly certified by a magistrate as insane and removed to an asylum, which was a hardship. He would like to see established in every town, preferably by the municipality, a reception hospital for mental diseases, from which, if recovery did not *ensue in six weeks, cases should be drafted to the asylums* proper. He could say from his own experience that many people were now sent to asylums who, if they had been accommodated in such reception houses, would have recovered and—which was very important and not a matter of sentiment—would have been spared the stigma of lunacy, a stigma which in many cases prevented a man subsequently obtaining employment. He admitted that by such a pro*vision the "recovery-rate" of* asylums would be much diminished but in the face of the great benefit to the community he could not imagine any alienist offering objection on that account. The position was somewhat acute in Lancashire where, although there were five county asylums averaging over 2000 patients, it was almost impossible to find accommodation for all the lunatics and practically all the admissions into the asylums were made from the workhouses. During the last six years under Section 20 of the Lunacy Act there had been admitted into Mill road Infirmary, Liverpool, 3934 lunatics. Of that number 1003 were suffering from delirium tremens and other results of alcohol, so that 2931 suffered from other causes of insanity. Of the 3934 1982 were transferred to the county asylums and 1605 recovered within the scheduled time allowed by law, while the remaining 347 died. In Glasgow the reception-house method had worked satisfactorily for some months and the London County Council was *empowered to provide four* reception houses on the same lines. Dr. Raw then proceeded to amplify his contention by relating instances of the several diseases associated with temporary mental aberration, paying
special attention
He objected to th
and invited an
association —Dr. G. H. SAVAGE said that the paper should *be considered from two aspects—first, the practical one as* to patients being first received in reception houses, and, secondly, the forms of mental disorder which should be sent to them. He was in accord with the desire that patients suffering from temporary mental disease should not be treated as, or termed, insane cases and if the dictionary could be

purged of such terms as "lunatic" and "asylum" much good would result. The homes, asylums, or hospitals for the insane were admirably managed and if patients could be sent to them without the formality of certification, and not only sent but detained, it would be a most desirable thing. The real difficulty was that a patient was willing to go as a voluntary boarder but was not willing to stay there, and if he were subsequently certified it was thought that a mean advantage had been taken of him. But if he came out harm followed to all. Perhaps some of the asylums could be utilised as reception houses but all would probably agree that some expansion of the law was required and he thought that the liberty of the medical man should be considerably increased.—Dr. A. R. Urquhart said that Dr. Raw's early asylum experience, followed by a remarkably large clinical one, eminently fitted him to bring forward such a subject. The question of receiving houses for the insane was a very old one and unnecessary difficulties had been made with regard to it. It was 30 years ago that he saw the receiving house of the late Dr. Norton Manning at Sydney and in that remote colony at that date was a similar institution to those now being striven for in England, and it was under the care of the physician responsible for the treatment of the insane in the neighbouring asylums of the colony. He deprecated the idea that a general physician was competent to take charge of such receiving houses.—Dr. J. Wiglesworth said he had hoped that Dr. Raw would have given his views on the pathology of some of the conditions which he had described. He did not think that there were so many cases of bodily disease associated with insanity as Dr. Raw made out. The most suitable cases for reception houses were acute alcoholics but he did not agree that they should not be regarded as insane; they were as insane as subjects of any other form of paranoia. He urged that the town was quite the wrong place in which to treat such cases. The more restful and delightful surroundings of the country were a great help to recovery. The period of detention of cases sent to receiving houses he thought should be nearer a fortnight than six weeks.—Dr. Robert Jones pointed out that the period set by the London County Council was six weeks but it could be extended more or less indefinitely by further periods of six weeks. He thought that Dr. Raw had fully established the necessity for such reception houses and he entirely supported Dr. Wiglesworth's contention that such houses should at any rate be suburban. He did not think that an asylum was the proper place to send alcoholics to.—Dr. W. Lloyd Andriezen would have liked to hear the conditions mentioned by Dr. Raw classified and he (Dr. Andriezen) outlined the scheme on which he thought such classification should be based. He also protested against the old metaphysical division of ailments of the mind from those of the body and emphasised the frequent presence of a hereditary neurosis in cases where bodily disease caused mental symptoms.—Dr. W. Crochley S. Clapham and Dr. F. R. P. Taylor continued the discussion, the latter referring to the reception hospital attached to the East Sussex County Asylum which he thought was as near that which Dr. Raw advocated as anything could well be.—Dr. Bower also referred to the same institution and to the large part taken in its establishment by Mr. H. F. Hayes Newington.—The President approved of the suggestion to establish reception houses for temporary cases but urged that every care should be taken that the presiding genius of such institutions would be a properly trained psychologist.

Dr. R. S. Stewart read a paper entitled "The Mental and Moral Effects of the South African War, 1899–1902, on the British People," in which he showed by summaries of criminal statistics that the nation as a whole was much more self-possessed during the dark days of the war—the end of 1899—while since then a reaction had been apparent. – The paper was discussed by the President, Dr. Jones, Mr. Hayes Newington, and Dr. Andriezen.

Dr. W. Maule Smith showed a most interesting series of slides illustrating the existence of Fragilitas Ossium in the Insane, often of a very extreme degree.

The members afterwards dined at the Café Monico.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Case and Specimen.—Paralysis of the Third Nerve.—Pneumonia.

A MEETING of this society was held on Nov. 19th, Mr. Rushton Parker, the President, being in the chair.

Dr. W. Alexander showed a patient from whom he had removed the Breast some time before. On admission operative interference was apparently hopeless as the tumour was adherent to the subjacent structures, ulcerating, and very foul. After the free application of creolin to the growth and the administration of thyroid tablets the tumour lost its hold on the deep tissues and was removed by two operations. The microscope showed the growth to be adeno-carcinoma. The question arose whether the thyroid tablets or some toxin from the septic condition was the factor in the change. —Mr. F. T. Paul and the President thought that the improvement was brought about by toxic products derived from the septic infection.—Dr. A. S. F. Grünbaum also spoke.

Dr. Alexander also showed a Double Uterus, each part being only adherent at the cervix. Each uterus had a distinct os and canal, one Fallopian tube, and one ovary; the formation of the organs was evidently due to absence of coalescence of Müller's ducts. The organ was removed for adeno-carcinoma of the cervix; the posterior uterus was thought to be a fibroid. The patient was a 3-para. During the first two pregnancies she had amenorrhœa and in the third she menstruated till within two days of the birth of the child.—Dr. H. Briggs spoke and Dr. Alexander replied.

Mr. R. J. Hamilton read a short paper on Paralysis of the (left) Third Nerve with Blindness on the same side due to a retrobulbar neuritis. After a discussion of the possible etiology Mr. Hamilton held it to be due to periostitis of the sphenoid, probably rheumatic in nature. The patient, a girl, aged 20 years, was shown.—Mr. Richard Williams had seen two or three similar cases in which he had diagnosed periostitis at the entrance into the orbit. The symptoms had subsided under the use of mercury and iodide of potassium alternately. The prognosis depended upon the rapidity with which the patient was brought under the influence of mercury.—Dr. K. A. Grossmann thought that the etiology was generally obscure unless traumatic. Prognosis was even more uncertain; the patient, whom he had exhibited on March 19th of this year, though mercury and iodide had been freely given, still showed paralysis when seen a fortnight ago.—Mr. Hamilton, in reply, said that his patient was improving under iodide and salicylate.

Dr. John Hay read a paper on Pneumonia. It was based on the observation and notes of 150 cases. Of these 150 cases 21 were admitted moribund or died within 24 hours of admission. After eliminating these there was a death-rate of 31 per cent. Alcoholic excess was much in evidence. It was admitted in 65 of the 150 cases and of these 65 37 died. After discussing certain physical signs and some points in the physical examination he dealt with the question of cardiac strain and the effect of the onset of hepatisation, the toxæmia, the temperature, delirium, and struggling on the heart, and he emphasised the far greater importance of the condition of the myocardium in the prognosis than the existence of valvular disease and brought forward numerous cases in support of this view. The signs of cardiac failure were then discussed, especial emphasis being laid on the importance of careful definition of the deep cardiac dulness. He pointed out the extreme gravity of the prognosis in cases where an irregularity of the pulse was present before the crisis excepting in the aged or in those cases where there was marked mitral stenosis. The causes and treatment of sleeplessness, delirium with struggling, and flatulent distension of the abdomen were discussed and the indications and contra-indications for the administration of morphia. Dr. Hay was of opinion that the value of alcohol in the treatment of pneumonia was much overrated owing to a misconception of its therapeutic action. It was of use in order to counteract any contraction of the peripheral vessels such as occurred during the initial rigor or as a narcotic, and also during convalescence, but he held that the consensus of scientific opinion was opposed to the view that in its specific action it was a cardiac stimulant. He gave the results of 47 cases which were treated throughout without alcohol as compared with 103 which received it when the orthodox indications for its use arose. The patients in each class were so far as possible of a similar type and yet after eliminating those admitted dying from both classes the mortality in class 1 was 21½ per cent. as compared with 36½ per cent. in class 2; the average age in each class was about 33 years. The action and value of digitalis strychnine, caffeine, and ammonium carbonate were discussed and the treatment by the application of ice-bags to the abdomen was referred to.—Dr. Nathan Raw would lay great stress upon the severity of the infection when considering the death-rate under any particular form of treatment. At times the severity was such that practically no treatment was successful; at other times the majority would recover. In an intermediate class much could be done and his practice had been not to spare the use of alcohol when the symptoms appeared to demand it. They must look forward to the discovery of a direct antidote to the pneumonic poison.—Dr. W. CARTER said that there were only two periods in any case of acute pneumonia when he would like to use opium—viz, at the onset and certainly never later than the second or third day if the nervous centres were markedly affected, and at the very end of the disease when the critical fall of temperature was followed by active delirium. In the latter case, though the physical signs were not much altered, the vital relations of the patient were such that a timely dose of opium was of the utmost value.—Mr. ALBERT E. DAVIS said that his routine practice was to give ammonium carbonate and six ounces of brandy per diem. His death-rate was under 10 per cent. in the last 18 years. He deprecated the use of opium in any form at any period of the disease.—Dr. W. B. WARRINGTON, Dr. T. R. BRADSHAW, Dr. T. R. GLYNN, Dr. C. A. HILL, Dr. J. BARR, Dr. GRÜNBAUM, Dr. C. J. MACALISTER, and Dr. J. H. ABRAM also spoke and Dr. HAY replied.

EDINBURGH OBSTETRICAL SOCIETY.

Election of Officers.—Valedictory Address.—Leucocytosis in Pelvic Disease.

A MEETING of this society was held on Nov. 11th, Dr. JAMES RITCHIE, the retiring President, and afterwards Professor A. R. SIMPSON, Vice-President, occupying the chair.

The following members were elected office-bearers for the ensuing session:—President: Dr. N. T. Brewis. Vice-Presidents: Professor A. R. Simpson and Professor J. A. C. Kynoch (Dundee). Treasurer: Dr. William Craig. Secretaries: Dr. William Fordyce and Dr. J. Lamond Lackie. Librarian: Dr. F. W. N. Haultain. Editor of Transactions: Dr. Lamond Lackie. Members of Council: Sir J. Halliday Croom, Dr. Michael Dewar, Dr. G. Matheson Cullen, Dr. J. E. Moorhouse (Stirling), Dr. James Ritchie, Dr. J. W. Ballantyne, Professor R. Jardine (Glasgow), and Dr. W. G. Aitchison Robertson.

The PRESIDENT in his Valedictory Address mentioned that during the last two years the membership had been increased by the addition of 22 Fellows, making 449 ordinary Fellows on the roll, and with honorary and corresponding Fellows a total of 567. He referred to the loss the society had sustained in the death of several of the Fellows and gave a short sketch of some of their lives. The work of the past session was also reviewed and summarised.

Dr. G. SCOTT CARMICHAEL read a paper on Leucocytosis in Pelvic Disease giving the results of examination of the blood made in 180 gynæcological cases and in many cases of pregnancy while studying in Greifswald under Professor Martin. For a complete investigation not only the quantitative change in the leucocytes alone must be taken into account but also the qualitative changes as evidenced by the proportion of the polymorphonuclear leucocytes to other forms or by such a change as is presented by their iodine reaction. For clinical purposes, however, the quantitative change in the leucocytes was sufficient. It could be rapidly ascertained and with few exceptions could be relied upon to betray the chief changes in the blood. The importance of the use of this examination in all cases of inflammation of the pelvic connective tissue could not be over-estimated. To obtain a proper standard it must be remembered that towards the end of pregnancy and during parturition the leucocytes tended to increase steadily, while during the puerperium there was as steady a decrease in all cases unattended by complications or operative interference. Up to 15 000 per cubic millimetre was considered within the range of a normal pregnancy by Zangemeister and Wagner. Dr. Carmichael had not observed any count in his cases to rise above 13,000, the average being 10,000 or 11,000 The leucocyte count was very helpful in deciding the question of the presence of pus in chronic inflammatory pelvic cases with no rise of temperature though the leucocytosis was not so high in these cases as in the acute ones. They must attach great importance to a slight rise in the leucocytes in a chronic case, especially if it was steady and gradual. The presence or absence of pus in tubal affections and also the source of the suppuration could be largely determined by a leucocyte count. Pyosalpinx caused by streptococci might produce a leucocytosis up to 40,000 per cubic millimetre, and the bacillus coli communis also caused a high degree of leucocytosis. Gonorrhœal inflammation caused a moderate degree, at highest up to 15,000; a tuberculous inflammation was lowest on the scale, causing no leucocytosis. In three cases of ectopic gestation there was no increase of the leucocytes, the numbers being respectively 6100, 8200, and 7100. So that this estimation could differentiate the source of the inflammation present. Some considered that malignant tumours produced an increase in the number of leucocytes; inflammatory complications of tumours would do so. In appendicitis a count of 25,000 or over would probably mean suppuration, but a surgeon would fail in his duty if he waited till this number were reached as other signs were of importance. At the commencement of an acute inflammation there might be considerable increase of leucocytes and yet no suppuration; but if after daily consecutive examination the count remained about or above 20,000, or if there was a steady rise towards that number, then the presence of pus might be suspected. In cancer of the cervix with much ulceration there was often considerable leucocytosis and no operation would be advisable until this increase was much diminished by appropriate treatment. After a severe hæmorrhage as in cases of uterine fibroids, there was often considerable leucocytosis.—Professor SIMPSON, Dr. G. L. GULLAND, Dr. D. BERRY HART, and Dr. BALLANTYNE discussed the paper.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 6th, Dr. Seymour Taylor, the President, being in the chair.—Dr. Herbert Tilley showed a case of Chronic Suppuration of the Accessory Nasal Sinuses cured by operation. The patient, an unmarried woman, 41 years of age, had suffered from profuse purulent nasal discharge for about ten years, the condition following upon an attack of enteric fever. For about five years headache had often been so severe as to preclude the performance of her duties, while mental apathy and inability to concentrate her mind upon her work had been a more or less constant symptom. During this time polypi had on several occasions been removed from the nasal cavities without producing any effect on the discharge from the nose. On Jan. 12th of this year Dr. Tilley operated on both frontal sinuses by completely removing the anterior wall, curetting away the polypoid pyogenic membrane, and making a large opening into the nose by way of the fronto-nasal canal The ethmoidal and sphenoidal cavities were also dealt with at the same time by curettage. On Jan 28 h the maxillary antra were opened through the canine fossa, the diseased contents were curetted away, and the sinus cavity was mopped out with chloride of zinc solution (40 grains to one ounce) and lightly packed with bicyanide gauze. At the end of 24 hours the gauze was removed and not reinserted, the antral cavities being irrigated with warm boric lotion, dried, and left alone. No opening was made from the antra into the nose. The healing process was carefully watched and just before the openings in the canine fossæ closed it could be demonstrated that the antral cavity was practically full of organising granulation tissue. The patient had now been free from any discharge for over seven months, her general health was better than it had been for years, and she had increased 17 pounds in weight. There was practically no scarring over the frontal sinus regions.—The President considered that the chief interest in the case, apart from the extensive and general suppuration of the accessory sinuses, lay in its association with enteric fever and referred to the extremely varied nature of the complications and sequelæ of that disease —Replying to a question by Mr. G. A. Garry Simpson, Dr. Tilley stated that he did not consider that the suppuration had been started by the typhoid bacillus. Probably the antra were suppurating before the onset of the enteric fever and the low state of health induced by that disease brought about a rapid infection of the other accessory nasal sinuses —Dr. Tilley also showed a case illustrating an operative procedure for the relief of almost complete adhesion between the soft palate and the posterior pharyngeal wall, the result of tertiary syphilis. The adhesion was so complete that only a small probe could be passed from the oro pharynx to the naso-pharynx. The patient, a girl 23 years of age, had been operated on twice previously but re-adhesion had occurred on each occasion. After a preliminary laryngotomy Dr. Tilley completely divided the adhesions between the palate and the pharynx. A strong silver wire was then passed from before backwards through the soft palate close to its junction with the hard palate about half an inch from the middle line. The distal end of the wire was then made to re-pierce the soft palate close to its free margin and from behind forwards, so that a short segment of the wire rested on the posterior surface of the soft palate. The free ends of the wire were then passed from behind forwards one upon each side of the root of an incisor tooth, firm traction was exerted on the palate, and the wires were twisted upon one another and cut off short in front of the tooth. A similar procedure was adopted on the other side of the palate. The wires cut out in about a fortnight and by that time the raw surfaces (corresponding to the previously adherent areas) had become practically covered with epithelium and hence no re-adhesion took place.—Replying to Mr. W. McAdam Eccles, Dr. Tilley stated that he had closed the laryngotomy wound at once. A certain amount of subcutaneous emphysema followed, affecting the right side of the face and the neck, but this disappeared in about a week.—Mr. McAdam Eccles showed a case of Sarcoma of the Os Pubis occurring in a girl, 11 years of age. Four months previously pain in the right leg, chiefly in front of the knee, had been complained of. At that time there was no abdominal swelling. When the swelling appeared operation was advised but declined and the tumour had rapidly increased in size. The patient was fairly well nourished and could stand and walk without discomfort. In the hypogastric region there was a large globular swelling, hard, fixed, and somewhat overlapping the body of the os pubis. Part of the tumour to the left side was softened. The inguinal glands were enlarged. Rectal examination showed that the uterus was displaced backwards and projected against the anterior wall of the rectum. There had been no interference with micturition or defecation and the temperature had remained normal. The tumour was of such a size that operative procedure seemed to be out of the question and Mr. McAdam Eccles was unable to advise treatment by Coley's fluid or serum injection.—Dr. E. Furniss Potter showed a case of Radical Mastoid Operation in which rapid healing took place without skin grafting. The patient was a girl, aged 14 years. Operation was rendered urgent by the supervention of an acute attack of chronic middle-ear disease. The operation was performed with great ease, the outer bony wall of the antrum being much softened. The patient did well until the eighth day when a severe attack of erysipelas lasting for 18 days occurred. Thereafter the patient made a good recovery and two months after the operation healing was complete. Dr. Potter considered this to be an unusually good result and quoted Mr. C. A. Ballance's statement[1] that the average time necessary for complete healing in cases similarly treated is from six to seven months.—Dr. E A. Saunders showed a case of Rickets with Anæmia and great Enlargement of the Spleen. The patient, a boy aged nine years, had been admitted to hospital five weeks previously complaining of abdominal pain and shortness of breath. The most striking features of the case at that time were an intense anæmia together with very great enlargement of the spleen and, to a less degree, of the liver. The head was large and square with marked bossing of the temporal and parietal regions. There had been no recent illness and the family history showed nothing of importance. On examination of the blood the anæmia was found to be of a simple type, the red corpuscles being 1,780,000 and the white 5000 per cubic millimetre. The hæmoglobin was about 40 per cent. The spleen reached to the middle line well below the umbilicus and the liver could be felt two and a half inches below the costal margin. There were no lymphatic enlargement, no purpura, no hæmorrhages, no œdema, and no rise of temperature. Under a tonic treatment, consisting of arsenic, iron, and cod-liver oil, together with good food the improvement was extremely rapid. The red blood corpuscles had increased to 3,880,000 and the white to 8000 per cubic millimetre and the hæmoglobin had risen to 75 per cent. The anæmia had practically disappeared and both the liver and the spleen had decreased in size.—Mr. L. S. Dudgeon urged the importance of a complete examination of the blood with a differential count of the leucocytes in such cases and referred to the fact that the enlargement of the liver and the spleen might be more apparent than real.—Mr. C. R. B. Keetley showed (1) a case of extensive Contracture after severe Burns; and (2) a case of Carotid Aneurysm in a woman.

EPIDEMIOLOGICAL SOCIETY.—A meeting of this society was held on Nov. 20th, Dr. B. A. Whitelegge, the President, being in the chair.—Dr. W. J. Simpson read a paper on the Epidemiology of Plague. After referring to the many unsolved problems as to its etiology and migrations in the past he pointed out that the present epidemic sprang from a centre remote from those of previous outbreaks and that its distribution had been equally dissimilar from theirs It had everywhere followed maritime trade routes, not passing inland in China save by the great water-ways. Its retrogression from western Europe about the close of the seventeenth century and from its eastern confines 100 years later was due, not to any social changes or sanitary progress, but to the transference of the trade of the East from overland to maritime routes. From the tenth to the sixteenth centuries the products of China and India were carried by caravans through Persia and Syria. The commerce of Europe was wholly in the hands of the Venetians and Genoese, by whom the goods were distributed to the ports of the Mediterranean, and of the German merchants of the Hanseatic League who transported them overland from Venice to central and northern Europe, affording the amplest opportunities for collecting the infection in its home and spreading it throughout the continent. But after the Portuguese discovered the sea route to India and the Far East the Dutch and later the English built up a world commerce over the high seas, and the substitution of the Red Sea route for that *viâ* the Euphrates Valley and the Caspian Sea closed the last of the direct routes between plague lands and Europe. But it was a matter for serious consideration whether the construction of railways in Asia Minor, Syria, and Persia would not be opening up the old trade routes through countries where the plague was endemic with the substitution of more rapid means of locomotion, for it was not certain that the sea even with its many advantages would always retain its supremacy as a means of international trade. At the present time Hong-Kong, the centre of distribution of the commerce of the Far East, Australia, and the western States of America, was a plague centre also The seasonal incidence of epidemic outbreaks was governed by some law, for though cases would occur at all or at any times it appeared as an epidemic in certain seasons marked in each zone and climate by approximation to a type. In Europe it was in late summer and autumn, in Egypt somewhat earlier; south of the equator, as at Cape Town and Sydney, from March to May, corresponding to the September to November of northern and central Europe; while in India there were spring and autumn waves depending on the climate. The rise, duration, and decline of each outbreak followed a certain type, little influenced by natural conditions or human efforts save that mean temperatures below 50° F. or above 83° were inimical, but it was not easy to understand how the latter could affect a bacillus the natural habitat of which was the blood at a temperature of 100° unless it were under extra-corporeal conditions. The susceptibility of the domestic animals was a matter of importance. Notwithstanding the failures of Haffkine and others Dr. W. J. Simpson, Dr Hunter, and Dr. Matsuda had succeeded in infecting swine and poultry, as well as monkeys, ruminants, and other animals.—Dr. F. M. Sandwith stated that of 200 ferrets imported into Cape Town very few survived, for though they did kill the rats they were themselves even more susceptible to the plague The alleged inexplicable disappearance of the plague from Egypt in 1844 and until recently was simply due to the official suppression of reported cases —Dr. R A. Farrar, Sir Patrick Manson, the President, Dr L W. Sambon, Mr. B G. Corney (Fiji), and others also took part in the discussion.

MIDLAND MEDICAL SOCIETY.—A meeting of this society was held at the Medical Institute, Birmingham, on Nov 18th, Mr. Arthur Oakes being in the chair.—Dr. C. E Purslow showed a Broad Ligament Cyst removed by abdominal section. The patient, aged 72 years, the mother of 11 children, was admitted into hospital with a cystic tumour of the abdomen of the size of a full term pregnancy. She first noticed that her abdomen was enlarging four months previously. Shortly before this she had received a very severe

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[1] THE LANCET, April 11th, 1903, p. 1010.

blow on the abdomen On opening the abdomen the cyst was tapped and then after its peritoneal covering had been incised enucleation was commenced The tumour invaded both broad ligaments completely so that it was impossible to say from which side it sprang originally The patient made an uninterrupted recovery Dr Purslow drew attention to the superiority of vaginal drainage to drainage through the abdominal incision —Dr Purslow also showed a Mucous Polypus of an unusual size removed from the cervix uteri — Dr. J G Emanuel showed a case of so called Crossed or Alternating Paralysis The patient was a young married woman, 25 years of age, who presented a complete motor paralysis of the face arm, and leg on the right side of the ordinary hemiplegic type, without wasting and with increased tendon jerks, ankle clonus and the Babinski reflex. There was no disturbance of sensation or coördination of the muscular or stereognostic senses The patient also exhibited paralysis of the left fifth cranial nerve, relative anæsthesia of the anterior part of the scalp, the face, the conjunctiva, the mucosa of the mouth, the lips, the tongue, the hard and soft palate, and the nose on the left side, together with hyperalgeeia over this area, there was also loss of power with wasting of the temporal, masseter, external pterygoid, and tensor palati muscles of the left side The senses of smell and taste were unimpaired The root of the left sixth cranial nerve was completely paralysed and there was paralysis of the left side of the tongue (hypoglossal nerve) All the ocular muscles, both intrinsic and extrinsic, acted well with the exception of the paralysed left external rectus There was no weakness of the left facial nerve or of the left arm and leg, but the tendon reflexes (triceps, wrist, patellar, and tendo Achillis) were exaggerated on the left side, ankle clonus and Babinski's reflex, however, were absent In addition to these localising symptoms there were certain well ma
as severe headaches cerebral
ic neuritis was absent. Dysphc
symptom and dysarthria was conspicuous and accompanied by a constant dribbling of saliva from the left angle of the mouth There was no paralysis of the larynx, neither was there incontinence of urine or fæces, albuminuria or glycosuria. The patient's general nutrition was good and her intellect was clear and keen These symptoms had come on insidiously and had gradually become more and more marked during a period of from six to seven months in spite of a long continued course of mercury and iodide of potassium in large doses Dr Emanuel thought that the symptoms were probably due to a tumour in the pons growing from the basisphenoid and the basioccipital region —Dr J D Stanley favoured the view of a gliomatous infiltration of the pons —Dr Wilfrid Glegg read a paper on Chronic Inflammation and Suppuration in the Ethmoid He described empyemata of the ethmoidal labyrinth in their latent, evident, open, and closed forms and discussed methods of diagnosis and differentiation of ethmoidal empyemata from purulent collections in other accessory cavities of the nose

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION —The annual general meeting of this society was held on Nov 13th, Dr V H Wyatt Wingrave the President, being in the chair —The following officers were elected for the ensuing year —President Mr John Bark (Liverpool) Vice Presidents Dr R H Woods (Dublin), Dr William Lamb (Birmingham) Mr St George O Reid and Dr Atwood Thorne Council (metropolitan) Dr Wyatt Wingrave (*ex officio*) Dr C O Hawthorne Mr W J Chichele Nourse, Dr. P H Abercrombie and Dr W Jobson Horne, (extra me
and Mr Samuel I
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Mr W Stuart Lc
Persistent Superficial Nasal Hyperæmia cured by removal of adenoids, in a male, aged 25 years —Mr Mayo Collier, speaking of this case, referred to several similar cases of his own where improvement had followed turbinal cautery —Dr J Dundas Grant spoke of a similar case where he had scarified the vessels and applied pure carbolic acid with excellent results. He thought that the vestibular portions of the nasal fossæ ought to be more carefully examined in these cases as follicular abscess was a cause of red nose —Dr Frederick Spicer showed a case of Accessory Tragus (bilateral) —Dr Dundas Grant showed a case of Fibroma of the Naso pharynx in a boy The operation for the removal of the growth was attended by remarkably little bleeding and was highly successful —Mr Mayo Collier showed a case of Frontal Sinus Disease in which recurrence of suppuration had followed the external operation and was only cured after removal of the greater part of the middle turbinal —Dr Dundas Grant strongly insisted on the principle that in these cases the anterior part, at least of the middle turbinal should be removed first of all before resorting to the external operation and that in many cases the performance of this partial turbinotomy would obviate the necessity for the much more severe external operation —Mr Bark instanced cases where in his opinion, a nasal operation had prevented the necessity for the radical operation for frontal sinus disease —Other cases and specimens were shown by Dr W H Kelson and Dr Jobson Horne —Dr W D Haslam described an Improved Screw Maxillary Antrum Perforator —Dr Perry Goldsmith (Canada) communicated notes of an unusual case of Empyema of the Maxillary Antrum — Mr Chichele Nourse showed a specimen of Radium

EDINBURGH ROYAL MEDICAL SOCIETY —A meeting of this society was held on Nov 20th, Dr D C L Fitzwilliams being in the chair —Dr C B Hamilton gave from the chair his presidential address, his subject being "The Hospital" After sketching shortly the evolution of the institution, he devoted himself mainly to the present abuse of hospitals maintained by charity Those he specially emphasised were (1) the use of the hospital by people who could afford to pay for medical advice, (2) the tendency among the poorer subscribers to think that their subscription entitled them to all the benefits of the institution, (3) the practice among outside medical men of sending troublesome cases into hospitals, and (4) the habit among hospital physicians of *keeping interesting cases under observation in the wards for* inordinate periods of time As remedies for some of these evils the President suggested that general hospitals might be maintained as fever hospitals and lunatic asylums are by taxation and that more homes should be provided where middle class patients could be treated at reasonable charges —Dr W E Carnegie Dickson read notes on a case of Hyperpyrexia The patient was a woman who had had previous attacks of chorea—one of them during pregnancy During labour with a subsequent child she developed nervous symptoms with choreic movement and acute pains in the limbs Hyperpyrexia to the extent of 108° F occurred a few days after parturition and in spite of energetic treatment, which was successful in reducing the temperature, the patient succumbed —A dissertation on Constipation by Dr W H Prentice was read in his absence by Dr B P Watson

CLINICAL SOCIETY OF MANCHESTER —The following
the session 1903 04
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Honorary treasurer. Mr C F H Kitchen Honorary librarian Dr J W. Hamill Committee Dr E Vipont Brown, Dr A. H Burgess Dr J Gray Clegg, Dr P R Cooper, Mr R D Cran Dr W E Fothergill Dr A Fraser Dr A B Fulton Dr G H Lancashire, Dr R G McGowan, Mr David Owen Dr R T Parkinson Mr J Howson Ray, Dr J H Taylor and Dr W K Walls Honorary auditors Dr W B Bell and Dr F C Scotson Honorary secretary Dr C Christopher Heywood —The opening meeting of the session was held on Oct 20th, when Dr Milligan, the new President delivered his presidential address on Recent Progress in Oto-Rhino-Laryngology and its Relation to General Medicine He said that the recent epidemics of influenza had been responsible for the production of many cases of accessory sinus suppuration and
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NORTH LONDON MEDICO-CHIRURGICAL SOCIETY — A clinical meeting of this society was held on Nov 12th, Mr Peyton T B Beale the President, being in the chair — Dr S E Dore showed a case of Lupus which had been successfully treated by the Finsen light in one part and by the x rays in another part The former had given the better result Various other modes of treatment had been adopted in this case without any good results. A photograph of the patient before treatment was exhibited.—Dr. T. J. Horder showed two cases of Paralysis Agitans accompanied by Osteo arthritis and a case of Tabes Dorsalis accompanied by Spondylitis Deformans.—Dr. A. Morison showed a case of Graves's Disease of recent date in a young man The wasting was very marked. There was no family history of this or of any allied diseases.—Dr. H. W. Syers showed a patient suffering from Spastic Paraplegia, the right leg being much more spastic than the left. The diagnosis was discussed.—Mr G. B. Mower White showed a case of Subspinous Dislocation of the Humerus in a girl, with a skiagram. There was some doubt as to whether the case was congenital or whether the condition followed infantile paralysis —Mr. White also showed a young woman from whose Knee joint a damaged Internal Semilunar Fibroid Cartilage had been removed.—Mr. Upcott Gill, Mr. A. Hair, and Mr. A. de Morgan showed pathological specimens.

Reviews and Notices of Books.

A Short Practice of Midwifery, embodying the Treatment adopted in the Rotunda Hospital, Dublin. By HENRY JELLETT, B A., M D., B Ch. Dub. Fourth edition, revised. With 152 Illustrations and an appendix containing the statistics of the hospital for the last 13 years. London : J. and A. Churchill. 1903. Demy 8vo. Pp. 557. Price 8*s.* 6*d.*

ONLY two years have elapsed since the appearance of the last edition of this text-book. The rapidity with which the various editions have been called for shows that it has met with much appreciation amongst students. The author has carefully revised the present edition but unfortunately has been compelled to increase its size. It is to be hoped that in the future he will be able to limit this tendency and to keep the book within its present convenient compass. In our notice of the last edition we called attention to a mistake in the table on p. 16. We see that it has been altered but the table still gives a very inaccurate account of the heights of the uterus, at any rate at the fourth and fifth months of pregnancy. We again would commend to Dr Jellett a study of the frozen sections of Bayer, Waldeyer, and Webster, as well as the writings of Pinard upon this point. On p. 220 we find the statement given on the authority of Winckel that on the ninth day after delivery the fundus of the uterus lies just above the upper margin of the symphysis pubis. We do not know to which of the writings of Winckel the author is referring. In the second edition of his "Lehrbuch der Geburtshülfe," on p. 186, we find that he says, "der fundus uteri am neunten tag des wochenbettes schon hinter der symphyse liegt," which can hardly be translated above the upper margin of the symphysis pubis. Dr. Jellett may quite well be referring to some other statement made by Winckel. We would point out, however, as Webster has shown, that Winckel's description of the rate of involution of the uterus, in the light of the frozen sections published by Webster himself and by others, cannot be accepted as entirely accurate. It is very interesting to note how the uterus might with some accuracy be described, as can be seen in the section published by Webster of the pelvis of a woman on the sixth day of the puerperium, as lying behind the symphysis pubis although the highest point of the organ is, of course, some distance above that level.

These criticisms of minor points in no way diminish our appreciation of the book as a whole. It is, as we have said before, a most excellent work and we can very strongly indeed recommend it to students. Several new illustrations have been inserted in this edition which still further increase the value of the book. The statistics of the Rotunda Hospital for the years 1901 and 1902 have been added to the appendix making up a total of 18,401 cases of labour.

Handbook of Diseases of the Ear, for the Use of Students and Practitioners. By RICHARD LAKE, F.R.C.S. Eng., Surgeon to the Royal Ear Hospital, Lecturer on Practical Otology, Medical Graduates' College With Three Coloured Plates London : Baillière, Tindall, and Cox. 1903 Pp. 232. Price 6*s.* net.

THERE is perhaps no department of medical study which is less known to the average student than otology and this lack of knowledge persists even after graduation in only too many cases. The removal of inspissated cerumen from the ear is often the only treatment ever adopted for this part of the body. For such a condition of things there are at least two main causes. It results partly from the fact that special departments in this subject are of somewhat recent foundation and partly from the fact that it is very rare for any question on otology to be asked at any examination, so that the student prefers to devote his attention to studies more remunerative from an examinational point of view. There is yet another reason for the prevailing lack of knowledge about diseases of the ear and that is the scarcity of text-books on this subject, and therefore we can extend a hearty welcome to the little work lying before us. In the first place, the book is not too big and this is distinctly a merit, for few students or practitioners have much desire or time for a lengthy treatise, and yet the book contains enough of the subject to supply the amount of information required for ordinary purposes. The introductory chapter on the anatomy of the ear is good and is illustrated by sections and diagrams ; it is not too elaborate and says nothing about the structure of the internal ear, but it devotes much attention to the middle ear and the mastoid cells. Other chapters deal with the examination of the patient and special symptoms and their import. A very good section is that devoted to the use of instruments. The most important lesions connected with the ear are those in which there is suppuration in the cavity of the tympanum and its neighbourhood, and Mr. Lake gives a very satisfactory account of middle-ear disease and its complications and an adequate description is given of the operations. The influence of diseases of the middle ear on life assurance is considered and a useful formulary concludes the volume. In the list of counter-irritants we find mentioned linimentum iodi and pigmentum iodi; the former has changed its name in the present Pharmacopœia and the latter has never had an official existence and its composition is liable to vary. We think well of this little volume and consider that it should have a wide field of usefulness.

LIBRARY TABLE.

The After-Treatment of Operations: A Manual for Practitioners and House Surgeons. By P. LOCKHART MUMMERY, F.R.C S. Eng , B.A , M.B., B.C. Cantab., Demonstrator of Operative Surgery, St. George's Hospital ; late Senior House Surgeon, St. George's Hospital. London: Baillière, Tindall, and Cox. 1903. Pp. 221. Price 5*s.* net.—The importance of the after-treatment of patients who have been submitted to operation has hardly been appreciated at its full value. The difference between the results obtained by various surgeons is to be attributed not so much to a difference in their operative skill but in great part to a difference in the care bestowed on the patient after the operation. All surgeons who have had much experience of operations will agree that in spite of a brilliantly performed operation a patient's life may be lost by lack of attention to some small but vital detail in the after-treatment. Important, then, as this subject is it is strange that so little attention has been accorded to it in surgical literature. Scattered about in the various treatises on surgery may be found brief references to special points but we believe that hitherto no attempt has been made to deal in one volume with the whole subject of the after-treatment of operations. Mr. Mummery has done the work well and his book should prove of great value to students and to those who have to look after patients subsequently to operations. Shock is probably at the present time the greatest danger after operation, for thanks to modern methods the risks of sepsis are but small. Mr Mummery prefers to consider shock and collapse as synonymous and we agree with him that shock is the better name of the two, especially as it has been received into several foreign languages. The author discusses the physiology of this condition and shows that the dilatation of the vessels of the splanchnic area, excited by injury to afferent nerves, is the chief cause of shock. The heart is only secondarily affected by the fall in venous blood pressure interfering with its intake. The treatment of shock is given very fully Warmth is of great value but if it is excessive and profuse perspiration is produced the shock will tend to be greatly increased. Position is of importance and the author expresses approval of bandaging the extremities to raise the blood pressure. Stimulants are of use but Mr. Mummery considers that their value in the treatment of shock is often over-estimated. They are best given in small repeated doses and should be combined with some other form of treatment, such as saline transfusion, which will raise the blood pressure. In the author's opinion transfusion is one of the most valuable remedies for the treatment of shock and with this we agree. The needle of an exploring syringe may be used and, as Mr. Mummery points out, it can be passed into the vein through the skin without any preliminary incision. Hæmorrhage after operations, post-anæsthetic complications, and treatment of the wound are also considered. Then follow chapters dealing with operations in special regions of the body, such as the head, the neck, and the abdomen. Each subject is accompanied by a useful little bibliography. An appendix deals with rectal, nasal, and subcutaneous methods of feeding. With reference to the last method the author thinks that in certain cases it may prove useful; "sterilised olive oil seems to give the best results." Diet, massage, exercises, and artificial limbs also receive consideration.

Portfolio of Dermochromes By Professor JACOBI of Freiburg im Breisgau English adaptation of text by J. J. PRINGLE, M.B., C M. Edin., F.R C.P. Lond., Physician to the Department for Diseases of the Skin at the Middlesex Hospital, London. Parts 3 and 4 London: Rebman, Limited. 1903. Pp. 180 and 80 Plates. Price for the whole work from £2 10*s* to £3 3*s*., according to form of binding.—In noticing Parts 1 and 2 of this work we spoke very favourably of the method of reproduction employed and the illustrations in the parts before us in no way fall short of their predecessors. With the issue of these two parts the work is completed. Part 4 deals chiefly with skin affections of syphilis and of other venereal diseases. A work like this appeals not only to those who are specially interested in dermatology but also and even more to those members of the profession who are in general practice and who wish to have coloured plates which may aid them in diagnosing any unusual diseases of the skin with which they may meet. The plates can be obtained loose in a portfolio or bound in various styles.

Anleitende Vorlesungen fur den Operations-Cursus an der Leiche. (*A Course of Operations on the Dead Body.*) Von Professor E. VON BERGMANN, Wirk. Geh.-Rath., Generalarzt, und Dr. H. ROCHS, Generalarzt im Königlich Preussichen Sanitats-Corps. II. Theil. Mit 76 Abbildungen. Berlin: Verlag von August Hirschwald. 1903. Pp. 207. Price 4 marks.—This part deals with the operations on the skull, the spine, the thorax, and the abdomen. We find described, somewhat briefly, the chief points of operations as carried out on the dead body and many more operations are included than are usually performed by students in this country; for instance, an account is given of the method of exposing the heart. The book is abundantly illustrated and is very good but its size prevents anything like a complete description of the methods of operating. Still, it should prove useful to a candidate for any of the higher surgical examinations in assisting him to carry out operations on the dead body.

The Complete Law in Nature Unveiled. By F. WARNER JONES, C E. London: *Knowledge* Office. 1903. Pp. 32. Price 1s. 6*d*.—We are not sure how far it is useful to notice a book of this singular description. The author having observed that a drop of water assumes a globular form when falling has confused the phenomena of surface tension with those of gravitation. Inasmuch as Newton did not attempt to assign a cause to gravitation but contented himself with its experimental verification the author takes this loophole to promulgate his own theory of "globulation." Although intended to complete the law of gravitation, the author makes no allusion to the observations of Newton and others on the movements of the heavenly bodies and the results arrived at, nor does he discuss the methods by which they came to these conclusions. The author speaks of the "similarity of construction" to be noticed "not only in our own bodies but throughout all nature" and concludes that this is the result of some great law which he subsequently calls "globulation"; but the necessity of reconciling this with the tendency that most inanimate things have of assuming a crystalline form has been overlooked. Again, in a review of the shortcomings of the law of gravitation we should expect at least a reference to the determinations of the mean density of the earth by Cavendish, Boys, Poynting, and others. His explanation of the circulation of the blood is notably curious.

Traité d'Analyse Chimique Quantitative. Par le Dr. BLAIS. (*Treatise on Quantitative Chemical Analysis.*) Paris: A. Maloine. 1903. Pp. 495. Price 6 francs.—This book is not intended for students but, as the author states, for pharmacists who are often asked to report on the quality of many substances in general use. The author gives preference to volumetric methods of analysis, 20 pages of the first part of the book being devoted to descriptions of determinations with standard solutions of acids and alkalies, whilst two pages suffice for the explanation of gravimetric methods. The second part deals with the estimation of various metals and non-metals and acid radicles, including a good account of recently improved methods for detecting minute quantities of arsenic in foodstuffs or in the organs. In the third part over 100 pages are devoted to the analysis of urine. Not only is the presence of abnormal constituents taken into consideration but also the deviation from average composition exhibited in the amounts of the normal constituents. To this end various co efficients showing these relationships are given and their use is explained. There are several figures descriptive of the microscopical appearance of the different urinary deposits. The remainder of this part is occupied with the examination of milk, beer, and wines. This book should prove very useful for the class for whom it is intended in France, but for English analysts and pharmacists there are trustworthy treatises accessible in our own language. Should anyone working at chemical analysis have in hand a number of French samples he would find the book help him to put his reports in such a form as to be more readily understood by Frenchmen.

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Home Nursing. By BERNARD MYERS. London: Baillière, Tindall, and Cox. 1903 Pp 131. Price 2*s.* 6*d.* net —This is a useful little book but we think that Dr. Myers goes rather beyond his definition of home nursing given in the first sentence: "By Home Nursing we mean to imply the care of the sick in their *own homes* by a person who has not had a *proper hospital training.*" The preface, too, states that "this book is written in the hope that it may be of service in guiding an *untrained nurse* in her duties when administering to the sick and dear ones at home" The ideal is excellent but, like most ideals, it will not be attained—in our opinion at least No one can learn nursing, anatomy, or physiology from a book. The book, however, is sound enough in itself and the directions are clearly laid down. Its great use will be for persons far removed from medical aid who must rely on their own resources and it possesses one singular advantage—namely, that it will not tempt the amateur nurse to take *too much* upon herself. Some recipes for sick-room cookery are given which are good except in one point—namely, in the recipe for white wine whey. Dr. Myers says, "Add two wine-glasses of cooking sherry." Now, what is called "cooking sherry" is an abomination. We do not mean to say that Oloroso at 60*s.* a dozen *need* be used but if sherry is not good enough to drink by itself it is certainly not good enough to cook with and more especially in the case of an invalid. There is plenty of *real* sound sherry to
purchased for 30*s.* a dozen or even less.

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The Sea Shore. By W. S FURNEAUX. L
Longmans, Green, and Co. 1903. Pp. 436.
net —This is an admirable book to give to a
lives by the sea or spends his holiday ther
most of the creatures here described are
on a chalky shore for the true hunting gr
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Treatment of Operations: A Manual for Practi-
House Surgeons. By P. LOCKHART MUMMERY,
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George's Hospital. London: Baillière, Tindall,
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a struggle with the General Medical Council. This resistance of the London corporations to the central authority appears to us, for reasons which we have given at length,[1] particularly unfortunate, but the care with which the ruling bodies of the corporations had selected and inspected the schools for teaching preliminary subjects was made apparent in the President's speech, and the applause which followed testified to the appreciation by the meeting of the sound intentions displayed. All this shows the discredit into which the violent tactics of the past decade have fallen.

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The Fear of Failure.

IN our last issue we dealt in some detail with the evidence adduced at the inquest upon Miss HICKMAN. The verdict emphasised the narrow boundary which separates insanity from an overwhelming sense of fear, and yet in many ways fear is not necessarily an evil. "Early and provident fear is the mother of safety." In these few words BURKE indicated his opinion of the political value of fear and its importance as a stimulus for the adoption of proper precautions. It is probable that every new venture in every walk of life, though instigated by the loftiest aspirations, is nevertheless accompanied by a haunting fear of failure. The greater the departure from the normal dull routine the more oppressing is the sense of fear due to the uncertainty of result. We wish to know the "end of this day's business ere it come." We are anxious to begin and when once fairly engaged upon the enterprise fear may be forgotten, but we have had the moment of panic, during which much courage may have been needed to hide the inner tumult of feeling.

In professional life fear, though repressed, waits largely upon every step. It takes long practice to overcome the fear of failure which is so oppressive to the conscientious efforts of youth. There are numberless pitfalls to be encountered at every turn: the possibility of failure of diagnosis, of failure of nerve at the moment of strain, of failure of some minute precaution upon which may depend the success of an operation and possibly the life of the patient. In a professional sense the fear of failure indicates a realisation of responsibility, and it is probably most acutely felt by those who have conscientiously striven to attain a thorough mastery of their profession, while those with only a moderate degree of academic equipment may be free from it, inasmuch as they do not know that there is any cause for anxiety. It is the knowledge of possible dangers which unnerves those with little practical training—those who could, perhaps, glibly describe serious surgical operations with the utmost minuteness but have never been called upon to demonstrate their powers by the simplest proceeding, those who may have frequently assisted with the greatest efficiency so long as they were carrying out instructions but have never experienced the weight of individual responsibility. The sense of fear does not imply incompetency. It is only the momentary panic which precedes action and it may sometimes arise from a sudden and overwhelming appreciation of the degree of confidence reposed in the individual and the dread lest some untoward circumstance should tend to show him unworthy of the trust. The fear of failure may be due to an inherent modesty, to a spirit of self-depreciation which recognises human limitations without doing justice to the chances of success where others have succeeded. It is the humility which recognises weakness and takes no thought of power; in the realisation that the time of trial has arrived panic may reign, obliterating consciousness of all the arduous steps by which the ascent has been made to the position which at once offers the chances of success or of failure. The moment of panic is probably experienced in every phase of life demanding individual judgment, skill, and action, and it can often only be met by self-control, by restraint, and by watchful care, and still more by turning from gloomy forebodings to the necessities of action, when self is wholly forgotten and the faculties are concentrated upon overcoming difficulties. FANNY KEMBLE vividly described her miseries before her first appearance as JULIET, how she "sat ready for execution" with the palms of her "hands pressed convulsively together," and yet this was the unseen prelude to a performance which roused a tumult of applause and established her fame as an actress After all, it is *le premier pas qui coûte;* when that is safely passed the rest is easy.

In the profession of medicine the first public appearance is necessarily less abrupt than in the life of an actor. In the training of medical students the gradations of increasing responsibility are made by easy stages, in which the rate of advance may scarcely be realised by the individual. As a clerk and as a dresser in the out-patient room and in the wards every step is checked, controlled, and judged by friendly critics who sympathise even while they stimulate to greater exertions, to more earnest work, and to greater self-control. The fear of failure is at this stage of small account compared to the fear of ridicule, the invariable sequel to any thoughtless or careless action or speech, a sequel which is supplied freely by fellow-students even when the teacher in mercy refrains. This chaffing accompaniment, when given and taken in good part, is of immense educational advantage. Under its influence the habit of self-control is gradually acquired until the student is ready to present himself for examinations which end in his qualification, when he may pass into practice or, preferably, become a resident officer at his hospital. It is in the fierce light of the publicity of these resident appointments that the first shock of responsibility, the first real fear of failure, may come, and the shock must come to all, though it may be greatly increased or diminished by individual temperament and by the practical or theoretical character of the previous work. Happily, the junior resident invariably feels that he is sure of the loyal support of his colleagues and of the members of the staff so long as he acts with prudence and so long as he is obviously doing his best Happily, also, he is generally a light hearted and healthy-minded person and, although fear of failure may momentarily possess him, he cheerfully goes on his way doing his duty and earning his reward of kindly praise from the staff when difficulties have been properly and judiciously encountered. Very rarely, indeed, is it found that the fear of failure hampers the work, unless it is a question of temperament, and yet the dire results which in the recent instance followed from yielding to its sway must render everyone connected with a hospital ready to echo the prayer of HENRY V.:—

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[1] THE LANCET, June 13th, 1903, p. 1650.

> "O god of battles, steel my soldiers' hearts,
> Possess them not with fear."

The Mansion House Council on the Dwellings of the Poor.

WHEN Mr. W. S. GILBERT wrote that "the law is the true embodiment of everything that's excellent" he probably did not expect to be taken too seriously; at any rate he could not have had in mind the attempts of our legislature to deal with the problem of providing sanitary dwellings for persons of limited means. The law has indeed shown itself to be well meaning but its efforts towards reform are hampered by the claims of vested interests, while the demands made upon the energies of Parliament and municipality alike by the strife of party and the struggle for place are excessive. In these circumstances such a body as the Mansion House Council on the Dwellings of the Poor is seen to great advantage, working as it does singly for the advancement of the health of the community, studying all questions relating to housing and sanitation, watching and, if possible, influencing public opinion on these matters, and promoting where practicable Parliamentary action.

The business like report of the council for the year ending June 30th, 1903, has recently been published and affords ample evidence of the necessity for some improvement in the existing methods of coping with overcrowding and the other hygienic shortcomings which discredit modern civilisation. We may take a case which is set forth in detail. According to the report on four occasions between March, 1898, and February, 1899, the attention of the St. Marylebone Vestry was called to a certain Nightingale-street and in the latter month a reply was received by the Mansion House Council to the effect that "the whole street has been condemned under the Housing of the Working Classes Act as unfit for human habitation and the matter is at the present time in the hands of the London County Council." In consequence of this statement a communication was sent to the London County Council and a correspondence was thus initiated which continued up to March, 1902. In May, 1902, the Marylebone borough council was asked to undertake the closing of the premises and it replied that its public health committee had considered the matter which was being fully dealt with. Five months later nothing had apparently been done and a further appeal was therefore made to the County Council. The discussion thus renewed was still proceeding when the report was published. It is stated that in 1900 the County Council "had prepared a scheme under Part 1 of the Housing of the Working Classes Act for the improvement of the area" and a reference to that Act throws a good deal of light upon the cause of the delay. The Act was passed in 1890 and it repealed and consolidated a number of other Acts. Under Part 1 when a sanitary authority wishes to deal with an unhealthy area an "official representation" has to be made to the authority by the medical officer of health of the district or, in certain cases, by a medical practitioner appointed for the purpose by the Home Secretary or the Local Government Board. Being thus prompted the sanitary authority is required to prepare an "improvement scheme" and if it fails in this duty a local inquiry may be ordered by the Home Secretary or the Local Government Board according to whether the property is situated in the metropolis or elsewhere. A scheme having been adopted notice of it has to be given in the local newspapers and to owners, occupiers, and others concerned and then a petition is presented by the sanitary authority to one or other of the higher authorities above mentioned praying for confirmation of the scheme. The confirming authority orders a local inquiry and if satisfied makes a "provisional order" which in due course is introduced as a Bill into Parliament and may, after being referred to a committee, attain the dignity of an Act. This is but a brief outline of the complicated procedure called for but it will suffice to explain why the repeated protests of the Mansion House Council bore so little evident fruit. The action of the council, however, brings out the inadequacy of existing legal methods and in this way should make for reform.

In another field more has been done by the council. At the instance of Mr. N. L. COHEN its executive committee prepared a report suggesting administrative and legislative changes which would accelerate the working of the Housing Acts and this was brought by Mr. CLAUDE HAY, M.P., and Dr. MACNAMARA, M.P., before a meeting of Members of Parliament and other interested persons with the object of securing from all sides of the House support to an amendment of the Acts. The result was the formation of an advisory committee on housing to embody in writing and to communicate to sympathetic Members of Parliament proposals for improvement in the law. This committee, with Sir JOHN GORST, M.P., at its head, at once put itself into communication with the President of the Local Government Board, the issue being the passing without opposition of the Housing of the Working Classes Act, 1903. Among the important provisions of this Act are two upon which the Mansion House Council lays special stress. Of these, the first is the scheme which insures that where 30 or more persons of the working classes are displaced under Parliamentary powers by public companies, school boards, or in the course of public improvements, the displacing authority must consult the Local Government Board and make such provision for rehousing as in the circumstances the Board thinks necessary. The second prohibits landlords from any longer taking advantage of Section 75 of the Housing Act of 1890 which enabled them, in cases where the annual rental did not exceed £20, to contract out of their obligation to see that at the commencement of a tenancy the house was reasonably fit for habitation. The general routine of the council's work shows an equally practical trend. By means of its local sanitary aid committees it has collected and brought to the notice of the sanitary authority for the particular district a large number of cases in which, owing to defective fittings or otherwise, houses were in a dangerous condition. A paid inspector made 3545 visits dealing with 1970 cases, of which 743 were remedied. In addition to this the council has circulated numerous leaflets and other publications dealing with questions of the prevention of disease and a series of Shaftesbury Lectures on public health were delivered by Mr. BUDGETT MEAKIN. Considering the very limited pecuniary resources of the council this is an excellent record only made possible by the gratuitous services of all the chief officers. There is, however, ample work for another paid inspector and the council would gladly welcome an access of annual subscribers of whom those contributing £1 or more become members of the general council. The honorary secretary is Mr. W. F. CRAIES, of 31, Imperial-buildings, Ludgate-circus, London, E.C., and the honorary treasurer is Sir J. C. DIMSDALE, Bart.

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The Progress of Experimental Psychology.

NEARLY ten years have elapsed since we drew attention[1] to the first course of lectures on experimental psychology then being delivered in London at University College. A few weeks ago, in our issue of Nov. 7th, we chronicled the recent addition of an experimental psychologist to the physiological staff of the University of Liverpool and the appointment of a lecturer on experimental psychology at King's College, London. During the interval between these announcements the accurate study of mental phenomena has made such continuous progress that experimental psychology may be said to have emerged quite definitely from the metaphysical atmosphere of mental philosophy which formerly enshrouded it. People now recognise that psychology is amenable to scientific treatment, and in a short time the prefix "experimental" will be regarded as superfluous for psychology as it is now for physiology.

It is hardly to be expected that the laboratories for psychological research which have sprung up during the past few years in England should equal in elaborateness those that are to be found abroad, especially in the United States. Nor has psychology been able to attract in this country the large number of original workers who are to be found on the continent, partly because we have hitherto neglected the encouragement of post-graduate research and partly because the value and bearing of the subject are so imperfectly recognised here. But although the laboratories at Cambridge, at King's College, London, and at University College, London, compare so unfavourably with the splendidly-equipped buildings, ranging from eight to 19 rooms, at Columbia, Harvard, Cornell, and other universities, the subject is nevertheless attracting an increasing number of workers in this country. A psychological society has of late been successfully founded and a new journal—the *British Journal of Psychology*—is to make its first appearance next January and will be devoted solely to psychological as distinguished from epistemological research. It is particularly in relation to education and to diseases of the nervous system that psychology must prove to be a valuable helpmate and it is here that we have some progress to report. Even though it be true that teachers are born and not made, they must nevertheless be properly trained. The fate that long ago befell apprenticeships in medicine and surgery is rapidly overtaking the archaic system of pupil teachers in schools. There is a growing feeling that teachers cannot but profit by an acquaintance with the broad lines of mental (and bodily) development of the child, by a training in pedagogical methods and by a knowledge of the psychological principles underlying those methods. Already in at least one university abroad teachers are familiarised during their course of training with cases of feeble intellect, myopia, deafness, chorea, and other defective conditions of the child's nervous system, in order that they may later recognise and direct medical attention to them at the earliest opportunity. For in primary schools, at least, the teacher stands literally *in loco parentis.* With regard to experimental work we have to note continued progress in the researches initiated by EBBINGHAUS upon memory, retentiveness and association, the collection of children's mental experiences by STANLEY HALL, the investigation of eye and hand movements during reading and writing, and the exact study of the reciprocal effects of mental and bodily exercise. These and allied problems when more completely worked out cannot fail either to modify or to give a scientific basis for various pedagogical maxims which have as yet a mere empirical foundation.

There is little fear of exaggerating the close relation between experimental psychology and diseases of the nervous system. It is hardly too much to say that the clinical investigation of every nervous or mental case constitutes a crude experiment in psychology. But such rough-and-ready determinations, adequate as they may be for our present methods of diagnosis and of treatment, are wholly insufficient to throw fresh light on the complex nature of our mental build. Indeed, no one can pretend to investigate pathological affections of the senses with the needful accuracy, or continue such original research as has been undertaken by KRÄPELIN upon the abnormal mental states induced by drugs and disease, unless he has had a far more thorough education in psychological methods than is at present generally offered to medical students. If the time has not come for urging that the intending psychiatrist needs a special training as much as the sanitary expert, we may at least hope that greater facilities and encouragement will soon be afforded for a more thorough training of such students in experimental psychology.

Annotations.

"Ne quid nimis."

THE ROYAL DENTAL HOSPITAL OF LONDON.

THE dental profession in general and the authorities of the Royal Dental Hospital in particular are to be congratulated on the results of their efforts to place the calling and practice of dentistry on a high professional level. The most important factor which has led to this progress has been the better provision of educational facilities and the equipment of an institution in which dentistry can be thoroughly studied in all its branches. Not afraid to face the question of cost and encouraged by the practical support of their own students the authorities at the Royal Dental Hospital may now claim to possess an admirably equipped dental school and hospital with accommodation ample alike for educational and charitable requirements. Since the acquirement of the new and commodious premises in Leicester-square the number of cases of relief amongst the necessitous classes has increased enormously and the committee of management earnestly appeals for donations in order that the debt on the building may be removed and that the excellent efforts to bring relief may not be relaxed for want of funds. Many interesting facts in connexion with this philanthropic work were related by several speakers on the occasion of the annual dinner of the staff and past and present students which was held at the Hotel Métropole on Nov 21st. Mr. F. J. Bennett, who occupied the chair, in proposing the toast of "The Past and Present Students," referred to the excellent relations existing between the students and the staff and took the occasion to make an appeal for the more extended study of the bacteriological problems in connexion with dental subjects, especially in regard to caries of the teeth. He suggested the founding of a professorship of dental bacteriology. The toast was responded to by Mr. G. W. Bateman and Mr. F. Butler, the former putting in a plea for a fuller appreciation of the importance of the mechanical side of dentistry than was at present given, and the latter gentleman expressing the thanks of the students for the opportunities supplied by the efforts of the school committee for studying the theory and learning the practice of dentistry. Mr. J. Bland-Sutton proposed the toast of "The Hospital and School" and congratulated those present on the equipment of the institution. Referring to the question of financial requirements, he said that, after all, it was a good thing to feel the presence of such a necessity because it spurred on those concerned to further efforts. In replying to this toast Mr. Walter Hills gave an interesting sketch of the history of the school and laid stress on the services rendered by Mr. C. Stoneham. The dean of the school, Mr. Morton Smale, also replied and acknowledged the assistance which had been so liberally provided by the students who had received their education at the institution. Mr. W. S. Nowell gave the toast of "The Visitors," to which Mr. J. Murray replied in a short speech in which he referred to the excellent relations existing between the dental and medical schools. A selection of music was given under the direction of Mr. H. Schartau and the proceedings came to a conclusion after Mr. A. Hopewell-Smith had proposed the health of the chairman which was suitably acknowledged.

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[1] THE LANCET, Jan. 13th, 1894, p. 102.

THE COMMON COLD.

IT is not long since a discussion of the "common cold" was every week claiming a considerable proportion of the space devoted in THE LANCET to the letters of correspondents. We doubt not that the same subject is prominent once more both in the minds of practitioners and in the emotions of those whom recent wet and cold have made singularly mindful of the unpleasantness and many mysterious qualities of the common cold. However doubtful the influence of chilling the surface of the body may be in the production of other ailments there can be no question as to the importance of the part which it plays in the causation of many colds; although chill alone is not sufficient to cause a coryza, another etiological factor is also necessary. Modern medical teaching eliminates the "chill" from many etiologies of disease in which the medical student of former times was taught to mention it, but in this ailment at least the time-honoured cause must probably be accepted. Many persons can count for certain upon the presence of a "cold" in their systems within a few hours of having experienced a chill. They state that they literally feel themselves catch cold. Whether this feeling merely bears witness to certain predisposing conditions for bacterial infection, as many maintain, or whether the vaso-motor changes underlying the feeling constitute the essential features of a cold, we should be sorry to have to decide. Of the curious susceptibility and disordered state of the vaso-motor system during the presence in the organism of a "cold" we have not much doubt. One noticeable symptom of this we do not remember to have read of until recently. This is the effect which warming a limited region of the body has in producing a chilled sensation of the remainder in the person of a patient who has a cold. If, for instance, having a cold a man sits sideways by a fire so that one leg is especially heated he experiences a chilling over the rest of his person and may even be caused to shiver. The effect is a kind of complement of what happens when a person similarly affected sits in a draught and thus chills part of his body to a degree of temperature lower than that of the rest. It seems equally mischievous to warm a part considerably more than the general surface of the body.

THE LANCASTER MEDICAL BOOK-CLUB.

THIS society has just celebrated its eightieth anniversary. It was formed on Nov. 11th, 1823, at a meeting of medical men in Lancaster. There were present Dr. David Campbell, Dr. Lawson Whalley, Dr. Edwards, Dr. Morton, Mr. J. Smith, Mr. Christopher Johnson, Mr. Howitt, and Mr. Statter. The old minute reads as follows:—

> It was resolved that it is expedient to establish a society to be called the Lancaster Medical Book Club which shall consist of the gentlemen present and such medical gentlemen resident in Lancaster as shall be elected hereafter by a majority of the existing members.

Dr. Campbell was appointed the president and Mr. Johnson the secretary. Dr. Campbell was the chief mover in the foundation of the Dispensary—now the Royal Infirmary—in 1781 Dr. Whalley graduated at the University of Edinburgh in 1804 and was physician to the county asylum. Mr. Johnson was a well-known practitioner who succeeded his father and was followed by his son and grandson in the practice. He was an able Latin scholar and did much good work in the early days of the microscope. Mr. J. Smith was surgeon to the prison from 1822 to 1837. The subscription was "one guinea for the first half year, commencing on St. Luke's day, 1823, and half a guinea for every following half year." At first it was simply a book club and the books were sold at the end of each half year. Amongst the earliest mentioned are Chevalier's Lectures, Guthrie on the Eye, Bichat's Anatomy, and Cooke's Morgagni. The minute books giving a continuous account of its doings are in the hands of the present secretary. In 1827 there is a quaint note "that all expenses which may hereafter be incurred in conducting the dissection of executed criminals shall be defrayed from the funds of the society," and in the accounts about the same time there is a payment of 10*s*. 6*d*. to the court keeper for his attendance at the dissections and later 10*s*. 6*d*. to Bond for dissections, and again "to cash paid door-keeper at Robinson's dissection 3*s*." In this year the first mention is made of a supper which has since been an annual affair. The entry reads: "Fines amounting to £1 2*s*. 11*d*. were collected and by an unanimous vote of the meeting appropriated towards the payment of the supper ordered on the occasion. The evening was spent in the greatest harmony and good order and the party seperated (*sic*) about a quarter before 12 o'clock." Next year we have a resolution that "1*s*. 6*d*. be allowed from the funds of the club towards the waiter," and shortly afterwards we read that "Mr. Johnson having been elected bailiff of the Commons for the borough of Lancaster generously treated the members of the club who were present with a supper, wine, and punch, and the evening was spent in the greatest harmony." After this it became the custom for any member upon receiving an appointment or on getting married to give a supper to his fellow members. The birth of children was marked by the infliction of a fine of two bottles of wine. It is stated that "two bottles of wine were discussed, being fines from Drs. Watson and Moore on the birth of their children." Again, Mr. Langshaw "washed his child's head in two bottles of wine." In 1848, however, the note is more laconic: "Dr. James Johnson paid his fine of two bottles." The medical library was started in 1841 when it was decided "that a medical library be formed and that in future the books, instead of being sold, should be deposited therein." The committee of the infirmary granted the use of the committee room and this kind permission is continued up to the present time. In 1877 meetings began to be held for the discussion of subjects of professional interest. The first paper was given by Dr. Hall on Experience in Midwifery and the next by Mr. Metcalfe Johnson on the Connexion between Insanity and Ganglionic Irritation. The later history of the club contains little of general interest. The members—33 in number—dine, or rather sup, together each year, meetings for general purposes are held as required, and the clinical section meets once a month during the winter.

THE COST OF SMALL-POX EPIDEMICS.

THE admirable letter on vaccination which Mrs. Garrett Anderson, M.D. Paris, honorary secretary of the Imperial Vaccination League, contributed to the *Times* in the early autumn has, we are glad to see, now been reprinted in pamphlet form. In this shape it should prove very useful to those who are endeavouring to spread over the country the truth with regard to the control of small-pox. We are rapidly approaching the time when definite steps must be taken with respect to the Vaccination Act of 1898 and it is earnestly to be hoped that Mr. Long will adopt a vigorous policy which will result in our following in this particular the example of Germany. Mrs. Garrett Anderson's pamphlet is an eminently common-sense document and it brings out with great clearness the need which obtains for general revaccination if we are ever thoroughly to control our small-pox and to reduce our isolation provision to vanishing point. Although the story told in this pamphlet is for the most part an oft-told tale it will, we fear, have to be narrated in plain terms again and again before the lower classes are able to appreciate the fact that primary vaccination practised in infancy is only protective against death and even attack for an uncertain number of years and that if epidemic small-pox is to become a thing of the past revaccination must be generally and systematically performed at or near the age at which the children in our elementary schools are about to terminate their school career. Until this is done we shall continue to employ both primary vaccination and isolation, neither of which is alone sufficient to prevent periodical and extensive outbreaks of the disease which necessitate our maintaining an elaborate system of accommodation for isolation and ambulance provision during non-epidemic times. Mrs. Garrett Anderson deals at some length with the question of expenditure and for the details our readers must be referred to the pamphlet itself. We may, however, add that the capital sums which have been borrowed to provide isolation and ambulance accommodation in respect of London for small-pox alone have amounted in all up to Sept. 30th, 1902, to £902,757. In other sections of the pamphlet the writer deals with (1) the actual sums raised year by year for the upkeep and working of the hospitals and for the maintenance of small-pox patients in epidemic years over and above the current expenditure in non-epidemic years; (2) the cost to the ratepayers of repaying the accumulated debt or capital account and for the current expenditure in epidemic and non epidemic years; (3) the economic loss to the community by the loss of life in an epidemic of small-pox; and (4) the indirect economic losses. In contrast with this expenditure, which is concisely set out in the pamphlet before us, attention is drawn to Germany with its 56,000,000 people where, by means of systematic vaccination and revaccination, epidemic small-pox has been banished from the land. In 1901 there were in Berlin, with over 1,888 848 inhabitants, 15 cases of small-pox with three deaths – two being unvaccinated children and one an adult aged 44 years vaccinated only in childhood. In this connexion it may be mentioned that in Germany primary vaccination is performed at a later age than is the case in this country—i.e., in Germany the child must be vaccinated before the end of the year next after the year of birth, a provision by which any given child may possibly be nearly two years old before being vaccinated. But in Berlin there is no elaborate system of hospital isolation such as obtains in London. The few cases of small-pox which occur in the metropolis of the German Empire are dealt with in the isolation ward of the Charité Hospital. With a generally well-revaccinated population and a people alive to the blessings which science can bestow there is no need to dread the proximity of a few cases of small-pox. It is to be hoped that the President of the Local Government Board will, when Parliament next assembles and he introduces his Bill providing for general revaccination on the same lines as primary vaccination, tell the House in some detail how these things are done in Germany. The highest patriotism is not to extol one's country when she is in the wrong but to persuade her to follow the example of other nations who have already found the light. In the matter of revaccination there are many people who would gladly support Mr. Long in a little of the mailed-fist policy.

ALCOHOL IN TROPICAL CLIMATES.

MAJOR FRIBIG, who has served in the Dutch East Indies since 1879 as an army surgeon, is the author of a paper on the influence of alcohol on Europeans in the tropics which was read recently at Aix-la-Chapelle. Acclimatisation, he says, is the result of a new regulation of the course of the blood by the vaso-motor system. The use of alcohol in a hot climate weakens that system and consequently interferes with the acclimature. Up to 1898 every Dutch soldier serving in the tropics used to receive 100 cubic centimetres of wine daily as part of his ration, but in May of that year General van Heutsz, Governor of Atjeh, reduced the allowance by one-half and, moreover, permitted the men who were so inclined to draw its value in money instead of the liquor. The officers, whose daily allowance was half a bottle of red wine per head, were also given a similar choice. From that moment, continues Major Fribig, the soldiers, stimulated by the example of their officers, became total abstainers in large numbers and exhibited a power of resistance against disease and fatigue, as well as an obedience to discipline, such as never before had been seen during any of the wars and expeditions which had occurred in Dutch India. The sick-rate at once began to fall, a remarkable diminution being observable even within the first three months. Major Fribig, who has been a total abstainer since 1894, used formerly to indulge in siestas but never does so now. The mid-day heat has no injurious effect on him and he is able to work during the afternoon with as clear a brain as in the morning. While he was a consumer of alcohol exercise under the sun's rays used to exhaust him very quickly, leaving him bathed in sweat and completely worn out. Now he can support the hardest outdoor work without blenching; although 46 years old he lately took part in an arduous expedition and was able to perform the longest and most toilsome marches with comparative ease. It was the same with the other abstainers but all who adhered to their wine suffered severely and in many cases broke down altogether. Major Fribig knows a great number of officers and men who continue to consume alcohol but are nevertheless able to carry out their duties efficiently in time of peace. They are therefore looked upon as fit for active service but no sooner are they put to the test of hard work than they succumb.. Their vascular systems are unable to withstand the extra strain; weakness or paralysis of the heart renders most of them absolutely unfit for duty. Many victims of the alcohol habit become moral wrecks, losing all energy and initiative Suicides amongst the troops in Dutch India are invariably consumers of alcohol. Among the diseases which Major Fribig found far more virulent and fatal in non abstainers than in abstainers are palustral fevers, hæmaturia, cholera, dysentery, cirrhosis of the liver, neurasthenia, cephalalgia, syphilis, and surgical injuries. The authorities in Dutch India are fully alive to the importance of the alcohol question. An influential association has been formed for the encouragement of total abstinence. Under its auspices several recreation rooms have been established in which non-alcoholic refreshments alone are sold, and in the principal garrison town a canteen has been opened where the only intoxicating beverage provided consists of a light wholesome beer. As an addendum Major Fribig, in conclusion, quotes the views of the following authorities: Dr. E Rudel, Dr. Hugo Hoppe, Dr. Livingstone, Captain Hutton, Count Götzen, Emin Pasha, Sir Henry Stanley, General Galliéni, and Lord Roberts The list could easily have been extended.

TREATMENT OF EMBOLISM OF THE LIMBS BY IMMEDIATE AND PROLONGED MASSAGE.

AT the meeting of the Société Médicale des Hôpitaux of Paris on Nov. 6th M. Pierre Merklen called attention to the treatment of embolism of the arteries of the limbs by massage—a method suggested to him by Professor Paul Berger who thus successfully treated embolism of the posterior tibial artery. When an artery is obliterated by an embolus a proximal clot forms and extends as far as the nearest branch given off by the artery; a distal clot also forms which is more extensive. If it extends very far it helps to prevent the establishment of the collateral circulation. Hence the indication is to break up the embolus or to drive it towards the periphery and to prevent the formation of the secondary clots. This result may be achieved spontaneously. Under the title "Histoire dramatique des Migrations d'un Caillot" Potain[1] related a case in which an embolus was first arrested at the bifurcation of the aorta, producing complete but transitory paraplegia, on the following day it had reached the external iliac artery, leaving the corresponding limb inert; on the third day it reached the popliteal artery, which was shown by the return of pulsations in the femoral artery and the limitation of the coldness and anæsthesia to the foot, which symptoms were transitory. M Galliard has published a case of embolism of the axillary artery in which there were severe pain in the shoulder and coldness and lividity of the limb; on the third day the pain and circulatory troubles were confined to the hand. The spontaneous disruption of an embolus is possible only when the artery is not entirely obliterated and the volume and consistence of the clot permit it to be carried into narrower channels. Perhaps also the pulsations of the blood help to break up the clot. Deroyer has proposed to break up the clot in embolism of the aorta by intermittent pressure on the bifurcation.[2] M. Merklen related the case of a man suffering from mitral regurgitation which had existed for 22 years. He was suddenly seized with severe pain in one of the lower limbs which became cold and anæsthetic up to a distance of several centimetres above the knee. The pulsations of the dorsalis pedis artery were absent but those of the femoral artery were retained For nearly two hours M. Merklen and a colleague, relieving one another so as to avoid interruption of the process, practised energetic *pétrissage* of the femoral, popliteal, and posterior tibia arteries until the patient declared that he was relieved. The limb was then wrapped up in cotton-wool. On the following day the relief had remained permanent and heat and sensibility had returned to the limb. The circulation evidently was re established, although there were numbness and formication and the pulsation of the dorsalis pedis could not be felt until several months later. The patient regained complete power in the limb. Probably the massage acted by breaking up as well as by moving the embolus which was driven towards the periphery to a point where arterial obstruction did not, thanks to the collateral circulation, interfere with the nutrition of the limb.

STANDARD ELECTRIC CURRENT PRESSURES AND FREQUENCIES.

THE electric currents used in medical practice, including the production of the x rays, being very largely taken from the mains of the various electrical supply companies, many of our readers will no doubt be interested in questions relative to the pressures and frequencies of such currents. At the present time the several electrical lighting and power authorities supply currents at great varieties of pressure and in view of the desirability of obviating this unsatisfactory state of affairs the Engineering Standards Committee, the offices of which are at 28, Victoria-street, Westminster, has made suggestions as to the minimum number of standard pressures which would best meet present commercial requirements and at the same time would utilise to the fullest extent the consumers existing appliances. The committee recommends direct current pressures of 110, 220, 440, and 500 volts, measured at the consumers' terminals, and at the same time it expresses the hope that these pressures will in future be universally adopted by the engineers advising corporations and others distributing electrical energy. On the question of frequencies the recommendations of the committee are (1) that 25 periods per second be the standard frequency for systems involving conversion to direct current by means of rotary converters, for large power schemes over long distances, and for three-phase railway work; and (2) that 50 periods per second be the standard frequency for mixed power and lighting on town-supply mains, for ordinary factory power plants, and for all medium size power plant where rotary converters are not employed.

THE FEATURES OF THE EPILEPTIC AURA AND ATTACK.

DR B. ONUF, assistant physician of the Craig Colony for Epileptics, New York State, has published in the *New York Medical Journal* of Oct. 31st an account of the features of the aura and the attack in epilepsy as studied carefully in 800 patients. The object of this investigation was to ascertain as accurately as possible the various clinical phenomena and the order of their sequence. Dr. Onuf states that the nature of the epileptic attack varied with the patient and that "the picture of the symptoms was not at all that given in the text books, to which he had seen almost as many exceptions as patients" The points to which special attention was paid were the epileptic "cry" preceding a fit, the character of the convulsions, the pupillary changes, the tendon reflexes after the fit, and the state of coma induced by the fit. The epileptic cry which ushered in the fit was really a "low, tremulous groan" and when the ear was accustomed to it the cry was readily recognisable. The pupils were not always dilated during the epileptic attack; sometimes they were contracted and insensitive to light and at other times they reacted to both light and accommodation. The convulsions were generally preceded by the well known epigastric or other sensory aura, the face then grew pale, the eyes rolled upwards, and with a characteristic cry the patient's body and limbs stiffened in a rigid spasm, in which condition he usually fell down. During this stage of rigidity (tonic spasm) the arms were abducted from the body, the elbows were flexed, and the fingers were tightly and stiffly contracted, while the lower limbs were rigidly extended. The state of tonic spasm lasted about 20 seconds or less; then succeeded violent and jerky movements of the limbs, the head, the jaws, the face, and the trunk (clonic spasms) The saliva collected in the mouth and was churned up into a foam by the spasmodic movements of the tongue which was often bitten between the teeth. During the clonic spasms the patients were liable to be thrown out of bed by the violence of the movements and in many cases had been known to sustain a dislocation of the shoulder or other injury from the fall. The clonic spasms did not always equally affect the two sides of the body; asymmetry of spasm was common. At the close of the convulsive stage the patient passed into a condition of moderate or deep coma. In this stage the senses of sight and hearing were abolished and cutaneous sensibility was impaired in proportion to the depth of the coma, being complete when the coma was profound. The knee jerks were liable to be exaggerated immediately after a fit owing to the condition of exhaustion produced by the epileptic discharge in the cerebral hemispheres, during which time the bulbo spinal reflex arc was in a state of temporary over-action as regards myotatic irritability, so that the tendon reflexes for a brief period were exaggerated.

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[1] Semaine Médicale, 1888, p 65.
[2] Gazette des Hôpitaux, 1890.

CHARITY AND CIGARS.

ACCORDING to the announcement of a daily contemporary a "famous tobacco planter, cigar and cigarette maker, has made an unparaleled offer," which is that during next month he proposes "to set aside one-fifth of the entire returns emanating from his extensive advertising throughout the country for the benefit of hospitals and charities." "Every smoker has thus an opportunity of obtaining high-class cigars, smoking mixture, or cigarettes at an exceedingly low price, at the same time assisting the most deserving of charities." "The great advantage" that this famous tobacco planter claims for his specialities "is the entire absence of arsenic, as all the tobaccos of his products are grown on his own vast plantations on virgin soil only." We certainly think it desirable that cigars should be free from arsenic but we are not aware that this form of contamination of tobacco is by any means the rule. In our experience the presence of even minute amounts of arsenic in tobacco is very rare. In a paper, however, on New Zealand Cancer Statistics published in the *Polyclinic* for August, 1902, reference is made to the presence of arsenic in the tobacco smoked in New Zealand which is obtained from the United States and in the same number of that journal Mr. Jonathan Hutchinson discusses the question of arsenic, cancer, and arsenic in tobacco, but no definite conclusion appears to be drawn as to arsenical tobacco being the cause of cancer. It is, of course, just possible that the tobacco plant might absorb arsenic from a soil fertilised with chemical manure contaminated with arsenic, such as, for example, "superphosphate." We note that the founder of the scheme alluded to above states in a pamphlet that samples were recently sent to many well-known analysts and to THE LANCET, with the result that "every report said 'no trace of arsenic or other poisonous metals can be traced.'" We did not say this. What we did say was: "We have carefully submitted the cigars to a series of tests for the most minute amount of arsenic, but in no instance was there the slightest evidence of the presence of this poisonous metal"; and introductory to this was the following: "The statement has reached us more than once that tobacco leaf occasionally contains arsenic, but we have never been able to substantiate it." In view of this observation we clearly inferred that the fact of the cigars being free from arsenic was not surprising. As a correspondent has suggested, this enterprising tobacco grower has evidently taken his cue from the experiment of the hospital shopping day. The tobacco grower is, we are confident, a well-meaning man but his method is not free from objection. Far better would it be if the smoker practised self-denial and devoted to charity the money thus saved.

THE WARREN TRIENNIAL PRIZE.

THE Warren triennial prize was founded by the late Dr. J. Mason Warren in memory of his father and his will provides that the accumulated interest of the fund shall be awarded every three years to the best dissertation, considered worthy of a premium, on some subject in physiology, surgery, or pathological anatomy, the arbitrators being the physicians and surgeons of the Massachusetts General Hospital. The subject for competition for the year 1904 is on some special subject in physiology, surgery, or pathology, so that the whole range of medicine is at the disposal of the candidate. A high value will be placed on original work. Dissertations, which must be legibly written and bound so that they can be easily handled, should be sent to Dr. Herbert B. Howard, resident physician at the Massachusetts General Hospital, Boston, before April 14th, 1904. The name of the writer must be inclosed in a sealed envelope. The amount of the prize for the year 1904 will be $500.

FRACTURE OF THE TIBIA AND FIBULA SIMULATING POTT'S FRACTURE.

IN the *Scottish Medical and Surgical Journal* for October Dr. G. T. Beatson has published an important case showing that a fracture of the tibia and fibula may easily be mistaken for Pott's fracture and demonstrating the value of radiography in revealing mistakes in diagnosis which otherwise would never come to light. A youth, aged 18 years, injured his left ankle in falling from a height of 10 or 12 feet. All the characteristic features of an extreme form of Pott's fracture were present. There were considerable swelling from effusion of blood, great outward displacement of the foot, a marked prominence on the inner side of the joint, and backward displacement of the heel. Dupuytren's splint was applied on the inner side of the leg and the deformity apparently was corrected. Two or three days later the foot did not seem to be in normal relation with the internal malleolus. Skiagraphy showed an oblique fracture of both bones of the leg a little above the ankle. Yet there were a prominence on the inner side of the ankle, eversion of the foot, and backward projection of the heel. The prominence, however, was not caused by the internal malleolus but by the lower end of the upper fragment of the tibia, while the eversion of the foot was not caused by displacement of the astragalus but by the foot being carried outwards with the fractured bones. Resection of the ends of the upper fragments of the bones and wiring suggested itself, but the pressure of the splint on the tightly stretched skin, though carefully applied, had caused sloughing. Asepsis could not therefore be guaranteed and suppurative arthritis of the ankle might be produced if an operation was performed. The leg was placed on a posterior splint with a foot-piece at right angles. Passive movements of the ankle were soon commenced. Five months later the patient could walk well and the movements of the ankle were excellent but there was considerable deformity. Dr. Beatson suggests that some of the cases diagnosed as Pott's fracture in which recovery did not take place with the symmetry which some writers say should always follow were of this nature and that the surgeon was unjustly blamed. The case emphasises the importance of the routine skiagraphy of fractures, even in cases which apparently are characteristic examples of common fractures.

FOOD ADULTERATION IN IRELAND.

THE King's visit to Ireland, the recent Land Act, and to a certain extent the fiscal controversy have again drawn special attention to that really charming country not only as a place for permanent residence but as a unique field for holiday rambling. Sportsmen, admirers of scenery, and students of customs and manners, it is well known, may find much to see and to appreciate, though some times it must be confessed they have to be content to take things rather in the rough. Whilst admitting, however, the claims of Ireland as a health and pleasure resort we must deplore the evidently remiss way in which the adulteration laws are administered. Cases have been brought to our notice in the neighbourhood of a country town not far from Dublin in which visitors were not only overcharged but were supplied with milk deprived of one-half its fat and with 20 per cent. added water—in fact, stuff we might expect to find sold in the slums of a great city and not in a country where the farm is everything—and there is reason to believe that this is a fairly common practice. It is quite clear to anyone with experience of local matters in Ireland that the analytical chemist is not sufficiently in evidence and we think it high time that the Institute of Chemistry should give its attention to the working or non-working of the system of cumulative appointments by which merely a few guineas a year are added to the income of some distinguished man. Skim milk, watery butter, diluted whisky, and numerous other frauds prevail extensively in the country districts. All this might be remedied by each county council appointing an analyst holding the qualification of the Institute of Chemistry (which, by the way, claims authority in Ireland) and providing him with a reasonable field for his duties which they should see were carried out. We are convinced that such appointments would soon check the scandals which we have mentioned and would benefit not only visitors but the inhabitants of the country.

OVERCROWDING IN BETHNAL GREEN.

THE action of the Bethnal Green borough council in prosecuting for overcrowding is to be warmly commended. The council took action against 12 persons, all of them aliens and most of them ignorant of English, under a by-law made by the council under the Public Health (London) Act to prevent overcrowding of sleeping rooms. The state of things revealed by the proceedings bears witness that the borough council cannot be accused of hyper-sensibility with regard to their view of what constitutes overcrowding. In some cases the defendant, tenant of a single room, had sublet the room and men and women were herding together, sleeping sometimes in boxes or on the floor. In one case the tenant, Hyman Inberwitch, occupied a room about 14 feet square by eight feet in height as a sleeping apartment for himself, his wife, another woman, his son aged 19 years, and a girl aged 13 years, there being also a baby some months old. His other room, about 13 feet by eight and a half feet, he also sublet and it was found to be occupied by five adult males. The prosecution resulted in fines, with imprisonment in default, being imposed. The alien population in the Bethnal Green district has absorbed whole streets and the overcrowding evil reached such a point that the borough council appointed extra inspectors and had midnight visits paid with a view to prosecution. It may seem a terrible thing to have to prosecute the very poor for offences which are the direct outcome of the pinch of poverty. The general good, however, must be aimed at and conditions more provocative of all kinds of immorality as well as every species of insanitary evil can hardly be imagined than those which the Bethnal Green borough council has thus determined to quell. Under what conditions can these wretched aliens have lived in their own land if they are willing to exchange them for such terrible circumstances in a strange country?

FIRE AT A BOARD SCHOOL.

ON Wednesday, Nov. 25th, half an hour after the children had begun lessons, the Shaftesbury-road Board School East Ham, was discovered to be on fire. Very fortunately the outbreak of the fire was in a room on the top floor and not at the bottom of the building. On this top floor were 624 boys and the headmaster, Mr. E. Richardson, at once told his assistants to take the boys downstairs into the playgrounds. The boys left in perfect order, as did also 623 girls who were on the floor below and 630 infants who were on the ground floor. The teachers in these two last departments were assisted in getting the children out by a number of policemen. The fire was got under in three hours, the damage being practically confined to the top floor. It is appalling to think of what might have happened had the fire broken out in a ground-floor room or had there been any panic, and the greatest credit is due to all concerned, both children and teachers, for their admirable behaviour in the face of a great danger. Fire is a circumstance which tries the nerves of the strongest, panic is particularly likely to occur, and what panic combined with fire means the records of the Ring Theatre in Vienna, the Paris Charity Bazaar, and the appalling calamity which happened some 30 years ago at a church in Mexico show only too well.

DIARRHŒA AND POLLUTED WATER.

OF late years attention has been called from time to time to outbreaks or epidemics of typhoid fever through contaminated water-supplies, such as those at Maidstone and King's Lynn, but a widespread epidemic of diarrhœa with a serious mortality commencing and ending suddenly as the cause came into operation and was subsequently removed on being discovered, like that recently recorded by Dr. J. C. Thresh, is extremely rare if not almost unprecedented. It commenced suddenly on July 25th of the present year and ended as abruptly on August 25th, having lasted just one calendar month, during which no fewer than 1400 persons of both sexes and all ages and classes were attacked and 14, of whom 13 were young children, died. The area comprised a portion of the borough of Chelmsford and a single village within the limits of the rural sanitary district, each of which derived its water-supply from the same source, in which no other section of the population, urban or rural, shared, and beyond the limits of the incriminated supply there was no excess of diarrhœa. The present year being remarkable for its unusually low diarrhœal death-rate served to emphasise the local incidence. An inspection of the waterworks showed that the supply was derived from several deep wells and distributed over distinct areas. In this particular locality the water was pumped from a deep and unimpeachable well into a small and uncovered reservoir. But the reservoir, instead of being surrounded by a parapet, was not raised above the level of the surrounding ground and was therefore exposed to pollution by surface drainage and the entrance of storm waters during heavy rains. This actually took place in the storm of July 23rd, or two days prior to the occurrence of the first cases, the source of the trouble being evidently an adjoining plot of garden ground manured with road sweepings and the like. Though not followed by such grave consequences the pollution of the tank or reservoir

Members of the College to the Council would give dignity to that body and a president chosen by a council so constituted would indeed be the President of the whole College.

Dr. G DANFORD THOMAS, in seconding the motion, expressed the hope that such a conference as this motion suggested might lead to a settlement of the question. That there were difficulties was no argument against attempting to settle the matter. Both sides might be willing to give way a little in order to arrive at a satisfactory result.

Mr. J. FEARNLEY thought that a deputation would be useless.

The motion was carried *nemine contradicente.*

The third motion, proposed by Dr. W. G. DICKINSON, was as follows :—

> That this meeting regrets the inadequate information given to Fellows and Members regarding the proceedings of the Council and is of opinion that the complete minutes of the Council meetings should be accessible to any Member of the corporation at reasonable hours.

He acknowledged that it was true that an abstract of the minutes of the Council was suspended in the hall of the College in a bad light but this was not sufficient. The details given were not enough, for the Members wanted to know all that the minutes of the Council contained.

Mr. J. BRINDLEY JAMES seconded the motion and urged that the Members would like to know the reasons why the Conjoint Committee decided not to enter into negotiations with the University of London.

The PRESIDENT pointed out that the minutes suspended in the hall were the full minutes of the Council with only such omissions as were absolutely indispensable. With regard to the negotiations about the union with the University of London the full record had appeared in the annual report of the Council. As to inspection of the minutes by any Member of the corporation he might point out that sometimes charges brought against Members of the College had to be considered by the Council and in some cases these charges could not be substantiated and therefore it was very undesirable that such accusations should be made public. With such exceptions as these the full minutes were suspended in the hall. The introducer of the motion had complained that the minutes were placed in a dark corner of the hall ; this was, of course, quite unintentional and if a better position could be found the minutes should be placed there.

After hearing the explanation of the President Dr. DICKINSON requested leave to withdraw the motion. By the permission of the meeting this was done.

In the absence of Mr George Brown Mr. H. NELSON HARDY brought forward the fourth motion :—

> That this meeting considers it unfortunate that the Council should have placed before it their reply to a report from the inspectors of the General Medical Council without publishing at the same time the report itself and further trusts that the Council will take immediate steps to bring the dispute with the General Medical Council to an amicable settlement.

He said that the dispute had now been going on for ten years and it was entirely due to the Council of the College permitting a part of medical education to be carried on in secondary schools.

Mr. J. C. SMITH seconded the motion and expressed the opinion that it was a great pity that the Council of the College should run counter to the opinion of the General Medical Council, the supreme body in medical education. He could see no advantage in any way in the course pursued by the Council of the College and by the Royal College of Physicians of London.

The PRESIDENT thought it would be best if he were to explain the present situation. The Council of the College had always been most careful in what it had done in this matter. It had thought it only reasonable that chemistry, physics, and biology should be studied before passing the preliminary examinations, or at least before the student began his more strictly medical studies, and this arrangement gave him more time to devote to the studies more closely allied to his future work. That this arrangement was really beneficial to the scientific education of the country had been recognised Many eminent scientific men had expressed the highest opinion of the value of the action of the College and one had said that it had contributed greatly to the general study of science in England. The report of the visiting inspectors of the General Medical Council had certainly been unfavourable, but their opinion was still more unfavourable of some other examining bodies. In fact, the general report made by the visitors stated that there was only one examining body which made an approach to a satisfactory attempt at an examination in chemistry and that was the Conjoint Board of England. In its opposition to the action of the General Medical Council the Royal College of Surgeons of England and the Royal College of Physicians of London were absolutely at one.

Mr. COLLINGWOOD opposed the motion, mentioning that in the examinations for the services the percentage of candidates from the College of Surgeons who failed was less than from almost any other examining body.

Dr. DICKINSON thought that as this was a matter affecting the external relations of the College it should have been brought before the Members.

Sir HENRY G. HOWSE said that the Council had been blamed for allowing scientific study to occur before registration but it was really for the benefit of the student. At first the Conjoint Board had recognised those schools which were recognised by the Science and Art Department, but the Council soon began to investigate by personal inspection the recognised schools and many had been struck off the list. The requirements of the Conjoint Board were great and certainly no other examining body took such pains to insure the high character of the teaching bodies it recognised.

When the motion was put to the vote it was lost by 9 votes to 8.

Mr. JOSEPH SMITH then proposed a vote of thanks to the President for presiding at the meeting He also expressed his regret at the death of Sir Robert M. Craven who was a very regular attendant at these annual meetings and suggested that a vote of condolence should be sent to his family.

The PRESIDENT, in acknowledging the vote of thanks, stated that he would carry out the wish of the meeting by conveying to the members of Sir R Craven's family the vote of condolence.

THE INTERNATIONAL SANITARY CONFERENCE.

MEETING IN PARIS.

THE International Sanitary Conference has been working with but little respite for more than a month. The discussions were long and arduous and the result, we are officially informed, is to be kept secret until after Nov. 30th. There now only remains the task of drawing up the text of the agreement which has been accepted in principle. This work is left in the hands of the secretarial staff while most of the delegates have returned to their respective countries but they are all to assemble again in Paris on Nov. 30th To some delegates this opportunity of consulting their Governments is especially welcome. As it was determined that no communication should be made to the press concerning the nature of the debates and the resolutions adopted we cannot guarantee the absolute accuracy of such information as, notwithstanding this determination, we have been able to obtain. Still it would appear that all the proposals made were not adopted. A certain number of resolutions have been unanimously approved and there will be no difficulty in their embodiment as part of the international obligations which it is sought to impose. Then there were other propositions which were approved by all the delegates in principle but to which, nevertheless, some of the delegates did not venture to pledge their Governments. Finally, there were other proposals that were looked upon as so far-reaching and as involving such important issues that a minority of delegates did not dare to vote either for or against them and were anxious to refer these questions to their Governments. In regard to the nature of the problems involved it may safely be said that the measures to be taken to prevent the spread of cholera and plague from country to country held a prominent place. The advanced school of sanitarians has demonstrated more and more conclusively that impediments to communications can be reduced to a minimum ; in other words, strenuous efforts were made to abolish what little remains of the old quarantine practices. But this tendency, it is said, met with energetic resistance on the part of the representatives of Turkey, Greece, and Bulgaria. The Turkish empire has ports on three different seas and a multiplicity of ports that are close to plague-stricken countries. The Greeks plead that they have always enforced quarantine and, with the one exception necessary to prove the rule, have always escaped epidemics. During the Crimean war the quarantine regulations could not be applied and then they had cholera. Ever since the independence of Greece and its constitution as a kingdom the country has not been infected by persons coming from abroad. As for the argument that the period of incubation is only five days and that therefore the passengers and crews are effectively in quarantine during the journey, for the period of danger is over by the time when they arrive in port, this does not apply to Turkey, Bulgaria, and Greece. These countries are farther east and can be reached in less than five days from places where plague exists. Then, again, if one of these three Powers yielded it would be quarantined by the other two. The question of rats as the transmitters of plague was also discussed at length and in this matter unanimity existed. Everyone approved of the measures which it was proposed to take against these dangerous vermin. Then there was a debate on mosquitoes and yellow fever and, finally, it has been recognised that a permanent international sanitary bureau might render considerable service. What would be the precise functions of such an institution has not yet been stated but it is generally agreed that its headquarters should be in Paris. Undoubtedly it would be difficult to find a more pleasant city or one of easier access from all parts of the world.

ASYLUM REPORTS.

Glasgow District Asylum, Woodilee (Report for the Year ended May 15th, 1903).—The average number of patients resident during the year was 890, comprising 468 males and 422 females. The admissions during the year amounted to 280—viz., 139 males and 141 females. Of these 204 were first admissions. Dr. Hamilton C. Marr, the medical superintendent, states in his report that the increase of lunacy in the agricultural district and city of Glasgow is not alarming. "It must be borne in mind that there is a constant flow from the country districts to the city which has a potent influence on the rate of the production of insanity. The young and strong, both in mind and body, seek the city and add to its mental health, leaving behind them, unfortunately, in the country the infirm and incapable. Hence the apparent anomaly in the fact that the Highlands of Scotland have a very much relatively larger insane population than populated districts such as Glasgow, where the causes of insanity are rife." In 31·3 per cent. of the patients admitted there was a history of intemperance. "While the victims of alcoholism are a source of misery and degradation to others, it must be remembered they are often the source of the production of insanity in others. ... .. The idiot, the epileptic, the mentally weak and unstable, are all legacies to his country of the victim of alcoholism." The number of patients discharged as recovered during the year amounted to 128—viz., 59 males and 69 females—or 14·4 per cent. of the average number resident. The deaths during the year amounted to 99, or 11·1 per cent. as calculated on the same basis. Of the deaths eight each were due to epilepsy and cardiac disease, ten to pneumonia, 15 each to senile decay and general paralysis of the insane, 17 to pulmonary and other forms of tuberculosis, and the rest to other causes. The Commissioner in Lunacy states in his report that the patients were well-dressed and suitably provided for, that the wards and day-rooms were bright in appearance, and that the medical case-books were well and carefully kept. A sanatorium for consumptive patients was opened on Dec. 18th, 1902; the buildings are situated in close proximity to the asylum and are lighted by electricity and have all the needful equipment for carrying out the open-air treatment of patients. The committee of management states in its report that two additional farms have been added to the asylum estate to produce sufficient crops to meet the requirements of the institution and to provide for the healthful employment of a larger number of patients.

[illegible]

females. Of these, 142 were first admissions. Dr. D. F. Rambaut, the medical superintendent, states in his report that a large number of patients of both sexes have been usefully employed during the year. "Knitting by machinery has been introduced and mat-making has been commenced, while a sewing room has proved a marked success. A further extension in this direction would prove economical and beneficial to the patients." The health of the institution suffered severely from an epidemic of influenza which appeared in the spring of 1902. 259 patients and many of the attendants were attacked and many patients died from this disease. The infirmary wards proved quite inadequate for the number of those attacked and it was necessary to employ temporarily another assistant medical officer and several attendants. The number of patients discharged as recovered during the year amounted to 83—viz., 40 males and 43 females, or 10·6 per cent. of the average number resident. The deaths during the year amounted to 144, or 18·5 per cent. as calculated on the same basis. Of the deaths two were due to renal disease, four each to epilepsy and pneumonia, five to colitis, seven to cerebral hæmorrhage, 11 to general paralysis of the insane, 13 to senile decay, 14 to pulmonary and other forms of tuberculosis, 18 to cardiac disease, 44 to influenza, and the rest to other causes. The death-rate was the highest ever recorded in the history of the asylum and this was largely due to the severe epidemic of influenza in the spring of 1902. During the year the cost of maintenance of patients per week has been 9*s.* 3¾*d.* per head, as against 8*s.* 11⅛*d.* per week during the previous year. "The increase is due chiefly to the increased price of meat, to the improvement of the dietary of the attendants, and to the reduction of the average number [of patients] resident." The farm and garden account shows a profit of £507 13*s.* as compared with a profit of £243 8*s.* in the previous year. The Commissioners in Lunacy state in their report that the wards and dormitories were, on the whole, in very good condition and well ventilated, that the general health of the institution was good, that the patients were orderly in their behaviour and neat in their dress, that the dietary of the patients was satisfactory both in quantity and quality, and that the medical case-books were well and carefully kept. "The means of combating an outbreak of fire and of securing the escape of patients are by no means satisfactory" and various improvements and alterations are suggested by the Commissioners. The committee of management states in its report that the sum of £498 7*s.* was expended in additions, alterations, and repairs.

Roxburgh, Berwick, and Selkirk District Asylum (Report for the year ending May 15th, 1903).—The average number of patients during the year was 321, comprising 142 males and 179 females. The admissions during the year amounted to 78—viz., 39 males and 39 females. Of these 65 were first admissions. Dr. J. Carlyle Johnstone, the medical superintendent, states in his report that owing to the want of accommodation at the asylum, "admission continues to be refused to all private patients, except in cases of emergency and in cases which would otherwise be placed on the rates and sent in as chargeable to parishes." It frequently occurs that persons who were at first quite willing to pay for their relatives as private patients show a marked unwillingness to contribute anything towards the cost of their maintenance when they have once been admitted as patients of the "pauper" class. Dr. Johnstone is of opinion that provision ought to be made in the district asylum for every case of insanity occurring in the district in which a sum can be paid sufficient to meet maintenance and expenses, with a reasonable addition for interest on capital, deductions being made in deserving and necessitous cases. Hereditary predisposition to mental disorder was ascertained to exist in 45 per cent. of the cases admitted, while in 36 per cent. of the cases suicidal tendencies were present. The physical condition of the patients was "bad in 59 cases and very bad in five cases." In 50 per cent. more or less serious physical disease was present. The number of patients discharged as recovered during the year amounted to 29—viz., 14 males and 15 females, or 9 per cent. of the average number resident. The deaths during the year amounted to 27, or 8·4 per cent. as calculated on the same basis. Of the deaths three were due to senile decay, six each to cardiac disease and general paralysis of the insane, eight to pulmonary and other forms of tuberculosis, and the rest to other causes. The general health of the inmates has, on the whole, been fairly good. Electric lighting has been recently established throughout the building and the brief trials made have given every satisfaction. "The question of the adequacy of protection from fire in the asylum has received the careful consideration of the board of management and it has been decided to carry out various works with the view of making better provision for the escape of the inmates and for checking the spread of fire in the event of an outbreak." The Commissioner in Lunacy states in his report that the asylum was in good order, that the appearance of the wards and day rooms was bright and cheerful, that the patients showed a general appearance of contentment and of kindly and judicious care, and that the medical case-books were well and regularly kept. The committee of management states in its report that the sum of £10,119 4*s* was spent during the year upon the asylum buildings, improvements, furniture, and electric light installation.

MEDICINE AND THE LAW.

A County Court Judge and the Dentists Act.

AT Wellington, Somerset, before his honour Judge Beresford, a point was raised in the course of administration proceedings under section 122 of the Bankruptcy Act, 1883, which the learned judge appears to have treated in a manner fortunately unusual. The individual whose insolvency formed the subject of inquiry was a married man with a family carrying on business as an insurance agent. His debts amounted to £37 18*s*. 2*d*. and among these was scheduled a claim for £4 10*s* by the "English and American Artificial Tooth Company." To the inclusion of this item one of the other creditors, Dr. William Spettigue, a medical man practising at Wellington, objected on the ground that the creditors named were not upon the Dental Register and therefore could not recover for the services in respect of which they claimed. His honour Judge Beresford's criticism upon Dr. Spettigue's letter in which this point was put forward was that "this learned gentleman had better have become a lawyer," and the reporter who chronicles the judicial humour in the local newspaper with the usual parentheses of "laughter" and "more laughter" records that he further said "playfully" to the registrar, "I think you had better impound this letter as one of the curiosities of the court," after which he proceeded to admit the "English and American Artificial Tooth Company" to the list of creditors It would be interesting to know how his honour Judge Beresford would justify himself in holding up to derision a medical man or any other suitor before him because he claimed to be acquainted with the law directly affecting his own profession. It would also be instructive to know upon what grounds the "English and American Artificial Tooth Company" was allowed by the learned county court judge to rank as creditors unless it were upon the ground that it was owed a debt which it could have recovered by legal process. Under the fifth section of the Dentists Act, 1878, "a person shall not be entitled to recover any fee or charge in any court for the performance of any operation or for any dental attendance or advice unless he is registered under this Act or is a legally qualified medical practitioner." In the newspaper report of the incident before us there is no mention of any evidence as to whether the "English and American Artificial Tooth Company" was, in fact, an individual or a corporation or as to whether it was suggested that a "company," either registered or not, can recover for dental work where an individual cannot. There does not appear to be any legal decision placing an association of individuals upon any different footing from a single person in this respect. There is, indeed, the case of the Pharmaceutical Society *v.* the London and Provincial Supply Association,[1] decided by the House of Lords in 1880 in which considerable argument took place as to the use of the word "person" in Acts of Parliament such as the Dentists Act, and in which it was held that whether the word "person" in a statute can be treated as including a corporation must depend upon a consideration of the object of the statute and of the enactments passed with a view to carry that object into force. This, however, was a case in which the Pharmaceutical Society had sued for penalties an association of shareholders registered as a joint stock company, all of them unqualified to deal in poisonous drugs except one, a qualified person, who conducted the business of a druggist on behalf of the others. Having laid down the law with regard to the use of the word "person", as above the House of Lords held that in the case of the defendants the provisions of the Act were sufficiently satisfied by the fact that the person actually dispensing was qualified under the Act. Anyone who considers this case with reference to the matter before Judge Beresford will see that a totally different point was there involved. The Dentists Act provides that a person shall not be entitled to recover for dental work or advice unless he is a duly qualified practitioner. It would stultify the Act if it was held that "persons" could sue for what "a person" could not, and any attempt to evade the Act by suggesting that the subject of the claim was not "an operation," or "attendance," or "advice" should be rigorously scrutinised. The admission of the debt by the insolvent person should not affect the matter, as he might admit as a debt a large sum due under a wager which would swamp most of his estate and thus deprive others of their money. Whatever the reason, however, may have been which caused the objection raised by Dr. Spettigue to be disallowed, he was entitled to considerate treatment. In no circumstances should a judge attempt to cast ridicule upon one, not being a lawyer, who solicits his intervention. Least of all should he do so where the applicant is a member of another learned profession endeavouring to uphold the honourable privileges of his calling in a court of law.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia was held on Nov. 19th, Sir WILLIAM S. CHURCH, Bart., K.C.B., the President, being in the chair.

The PRESIDENT announced that the adjudicators of the Weber-Parkes prize had selected the following subject for the next award in 1906: "The Degree of Infectivity of Pulmonary Tuberculosis and the Administrative Measures desirable for the Control and Treatment of the Disease"

The PRESIDENT also made a statement in reference to the sum which had been left over from the money subscribed for the expenses incurred in the preparations for viewing the procession on the occasion of the coronation of the King. The President had written to Lord Knollys asking him to obtain the King's permission to allow a portrait of His Majesty to be hung in the College. The necessary consent had been graciously given and it was now proposed to consult with Mr. Fildes as to the production of a replica of a portrait of the King painted by that artist and to apply the above-mentioned sum to that purpose. A subcommittee consisting of the President, the Treasurer (Sir Dyce Duckworth), and Dr. G. F. Blandford was appointed to make the necessary arrangements.

A communication was received from a Member of the College offering a sum of money (£500) for the purpose of encouraging investigation into matters connected with tuberculosis, leprosy, plague, and malaria; that for this purpose a lectureship should be established to be styled "The Dr. Horace Dobell Research Lecture on the Ultimate Origin, the Evolution, and Life-history of Bacilli." This generous offer was thankfully accepted by the College. The President, the Registrar (Dr. E. Liveing), and the Treasurer were appointed to act as a committee to confer with Dr. H. B. Dobell as to the means of carrying out the trust.

VACCINATION EXPENDITURE.—The Chard board of guardians has recently presented an appeal to the Local Government Board in reference to the increased cost of public vaccination in the Chard union since the passing of the Vaccination Act. In the four years immediately preceding the passing of the Act 1853 primary vaccinations were made at a cost of £222, whilst in the four years subsequent to the enforcement of the Act 1840 primary vaccinations and 113 revaccinations were performed at a cost of £911 The guardians suggest that the Local Government Board should be empowered by new legislation to decide that "stational vaccination should be allowed" in unions where good vaccination returns have been shown. With regard to the fees paid to public vaccinators the guardians consider that when such fees were fixed it was thought that public vaccinators would be put to considerably more trouble than has proved to be the case.

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[1] 5 Appeal Cases, 857.

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

The City of Manchester.—Dr. J. Niven reports that the Manchester birth-rate for 1902 (33 per 1000) was higher than in any recent years since 1895 while the marriage-rate (18 per 1000) was also above that for either 1900 or 1901. Although these rates have to be considered in conjunction with the fact that in 1901 the birth-rate, owing apparently to the prevalence of arsenical neuritis, was exceptionally low and that the termination of the South African war may have favourably influenced the marriage-rate there is, as Dr. Niven states, ground for the belief that no serious business depression obtained in Manchester during the year under notice. But since 1885 there have been generally in the city an increase in the marriage-rate and a decrease in the birth-rate, a combination of circumstances which in Dr. Niven's view points to a deliberate restriction of reproduction. Such restriction is not found among "the more reckless portion of the community" and the fact that it is exercised by the more prudent classes may be, he thinks, "a serious menace to the quality of the population." As to this question Dr. Niven remarks: "It may be said generally, I think, that while it is permissible for medical men to indicate the means of restricting production where it is impossible to maintain the young family or where the health of the mother is undermined, nothing but harm is to be expected from the general adoption of artificial means. The result will probably be the selection of an inferior population and a failure to respond to the call for increase in population when the demand is urgent" This is very largely the view which is taken by most people who have thought upon this subject and the stationary condition of the population of France is a good illustration of the manner in which the adoption of neo-Malthusian practices may lead to a serious state of affairs in so far as family or national survival is concerned. It was, indeed, against these practices that Zola's "Sterilité" was largely directed. But the question in its general aspects would be very difficult of treatment by the medical profession and the only practicable manner of attacking it seems to be to handicap the small family financially. Dr. Niven furnishes an interesting account of the measures taken in Manchester to control small-pox and he tells us that in order to avoid the aerial convection of the disease every patient in the acute phase of the malady was oiled with a 2 5 per cent. solution of carbolic oil thrice daily. As a result of this measure no case of the disease occurred within half a mile of the hospital. It was not thought necessary in Manchester to render varicella a notifiable disease and Dr. Niven thinks that no harm accrued from the omission. In his view the most important factor in the spread of small-pox in the city was the overlooking of cases in the common lodging-houses. When cases were discovered therein every effort was made to vaccinate the "contacts." In the poorer common lodging-houses the inducement of a shilling answered the purpose but in the better-class establishments the amount was not sufficient. Dr. Niven makes some suggestions as to the lines which future legislative action should follow and he attaches the greatest importance to general revaccination at school ages. It is, as he observes, by this method that the Germans have prevented the disease from becoming endemic in the fatherland. If an Act containing this provision were passed Dr. Niven thinks that the conscience clause might be retained as in the case of primary vaccination but we do not gather that he would extend the provision of this clause to those who have come in contact with small pox. In these circumstances he would not propose to isolate "contacts," the experience of Manchester during the recent prevalence of small-pox not having shown this step to be necessary. With respect to pulmonary tuberculosis Dr Niven reports that during 1902 1275 cases were notified as compared with 1339 in 1901 and 1573 in 1900—i.e., there has been a progressive decrease in the number of notifications received. Of the 1275 cases notified in 1902 667 were Poor law cases, 305 were from institutions, and only 303 were notified by private practitioners. From these figures Dr. Niven infers that the administrative measures adopted somewhat discourage medical practitioners from notifying cases. The remedy for this state of affairs is, he thinks, compulsory notification. Dr. Niven's views with regard to the communicability of pulmonary tuberculosis will always command respect and interest. He thinks it very difficult for any person to avoid inhaling a certain number of tubercle bacilli but he suggests that an amount of infection which would light up the disease in a weakened constitution would have no effect in those of a more robust habit. He, however, inclines to the opinion that even the strongest person may become infected provided a sufficient amount of infection is present. In judging of the most probable sources of infection in any given series of cases he assumes that healthy people only contract the disease after prolonged exposure and that if such exposure has taken place within two years of the onset of the disease it may reasonably be regarded as the cause of the infection. In this manner 406 cases have been grouped as regards infection into "likely" 278, "less likely" 103, and "possible" 25 Doubtless Dr. Niven has an excellent reason for taking this limit of two years but to some it would seem rather a long interval—i.e , it would appear to imply a period of latency over and above that usually occupied in what is termed incubation, and, if once the principle of latency is accepted, and we are far from rejecting it, there would seem to be no reason for limiting the interval to two years. Behring would probably take a different view of the cases grouped by Dr. Niven and he would conclude that in all there were conditions which altered the resistance of the individual in such fashion as to render him a susceptible subject to the infection which he took in with milk at infancy. He would support his thesis by the records of the post-mortem room and by the results of the inoculation with tuberculin of an Austrian regiment, 68 per cent of whom reacted. But far be it from us to dogmatise upon the very difficult problem and all those interested in the subject of tuberculosis—or, indeed, in all matters of public health—should not fail to read Dr. Niven's admirable report.

The City of Sheffield.—Dr. John Robertson, who is to be congratulated upon being appointed to the important post of medical officer of health of the city of Birmingham, has left behind him in Sheffield numerous records of his energy and ability and among these must be expressly mentioned at the present time the compulsory notification of pulmonary tuberculosis. As, therefore, this is the first departure in the direction of compulsory notification of the disease in this country it will be well to furnish our readers with a brief abstract of section 45 of the Sheffield Corporation Act, 1903, which deals with this question The usual provisions as regards notification, payment, and penalty are duly set forth and these provisions are followed by a clause enacting that whenever the medical officer of health certifies that the cleansing and disinfecting of any building would tend to prevent or to check tuberculosis of the lung the necessary work must be carried out either by the occupier (or owner) or by the corporation. But by far the most important subsection in the whole document is that which enacts that "No provisions contained in any general or local Act of Parliament relating to infectious disease shall apply to tuberculosis of the lung or proceedings relating thereto under this section." It will thus be seen that tuberculous subjects are not to be exposed to the same disabilities as are those suffering from the acute exanthemata—i.e , the disease in question is not added to the Infectious Diseases Notification Act but dealt with separately. Obviously, as we have often pointed out, it would be absurd to apply all the disabilities of the Sanitary Acts to persons suffering from a disease which lasts for years and from which a very large proportion of the population suffer. The Sheffield section is to remain in force for seven years when it will, unless continued by an Act of Parliament or a provisional order of the Local Government Board, automatically cease to be operative The measure is, therefore, purely experimental and it will in this sense be watched with the greatest interest by all those who are anxious to bring about the decrease of pulmonary tuberculosis at a rate greater even than it is already declining. Having regard, therefore, to the importance of the year 1902 in so far as tuberculosis is concerned, we append the death-rates from all forms of tuberculosis since 1893, the rates being per 1000.

1893	2·43	1898	1·80
1894	2·11	1899	2·09
1895	2·27	1900	2·03
1896	1·83	1901	2·19
1897	2·01	1902	1·79

Dr. Robertson tells us that the mortality from pulmonary tuberculosis has been reduced in Sheffield nearly 50 per cent. during the last 50 years and he regards this reduction as mainly due to the improved conditions under which the people live, such, for instance, as "better sanitary arrangements, less overcrowding, better lighting and ventilation, less dampness in dwellings, greatly improved conditions of work due to our Factory and Workshops Acts, and much improved food supplies"

The Borough of Brighton.—The town council of Brighton should feel itself under an obligation to its medical officer of health, Dr. A. Newsholme, and its deputy medical officer of health, Dr. T. H. C Stevenson, for the trouble they have taken in preparing a second Brighton life table based upon the mortality experiences of the ten years 1891–1900 A comparison of the teachings of this table with those of the first life table drawn up by Dr. Newsholme from the mortality experiences of the ten years 1881–90 is both instructive and interesting, and, generally speaking, the comparison must be interpreted as complimentary to the administration of the Brighton town council, whether the results be looked on as indicative of its activity in a purely sanitary sense or whether from the standpoint of the material or social welfare of the people of Brighton. In the construction of the life table what is known as the "graphic method" has been employed except for ages 85 and over, for which what is known as the "method of differences" has been utilised. The result is a table which is thoroughly trustworthy for all practical purposes. Taking now a general view of the inferences to be drawn from a comparison of the two Brighton life tables we find in the first place that the *probability of living one year* in 1891–1900 was less in the first year of life than in 1881–90, but on looking further into the figures we discern a difference as regards the sexes. Although in the case of males the probability of survival to the end of the first half year had diminished that during the last half year had slightly increased. Dr. Newsholme attributes this "worsement" largely to the more general adoption of artificial feeding as well as to meteorological influences. In the case of female children the probability of survival was less in both halves of the first year of life in 1891–1900 than in 1881–90 But after the first year of life the picture for the period 1891–1900 is, generally speaking, materially brighter than was that drawn by the statistician from the figures for the preceding decade. As to males the probability of living through each year was greater at all ages save at the periods 20 to 24, 56 to 65, and 73 to 80 From the age of 80 until the end of life, except at ages 87 and 88, this probability has improved. With respect to females the story was more hopeful in 1891–1900 than in the previous decennium, except for the ages 11 to 14 inclusive, at 64 at ages 66 to 72 inclusive, and at ages 87 onwards. The female probability was greater than the male in every year of life except the second and for each of the years from six to 15 inclusive. After 15 the female probability was greater to the eighty seventh year Coming now to the figures dealing with the *number of survivors out of 100,000 born of each sex* at the end of each succeeding year of life the experiences of 1891–1900 are, except for the first year of life, favourable, not only as compared with the Brighton of 1881–90 but also at every year contrasted with the figures for England and Wales, London and Haydock, and the following table relative to the first four years of life will tell its own tale:—

Male Survivors out of 100,000 Born

Age.	Brighton.	England and Wales.	London.	Haydock.
0	100,000	100,000	100,000	100,000
1	83,194	82,861	81,588	78,510
2	79,211	78,467	76 229	—
3	77 503	76 836	74 123	—
4	76,472	75,826	72,794	—

Finally, with regard to the comparison as to the future *expectation of life* at each year of age, the most important of all the lessons of a life table, compared with 1881-90 the male expectation of life at birth had increased in 1891–1900 by 1 34 years and the expectation remained higher than in the previous decade for every age except from 71 to 75 inclusive. Similarly with respect to females the expectation of life at birth had increased 0·94 year and the expectation remained higher until after 63 when it was fractionally lower than the previous period except at ages 71 to 74. As compared with England and Wales as a whole and with London the male expectation of life at birth in Brighton was during 1891–1900 three quarters of a year higher than in the former and nearly four years higher than in the latter (London). These are, briefly stated, the lessons of the second Brighton life table and we congratulate Dr. Newsholme upon the accomplishment of the task and on the results of the research. It would be interesting if a life table of the poorer parts of Brighton could be separately constructed and compared with a similar table for the richer parts of the same town. Or, perhaps better, we should like to see a separate life table constructed for the several London boroughs.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 8020 births and 5037 deaths were registered during the week ending Nov. 21st. The annual rate of mortality in these towns, which had been 16·3, 16 2, and 17 9 per 1000 in the three preceding weeks, declined again last week to 17·4 per 1000 In London the death-rate was 16 6 per 1000, while it averaged 17·8 in the 75 other large towns. The lowest death-rates in these towns were 7·1 in East Ham, 9·3 in Hornsey, 9·5 in Southampton, 9·6 in Brighton, 9·7 in Leyton, 10 6 in King's Norton, 10·7 in Bournemouth, and 10 8 in Coventry; while the highest rates were 24 7 in Plymouth, in Devonport, and in Hanley, 25 1 in St. Helens, 25·5 in Preston, 25 9 in Oldham, 27 1 in Stockton-on-Tees, 27·4 in Middlesbrough, and 29 3 in York. The 5037 deaths in these towns last week included 436 which were referred to the principal infectious diseases, against 523, 419, and 432 in the three preceding weeks; of these 436 deaths, 110 resulted from diarrhœa, 106 from measles, 73 from diphtheria, 59 from whooping-cough, 46 from scarlet fever, 40 from "fever" (principally enteric), and two from small-pox. No death from any of these diseases was registered last week in Hornsey, Tottenham, Hastings, Bournemouth, Reading, Burton-on-Trent, King's Norton, Smethwick, Coventry, Stockton-on Tees, or Newport (Mon.); in the other towns the highest death-rates from the principal infectious diseases were recorded in Willesden, Leyton, Devonport, Hanley, Warrington, Oldham, Preston, York, and Merthyr Tydfil. The greatest proportional mortality from measles was recorded in Willesden, Warrington, Bury, Salford, Oldham, York, and Sunderland; from scarlet fever in Northampton, York, and Merthyr Tydfil; from diphtheria in Bermondsey and Grimsby; from whooping-cough in Devonport, Warrington, York, and Merthyr Tydfil; from "fever" in Wallasey and Preston; and from diarrhœa in Hanley, West Bromwich, York, Cardiff, and Merthyr Tydfil. Of the two fatal cases of small-pox registered in these towns last week, one belonged to Nottingham and one to Tynemouth. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 42, 43, and 51 at the end of the three preceding weeks, had declined again to 47 at the end of last week; five new cases were admitted during the week, against 12, five, and 16 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital on Saturday last, Nov. 21st, was 1833, against 1828, 1854, and 1824 at the end of the three preceding weeks; 192 new cases were admitted during the week against 199, 224, and 185 in the three preceding weeks. The deaths in London referred to diseases of the respiratory organs and pneumonia, which had been 260, 271, and 339 in the three preceding weeks, declined again last week to 325, and were 22 below the number in the corresponding period of last year. The causes of 46, or 0·9 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, *Leeds*, Hull, Newcastle-on-Tyne, and in 46 other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Blackburn, Sheffield, Sunderland, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal

Scotch towns, which had been 17·0, 15·8, and 17·4, per 1000 in the three preceding weeks, was again 17·4 per 1000 during the week ending Nov. 21st, and was equal to the rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 10·7 in Paisley and 12·3 in Aberdeen, to 17·0 in Perth, and 20·4 in Glasgow. The 569 deaths in these towns included 20 which were referred to diarrhœa, 13 to measles, seven to diphtheria, seven to whooping-cough, six to "fever," four to small-pox, and four to scarlet fever. In all, 61 deaths resulted from these principal infectious diseases last week, against 62, 53, and 49 in the three preceding weeks. These 61 deaths were equal to an annual rate of 1·9 per 1000, which was 0·4 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of diarrhœa, which had been 33, 15, and 20 in the three preceding weeks, were again 20 last week, and included 11 in Glasgow, four in Aberdeen, and three in Edinburgh. The deaths from measles, which had been 11, 19, and 10 in the three preceding weeks, rose again last week to 13, all of which occurred in Glasgow. The fatal cases of diphtheria, which had been six and four in the two preceding weeks, rose again last week to seven, and included three in Glasgow and two in Perth. The deaths from whooping-cough, which had been seven, six, and four in the three preceding weeks, increased again last week to seven, of which two were registered in Glasgow and two in Edinburgh. The fatal cases of "fever," which had been two, one, and ten in the three preceding weeks, declined again to six last week, and included five in Glasgow. The four deaths from small-pox and two of the four deaths from scarlet fever occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 108, 107, and 129 in the three preceding weeks, further rose last week to 136, and were 15 in excess of the number in the corresponding period of last year. The causes of 23, or more than 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·2, 21·7, and 20·9 per 1000 in the three preceding weeks, rose again to 24·5 per 1000 during the week ending Nov. 21st. During the past four weeks the death-rate has averaged 22·1 per 1000, the rates during the same period being 16 3 in London and 16·0 in Edinburgh. The 178 deaths of persons belonging to Dublin registered during the week under notice showed an excess of 26 over the number in the preceding week and included nine which were referred to the principal infectious diseases, against seven, two, and seven in the three preceding weeks; of these, four resulted from diarrhœa, two from diphtheria, two from whooping-cough, and one from "fever," but not any from small pox, measles, or scarlet fever. These nine deaths were equal to an annual rate of 1·2 per 1000, the death-rates last week from the principal infectious diseases being 1·3 in London and 1 1 in Edinburgh. The fatal cases of diarrhœa, which had been four, one, and none in the three preceding weeks, rose again last week to four The two deaths from whooping-cough showed a slight decline from the number in the preceding week. Two fatal cases of diphtheria occurred last week, none having been registered in any of the five preceding weeks. The 178 deaths in Dublin last week included 31 of children under one year of age and 53 of persons aged upwards of 60 years; the deaths of infants showed a slight decline while those of elderly persons were in excess of the number in the preceding week. One death from violence and four inquest cases were registered, and 59, or one-third, of the deaths occurred in public institutions. The causes of nine, or more than 5 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

NEW REGULATIONS FOR THE ROYAL NAVY MEDICAL SERVICE.

THE new regulations for the Medical Department of the Royal Navy have now been made public These regulations will be found in our issue of Sept. 12th, p. 774, and the document now given to the public varies hardly at all from our version. The following two modifications may be noticed. The hospital allowances for naval medical officers at home and abroad, in lieu of provisions for themselves and servants and for fuel and lights, are now granted also to medical officers of the marine divisions and dockyards. This allowance when made to surgeons at Malta is reduced from £ 08 to £70, but servants will be provided there at the public expense. A small modification also occurs in the matter of compulsory retirement. Retirement will be compulsory upon an inspector or a deputy inspector-general of hospitals and fleets "at the age of 60, or at any age, if he has had three years' non-employment in any one rank; or after four years' continuous non-employment in any two ranks combined." The regulations for the compulsory retirement of these officers as published in our columns read "at the age of 60 or at any age if he has not served for five years." The alteration, which is for the benefit of the officers concerned, was made by an order in Council dated Oct 9th, 1903.

ROYAL NAVY MEDICAL SERVICE.

The following appointments are notified:—Fleet Surgeon J. H. Whelan to the *President* for three months' study at Civil Hospital (to date Dec. 1st, 1903). Staff Surgeon J. Bradley to the *Edgar* (to date Dec. 1st, 1903). Surgeon S. H. Woods to the *Jason* on commissioning.

ROYAL NAVAL VOLUNTEER RESERVE.

The undermentioned gentlemen have been appointed Officers:—William Donald Anderson and Alexander MacLennan to be Surgeons (dated Nov. 20th, 1903).

ROYAL ARMY MEDICAL CORPS.

The undermentioned Lieutenants to be Captains (dated Nov. 14th, 1903):—W. J. Waters, H. F. Shea, C. E. Fleming, P. J. Bodington, J. F. Whelan, P. S. Lelean, W. H. Odlum, F. A. Stephens, M. G. Sterling, W. M. Power, J T. Johnson, E. F. Q L'Estrange, R B. Black, and T. B. Unwin.

Major H. A. Cummins, C M.G, is held in readiness for service in India early next year. Lieutenant-Colonel A. Baird, retired list, is appointed to the medical charge of the troops at Worcester.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 3rd Durham: Surgeon Lieutenant J H. Hunter to be Surgeon-Captain (dated Nov. 21st, 1903); Surgeon-Major F. W. Sinclair resigns his commission (dated Nov. 21st, 1903).

Rifle: 2nd Volunteer Battalion the Royal Sussex Regiment: Surgeon-Lieutenant P. J Le Riche to be Surgeon-Captain (dated Nov. 21st, 1903) 3rd (Dundee Highland) Volunteer Battalion the Black Watch (Royal Highlanders): Surgeon Captain W. S. Malcolm resigns his commission (dated Nov. 21st, 1903).

THE RETIREMENT OF SURGEON-GENERAL G. J. H. EVATT.

Apropos of the retirement of Surgeon General Evatt, which we announced last week, a correspondent sends us an appreciation of the work of that officer and we endorse all that our correspondent says, though we are unable to find room for his rather long letter. As the writer points out Surgeon-General Evatt had great ability as an organiser and we owe to him in a very great measure the formation of many of the volunteer ambulance corps which recently proved themselves so useful during the late war in South Africa. Then again it is to Surgeon-General Evatt that the Association of Medical Officers of Schools owes its foundation and his efforts to improve the lot of the private soldier were untiring. According to our correspondent a distinguished member of the Royal Army Medical Corps once referred to Surgeon General Evatt in the following words, which we quote as giving an indication of the kind of officer the service has lost. "There is something inhuman about the man. When he was at Netley he was in the wards at 6 A.M., he was there all day, and there at 11 o'clock at night. It's inhuman, and he made more prisoners than anyone. But Netley was never so smart as when Evatt was there." It is a pity that an arbitrary age limit should prematurely stop the effective work of Surgeon General Evatt.

DEATHS IN THE SERVICES.

Inspector General of Hospitals and Fleets Robert Pottinger, R N. (retired), on Nov. 16th, at Abington Villa, Moffat, in

favourable to the movement generally and the Board has *sanctioned expenditure by boards of guardians for the* erection of sanatoriums. With the facts before them it is to be hoped that the managers will be satisfied that there is now such a "general consensus of metropolitan authorities" in favour of the proposal that they should assume the rôle of hospital authority as would justify them in taking action.

The need is great. In the metropolitan workhouses and infirmaries in July, 1900, there were 1562 persons suffering from consumption and more or less a danger to all with whom they were brought into contact. The number is probably not less at the present time. The managers have power to take charge of this class of the sick poor. To enable them to undertake the isolation and treatment of the non chargeable sick poor probably legislation—a single clause Bill—would be necessary. How many sufferers belonging to this class there may be in London is unknown, but very many certainly, as may be inferred from the fact that last year the deaths in London from phthisis were 7621 compared with 2321 from scarlet fever, diphtheria, and continued fevers, the diseases, other than small-pox, now admissible to the managers' hospitals.

For small-pox ample provision has been made at Joyce [illegible] three hospitals erected at [illegible] a million sterling. The [illegible] site have cost about £320 000, have long been standing idle, and I know not to what purpose they could be applied if not converted to sanatoriums. These hospitals, with some necessary modifications and additions, would, it is thought, serve the proposed purpose very well. The site is admirable and in the midst of a beautiful open country, not far from Dartford, and beyond the fog and soot area of London. The two hospitals, "upper" and "lower," stand on high ground; the locality is bracing, the air is pure, the site is dry, and the water-supply and drainage are satisfactory. They are sheltered from the north and east winds and it may be taken as evidence of the general healthiness of the locality and the suitability of the buildings that in 1902 of 3220 convalescents from fever and diphtheria treated at the upper hospital not one died.

The hospitals are quite distinct and perfectly equipped, *the one moreover being practically invisible from the other*, so that classification would be easy. The wards are light and well ventilated, the floor and cubic space being ample. The grounds are well wooded and there is abundant space for any needed extensions, shelters, &c., the site comprising an area of 160 acres. The upper hospital contains some 1040 beds, the lower hospital, the larger part of which has not been brought into use hitherto, having 850 Gore Farm is within easy reach of the metropolis and the managers' motor ambulance could make the journey, to and fro, by daylight in the shortest day.

Enough, I hope, has been said to show that there is good ground for inquiry, and in the public health interests of the inhabitants of London it is to be hoped that the managers will see their way to use these hospitals for consumptives, and so save the greater part of the half a million sterling which you, Sirs, have suggested as the probable expenditure likely to be necessary to enable them "to deal with tuberculosis." THE LANCET has from the beginning of the movement recorded and commended every extension of sanatorium provision and I hope that its support will not be denied to a proposal which, probably, would double the existing accommodation in special hospitals devoted to the isolation and treatment of persons suffering from consumption.

I am, Sirs, yours faithfully,

T. ORME DUDFIELD.

Kensington, Nov. 21st, 1903.

THE BORDERLANDS OF INFECTIOUS DISEASES AND THEIR MANAGEMENT.

To the Editors of THE LANCET.

SIRS,—The profession owe Dr H E J. Biss a debt of gratitude for his able and instructive paper in THE LANCET of Nov 7th, p 1235, on the Borderlands of Diphtheria and Scarlet Fever. In his argument however, he has seen through a pair of *red* coloured spectacles. My readers will rejoice that I have looked through a *yellow* pair of spectacles and if only one of your subscribers will put on a pair of *blue* spectacles we may *arrive at the clear white light of* truth

Dr. Biss has discussed the class of infectious diseases *referred to from the point of view of the physician to* a fever hospital, who has his cases "dumped" down at his door for reception and treatment, knowing little of their previous or future home history. Regarding infectious illness through his red spectacles he finds cases on his hands varying from the perfectly typical text book description, concerning which no doubt can arise, to the slight or anomalous case for which neither he nor any other authority, however renowned, can on arrival on his dumping ground by any possibility find a docketed pigeon-hole. For such a case he ought to have an undocketed pigeon hole at his disposal in which to place the patient until he can either diagnose the disease or keep him isolated until the illness terminates when he can be returned after disinfection to his home. But surely no one would in earnestness say that such a case was a borderland disease. The disease is true enough and breeds true enough; the only thing lacking is the capacity to diagnose it. What is present is, probably, a feeble microbe in an unsuitable soil which has failed to propagate a full-blown specimen and has merely produced such a poor specimen of the disease that it is undiagnosable by all the art at our disposal. But these poor specimens are true samples of the disease, even although we may be unable to recognise the distinguishing characteristics. I have seen single cases of measles, rose rash, chicken-pox, influenza, whooping cough, diphtheria, scarlet fever, and the "fourth disease" that after a lifetime spent in assiduously endeavouring to elucidate them I am ashamed to confess I have failed to diagnose.

Holding, however, a different position from Dr. Biss I have directed the search light through a pair of yellow-coloured spectacles and have had revealed quite a different picture from that seen through his red glasses When an indistinguishable case of disease arises *as a single case* I am obliged reluctantly to admit that I am unable to diagnose it. But it is so infinitely rare for these diseases to occur as single cases in the position I hold that I merely rest on my oars. Meanwhile I place the patient in quarantine in an undocketed pigeon-hole and wait and watch, like Mr Micawber, "for something to turn up" And when the appropriate *period of incubation of the disease has elapsed and I find* his study companion, or one or both of the two boys who sleep next to him in his dormitory or who sit next to him in "form," in chapel, or at meals, infected with the typical text-book description of the disease, I have very little difficulty in removing my patient from the undocketed to a docketed pigeon-hole. I therefore protest that these anomalous atypical cases are not borderland cases of disease, for they breed absolutely true and only too often start a group of characteristic cases of the disease or an epidemic. The impossibility of the diagnosis of a disease we have before us makes it imperative that means should be provided to quarantine the patient until it can be done; or failing diagnosis altogether, isolating until all possibility of the conveyance of infection has passed. *Further, no immediate* definite diagnosis is necessary when an undocketed pigeon-hole is available in which to quarantine the patient until it can be accurately ascertained.

It is a lamentable admission for a late medical officer of a fever hospital to have to make concerning the administration of fever hospitals, that "the constant breaking out of scarlet fever in diphtheria wards and of diphtheria in scarlet fever wards in most instances is traced to some individual the equivocal nature of whose illness had caused its real bearing to be overlooked." There is no borderland about these as they also bred true enough! It is high time that fever hospitals set their house in order and provided quarantine rooms in which their undiagnosed and undiagnosable cases can be pigeon holed until a diagnosis is possible and not place them in wards where they have no right to be incarcerated. The sooner, then, isolation hospitals, which apparently are not isolation hospitals but disease developers, are mended or ended the more creditable will it be for us as a profession and the safer will they be for the public If something is not done to save these most valuable hospitals from themselves by providing single quarantine rooms for cases undiagnosable on entrance, and by arranging convalescent rooms for separating the convalescents from the recent cases of illnesses the public will refuse to enter them and they will be within their rights as citizens.

It *must therefore be clearly set forth* that the poisons which generate infectious diseases *are* "absolute entities," however humiliating it may be that we are unable to distinguish them in individual cases. But they breed true—as true as they have done for many generations of mankind. The plague, extinct with us in the twentieth century, is as virulent where its environment is favourable for its development as it was in the seventeenth century. In a suitable season and in the unprotected small-pox is as severe as it ever was in Jenner's day. Measles and scarlet fever are still identical with Sydenham's description of them. The type may be milder for a time by reason of the protection afforded by its running through generation after generation of the same race of mankind; but only let a favourable season arise, or a virgin community be attacked, and all the mildness of type is scattered to the winds. The diphtheria of to-day, in the absence of antitoxin, is the same as it was in the middle of the eighteenth and the middle of the nineteenth centuries when it commenced its epidemic fatal form in Cornwall on both occasions. If some of the infectious diseases were crossbreeds they would tend, like all crossbreeds, to revert to the original stock, evidence of which is not forthcoming. The gist of the whole matter seems to be merely one of the virulence or the mildness of the attack. Where this is severe its characteristics are manifest enough; where it is slight it may be so devoid of the distinguishing features of the disease that it may be a "toss-up," owing to our ignorance, as to which genus it belongs. But all doubt is removed when a succession of cases arises, among which are those possessing pathognomonic symptoms, showing that it breeds true, and no such case can be a "borderland," but is as typical as the most characteristic if we only had the faculty to unravel it. The hesitation is with ourselves; there is no dubiousness about the disease.

I am, Sirs, yours faithfully,

Rugby, Nov. 14th, 1903. CLEMENT DUKES.

THE DAWN AND RISE OF PHYSIOLOGY.

To the Editors of THE LANCET.

SIRS,—Professor W. Stirling in his address, an abstract of which appears in THE LANCET of Nov. 21st, p. 1418, suggests that a lectureship on the history of medicine should be established in the Manchester University, and no doubt it is very desirable that such a chair should exist in every university. Still, there is another subject which has a greater claim to be taught in every medical school—viz., dietetics. The laity are beginning to recognise the importance of diet not only in the treatment but in the prevention of disease and it ought to receive more attention than it has hitherto done in the medical curriculum. Hydrotherapy is also receiving much more attention in the schools in Germany and America than it used to do and is a subject which we ought also to study in this country. It would be well if the General Medical Council insisted upon an examination in both subjects. I am, Sirs, yours faithfully,

JOHN HADDON, M.D. Edin.

Denholm, Hawick, Scotland, Nov. 21st, 1903.

THE M.D. DEGREE OF BRUSSELS.

To the Editors of THE LANCET.

SIRS,—Dr. P. A. Nightingale is correct in saying that the M.D. degree of Brussels University for practitioners does not confer the right to practise in Belgium (and I am sure few, if any, would wish to as it is already overcrowded with medical men). When I was in Brussels for the examination I made inquiries on this point and amongst others from the British Vice-Consul. He gave me distinctly to understand that certain formalities had to be gone through and permission had invariably been given in the few cases where the request had been made. Excepting for the fact (which, no doubt, is an important one) that the degree if obtained since 1886 is not registrable, holders of it are on an exactly similar footing with those who possess the practitioner's degree from St. Andrews, Durham, and some other universities. One reason is obvious why medical men who desire to hold an M D. degree have recourse to Brussels University in that the above universities insist on a man being at least 40 years of age.

I am, Sirs, yours faithfully,

Canterbury, Nov. 16th, 1903. A. R. HENCHLEY.

To the Editors of THE LANCET.

SIRS,—In reply to Dr. P. A. Nightingale's letter in THE LANCET of Nov. 14th (p. 1395) respecting the value of the M.D. Brux., I have taken his advice and referred the matter to M. Lavachery, secretary to the University of Brussels, and to Dr. M. Greenwood, honorary secretary of the Brussels Medical Graduates' Association in London. As a result of these inquiries I find that (1) the degree does not *officially* confer the right to practise in Belgium, but that if one were to become domiciled there he would have no difficulty in obtaining a State permit to practise without having to undergo any further examination; and (2) the examination for the scientific title of M.D. for foreign candidates is identically the same as that for the legal title for the Belgian students. In the words of M. Lavachery, "Quant aux examens en eux-mêmes, ils sont identiquement les mêmes que ceux qui sont subis par les Belges à titre légal." The only difference between the terms *legal* and *scientific* M.D. is that the former applies to those students who have passed through their whole curriculum at Brussels and the latter to those who only take the final examinations there.

I am, Sirs, yours faithfully,

Westcliffe-on-Sea, Nov. 18th, 1903. N. LEONARD.

RECURRENT OVARIAN CYSTOMA AND ABERRANT ACCESSORY OVARIAN STRUCTURES.

To the Editors of THE LANCET.

SIRS,—In matters controversial there is nothing like a direct negative for clearing the air and showing up the issues in their true perspective. I will answer Mr. J. D. Malcolm's negatives *seriatim.* He says he has long been of the opinion that ovarian tumours are malignant more often than is generally supposed. He is not the only one who holds this opinion which is, I believe, erroneous, and for the following reasons. 1. It is in direct conflict with the carefully compiled mortality statistics of this country and of all countries where reliable records are kept. Thus Dr. Tatham's analysis of the localisation of malignant disease in women, as given in the Registrar-General's sixty-third annual report, shows that of 16,246 women who died from malignant disease in the year 1900 the ovary was the part affected only in 275 cases, or in 1·7 per cent. The United States statistics for the same year show a still smaller proportion of malignant ovarian disease—viz., less than 1 per cent. (0 9). 2. The information furnished by the statistical reports of large hospitals, where cases of this kind are carefully scrutinised and where a considerable proportion are submitted to post-mortem examination, is entirely in accord with that derived from the national statistics. Thus my analysis of 9227 primary tumours in women under treatment in large metropolitan hospitals shows that only 51 (or 0 6 per cent.) were affected with malignant disease of the ovaries. Similarly of 804 primary ovarian tumours only 6·3 per cent. were malignant. Gurlt's analysis of the mortality statistics of the chief Vienna hospitals gives similar results. Of 138 ovarian tumours from the Kelly clinic, submitted to microscopical examination at the Johns Hopkins Hospital, 11, or 8 per cent., were malignant. 3. Now, in strange contrast with this rarity of malignant disease of the ovaries in ordinary circumstances is the great frequency of its occurrence after ovariotomy, which in Spencer Wells's large experience amounted to no less than 36 per cent.

With regard to this last important item Mr. Malcolm says: "My personal experience does not afford any data in support of it." This is not at all surprising. There are so many ovariotomists nowadays that the experience of any one surgeon is seldom large enough to enable him to dogmatise on such a subject. In Spencer Wells's time it was very different; for many years he had a monopoly of ovariotomy in London and he performed far more operations of this kind than any living surgeon has ever done. Moreover, Spencer Wells, besides being a great ovariotomist, was endowed in no ordinary degree with the business-like habit of keeping accurate records of all his cases which he followed up even to the extent of ascertaining the causes of death of those who died many years after operation. It is to this unique record of his personal experience of 1000 completed ovariotomies that those who wish to know the causes from which women die after this operation should refer. On examining this record I have found that of those who recovered after completed ovariotomy 117 had since died, the cause of death being unknown in 29; of the remaining 88 no less than 32 had succumbed to malignant disease, or 1 in 2·75. During the same period I have ascertained that the cancer mortality in the general population among women of the same age was 1 in 15. Thus the cancer mortality was nearly five and a half times greater for those whose ovaries had been removed than for those who had undergone no such operation. Moreover, the proportion of cancer deaths was much greater among those who had undergone double ovariotomy than in those submitted to the unilateral operation.

The experience of other ovariotomists who have followed up the after-history of their completed cases, as Spencer Wells did (Olshausen, Pfannenstiel, and others) is to the same effect. The gynæcological publications of the last quarter of a century literally teem with confirmatory cases, which might be cited by hundreds. But it would take up too much of your valuable space if I were to proceed further in this direction; for the present it must suffice if, in concluding this letter, I call attention to only one other indication of this kind—viz., the proclivity to malignant disease manifested by persons with badly developed, rudimentary, or absent ovaries, of which so many examples have lately been reported (Krug, Stroebe, Krabbel, Neugebauer, Unterberger, Audain, Ladinski, Heinricius, Obolonski, Fehling, Hall, and others). In face of such facts as I have instanced, I submit that it is necessary for those who disbelieve in the frequency of malignant disease after removal of the ovaries to support their denial with something more convincing than a pious opinion and a vague appeal to personal experience.

I am, Sirs, yours faithfully,
Clifton, Bristol, Nov. 21st, 1903. W. ROGER WILLIAMS

THE LUNG REFLEX OF ABRAMS.

To the Editors of THE LANCET.

SIRS,—Regarding my remarks on the causation of the thoracic expansion which follows upon pulmonary relaxation I must again insist that Dr. A. G. Auld[1] fails to interpret them correctly. He makes me say in effect that the passive outward recoil of the thoracic walls (ribs, sternum, and diaphragm) "is not alone able to produce a certain degree of thoracic expansion, without, that is, any aid on the part of the muscles of inspiration." In both my previous letters I explicitly state that such recoil is competent to do so. What I, however, contend is that the expansion thus induced will not end here but that the inspiratory muscles will come into extra play so as to tighten up the pulmonary tissues (which would otherwise be unduly relaxed) and maintain pulmonary suction at the normal. I fear that Dr. Auld and I are little likely to agree on this matter, for it is evident that we have fundamentally different conceptions as to the origin, nature, and meaning of pulmonary suction. I have failed to convince him that this phenomenon originates in, and is throughout life maintained and regulated essentially by, the inspiratory muscles. He admits, it is true, that these muscles take part in establishing the suction immediately after birth but contends that thereafter "the conditions are, in fact, reversed and the inspiratory muscles instead of endeavouring to establish a pulmonary suction are in reality directed rather against it." Surely a strange contention. The effect of the inspiratory muscles in breathing is *to augment suction:* the mean capacity of the chest is greater during breathing than is its capacity at the end of expiration (when we may suppose the inspiratory muscles to cease to act) and therefore suction is in the former case greater than when the chest remains in the expiratory position; from which it is manifest that the inspiratory muscles must throughout life, moment by moment, take a direct and active share in the maintenance of pulmonary suction.

Dr. Auld makes me appear to have laboured under the misapprehension that in stating a mere physiological truism—i.e., that pulmonary suction favours cardiac diastole—I was enunciating a new and original view of my own, for, says he, "the function of the pulmonary suction in facilitating cardiac diastole ...... is surely a well-established fact in pneumono-dynamics." May I therefore be permitted to remind him that I did not confine myself to a bald statement of this well-known fact. I contended that the *essential* function, the *raison d'être*, of pulmonary suction is to help cardiac diastole, not so much of the ventricles as *of the auricles*, and notably *of the right auricle* (which I may here remark is in much more extensive relation with the lung than is the left, as shown by transverse sections of the frozen cadaver), and I further urged that inasmuch as pulmonary suction is essentially dependent upon, and is throughout life vigilantly regulated by, the action of the inspiratory muscles, these latter contribute a constantly active diastolic force, a view which does not, I venture to hope, savour of platitudinism—if I may be allowed the term.

As to the existence of a pulmonary reflex I have, as I said in a former letter, a perfectly open mind, but I am bound to add that much of the evidence advanced by Dr. Auld in its favour seems to me capable of different interpretations from that which he puts upon it. If it is a fact that the fluoroscopic picture shows a local increase of brightness corresponding to the part of the chest wall stimulated we must indeed accept it as strong evidence in favour of the existence of a pulmonary reflex; but when Dr. Auld supports, as he does in his last letter, Dr. Abrams's contention to the effect that the borders of the lung can be made to move more extensively by reflex means than by forcible inspiration, he is accepting as a truth what appears to me to be a physical impossibility. By means of a complete inspiration the borders of the lung are made to travel to the uttermost confines of the pleuræ. How, I would ask, is it possible for them to go further? Assuming, however, that they can by reflex means be made to move thus far, will Dr. Auld still contend that the attendant expansion of the chest can be wholly due to mere passive recoil?

I am, Sirs, yours faithfully,
Wimpole street, W., Nov. 22nd, 1903 HARRY CAMPBELL.

THE WALSALL DISTRICT MEDICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of *Nov. 21st* amongst the Birmingham news (p. 1467) reference is made to an article in the *Midland Medical Journal* on the subject of the secession of the Walsall Medical Society from the Birmingham and District General Medical Practitioners' Union. In that article the Walsall men are attacked rather vigorously and anyone reading it and knowing nothing of the true state of affairs must draw a very uncomplimentary deduction as to the state of things here. As a matter of fact, Walsall has recently been most active in matters of medical reform. The reply to the circular on the subject of touting clubs was that these clubs were almost, if not quite, abolished. The club collector, who formerly went from door to door, gathering pennies and new members for the doctors' clubs, has vanished from the face of the earth. The majority of the medical men in Walsall are holding together to their mutual advantage and Walsall is not by any means in the parlous state that your correspondent thinks, nor in the absolutely deplorable condition suggested by the writer in the *Midland Medical Journal.*

I am, Sirs, yours faithfully,
FRANK G. LAYTON,
Honorary Secretary, Walsall and District Medical Society.
Walsall, Nov. 22nd, 1903.

THE PRESENT POSITION OF ETHYL CHLORIDE.

To the Editors of THE LANCET.

SIRS,—I notice in THE LANCET of Nov. 7th, p. 1305, a review of a little book[1] which I published just 15 months ago. The review concludes with the remark that ethyl chloride is noticed as a general anæsthetic but "we should judge fails to gain the favour of the writer." Now anyone taking interest in the subject of anæsthetics must be well aware that ethyl chloride has made enormous strides during the past year in this country. It has been very favourably noticed and commented on in nearly every surgical and dental journal in the English language. I myself have contributed a humble quota to the literature of the subject based on a practical experience of some 400 cases and I think that in ordinary fairness the gentleman who wrote the review in question might have qualified his remarks—especially in view of the protracted period of gestation—by adding "at the time the book was written."

I may remark that at that time I was using the gas-ether sequence very largely, both in hospital and private work. I never went out to an anæsthetic case unless I had a small cylinder of nitrous oxide in my bag. During the past six months I have not used nitrous oxide once in surgical work but have invariably employed the ethyl chloride-ether sequence in preference. I use ethyl chloride every day and often many times a day. I regard it as a very valuable addition to the anæsthetist's repertoire and I am quite sure that it has come to stay and will take a front place among anæsthetic agents in the future. It has been used as largely in Edinburgh as in any medical school during the past few months I think. It is used almost exclusively in the ear and throat wards of the Royal Infirmary and also in the dental department latterly. I am also proud to say that on my advocacy a gentleman of much wider anæsthetic experience than myself started using it in one of the Metropolitan hospitals and has since written me with favourable comments.

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[1] THE LANCET, Nov. 21st, 1903, p. 1462.

[1] A Pocket Guide to Anæsthetics for the Student and General Practitioner, W. Green and Sons, Edinburgh.

What has kept back ethyl chloride has been the lack of a suitable inhaler. There are several very good patterns on the market now, however, and with any of these good results can be obtained. In THE LANCET of June 13th (p. 1677), July 18th (p. 168), and Oct. 17th (p. 1087), special inhalers, all based on much the same principle, were described by Mr. R. H. Jocelyn Swan, myself, and Mr. G. W. B. Daniell respectively, while in the issue of April 4th (p. 952) of this year Dr. W. J. McCardie expresses his preference for Ormsby's inhaler. I notice to-day in the new English edition of Kocher's "Operative Surgery" just published, that the author remarks that he tried ethyl chloride as a general anæsthetic "several years ago with ungratifying results"—this being doubtless due to the use of Breuer's mask (mentioned in a previous paragraph)—a most unsuitable inhaler in every way.

Will you pardon me if at the risk of repetition I sum up in a few sentences the views I have as to the value of ethyl chloride at the present time? 1. It is a pleasant anæsthetic to inhale, extremely rapid in action, very portable, and inexpensive. 2. It compares favourably with nitrous oxide as regards induction of anæsthesia and available period; it produces no cyanosis when used in suitable doses and necessitates the carrying of no heavy and cumbersome impedimenta. The advantage of this to the general practitioner and dentist in the country is obvious. 3. The technique of the administration is very simple. 4. While not as safe as nitrous oxide in the hands of the unskilled we are justified in concluding from the material available that it is safer than ether, all things considered, and much safer than $CHCl_3$ or bromide of ethyl. 5. It can be safely readministered at one sitting, this being a further point in its favour over bromethyl. 6. It is not usually followed by marked after-effects. 7. It is preferable to nitrous oxide when the patient is very young, very old, or anæmic, while those who are suffering from cardiac, renal, or lung affections take it quite well. 8. It is in no way to be preferred to $CHCl_3$ or ether for *prolonged* anæsthesia but may be used with advantage merely to induce anæsthesia which is maintained either with $CHCl_3$ or ether. 9. For minor surgery, throat operations, and the extraction of teeth it is the best anæsthetic available at the present time. 10. Pure ethyl chloride, sold as such, is always preferable to proprietary preparations and to mixtures such as somnoform. 11. In conclusion, I think one of the strongest claims of ethyl chloride to being considered a fairly safe anæsthetic lies in the fact that during the past 12 months it has been experimented with wholesale throughout the country and yet no death has been recorded. I think it quite possible that we may hear of one or two from time to time now as the anæsthetic becomes more widely used, and often by quite unskilled and inexperienced persons, but that should not blind us to the real merits of the drug when used with reasonable precautions.

I am, Sirs, yours faithfully,

Edinburgh, Nov. 25th, 1903. THOMAS D. LUKE.

*** We have already expressed our regret to Dr. Luke for the delay that has occurred in the review of his book. Guides to any progressive branch of science speedily pass out of date.—ED. L.

TYPHOID FEVER.

To the Editors of THE LANCET.

SIRS,—[illegible]n your issue of Nov. 21st, p. 1416, you publish a clinical l[illegible]ure on Typhoid Fever by Dr. Seymour Taylor which invites criticism. T[illegible] no doubt Dr. Taylor expects, for he admits at the outset that his remarks are based entirely on clinical experience (? 56 cases) and may be erroneous. First as to what Dr. Taylor calls the predisposing causes but which I should prefer to designate the primary etiological factors. I have dealt with the flood theory elsewhere in the paper[1] I had the honour of reading before the Epidemiological Society in April last. This flood theory has received the strong support of two such eminent sanitarians as the late Dr. Corfield and Mr. Shirley F. Murphy, but I contend that the evidence on the whole is against its being more than a minor factor. For instance, do not floods occur as a general rule as much in February as in any other month of the year? Yet the incidence of typhoid fever in London and the Thames Valley is then at its yearly minimum. Dr. Taylor says: "I shall be interested to read the returns of the incidence of enteric fever in the watershed of the Thames during the wet summer and autumn of this year." He can at any rate find the vital statistics of London month by month in your columns, and the returns for October, 1903, are to be found in the same issue of your valuable journal in which appears his own lecture (*vide* p. 1456). He will find there that "the 49 fatal cases of enteric fever were 28 *below* the corrected average number." Again, at the Metropolitan Asylums Board hospitals, "the weekly admissions averaged 44, against 18, 27, and 40 in the three preceding months." Compare these with the weekly admissions in October, 1902, which "averaged 59, against 49, 38, and 63 in the three preceding months."[2] These figures indicate that London, at any rate, has enjoyed a much smaller incidence of typhoid fever this year than last year and I am inclined to think than for many previous years.

On the other hand, these figures lend considerable support to my own theory that the seasonal incidence of typhoid fever is very largely a mere coincidence with the seasonal consumption of infected shell-fish. London has suffered much less this year because of the shell-fish scare created last autumn and winter and the consequent smaller consumption, on the one hand, and the greater efforts put forth by the various metropolitan sanitary authorities, aided by the Worshipful Company of Fishmongers, to keep off the London markets shell-fish from obviously polluted sources, on the other hand. They, of course, have not been entirely successful in this but they have certainly accomplished a great deal, and in my judgment the immediate result is the marked decline in the incidence of typhoid fever. As undoubtedly some polluted shell-fish have been sold in London even this year and, moreover, as visitors to the various seaside resorts have in large numbers indulged in shell-fish while away (returning to develop typhoid fever in the metropolis) the London figures do not yet show the real proportion of typhoid fever due to shell-fish. It is my opinion that a very large proportion of the number of cases which have occurred this autumn are still traceable to shell-fish and that the satisfactory diminution already noted by no means represents the actual proportion of typhoid fever due to shell-fish. Other sources of typhoid fever in the autumn which must not be overlooked are uncooked vegetables and other foods which have been exposed to pollution in some form and perhaps in this direction the flood theory may be of some account.

As to the next primary etiological factor—the soil, or personal factor—there can, of course, be no two opinions as to its being an important one in the individual case, but it can hardly rank as a seasonal factor, the temperature of the human body being about the same all the year round. As to Dr. Taylor's remarks on relapse and recrudescence, I certainly am among those who can dispute his deductions and I can base my own deductions on 110 cases (with only eight deaths, two of these being admitted moribund) under my own care during the last 27 months and 50 additional cases which were under my observation, though not under my personal care, during the same period. I shall publish my own deductions in a separate paper on another occasion, merely stating here that they do not coincide with those of Dr. Taylor.

As to treatment I am very interested in Dr. Taylor's use of pulvis hydrargyri cum cretâ. I venture to think that this drug has probably not only a direct antiseptic action but an even more important indirect antiseptic action in promoting the flow of that natural intestinal antiseptic, bile. I can quite believe that both Dr. John Harley and Dr. Taylor have adopted this method of medication with satisfaction; I have myself employed hydrargyri subchloridum in some of my cases with satisfaction, but I have not made it by any means a routine method. In any case mercury in small doses commends itself to me as a medicament in typhoid fever in the hands of a judicious physician.

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[1] Transactions of the Epidemiological Society, 1903.

[2] THE LANCET, Nov. 15th, 1902, p. 1347.

I am, Sirs, yours faithfully,
J. T. C. NASH, M.D. Edin., &c.,
Medical Officer of Health, Southend-on-Sea, and
Medical Superintendent of the Borough
Fever Hospital.
Nov. 23rd, 1903.

To the Editors of THE LANCET.

SIRS,—I was much interested in reading Dr. Seymour Taylor's clinical lecture on Typhoid Fever published in THE LANCET of Nov. 21st (p. 1410). In speaking of the recrudescence of the fever he makes the remark that a rise of temperature in the later stages of the disease frequently follows the administration of an enema. I have a case in point at present. My patient, with a temperature of 99° F. at the end of the third week *and no action of the bowels for four days*, his illness having been characterised by constipation rather than by diarrhœa, was ordered a simple enema of soap-and-water. During the next 24 hours his temperature rose to 103° and remained such for 12 hours and then dropped to 99°. I offered an explanation at the time that in absence of any other cause the rise of temperature was due to the liberation of toxins owing to the disturbance caused by the enema. Whether this explanation was the right one puzzled me much till I read Dr. Taylor's paper in which he explains the rise of temperature as due to the liberation of toxins.

I am, Sirs, yours faithfully,
Stamford hill, N., Nov. 21st, 1903. W. A. MILLIGAN.

THE SUCCESSFUL TREATMENT OF A FEW CASES OF LUPUS.

To the Editors of THE LANCET.

SIRS,—May I be allowed to comment upon Mr. C. S. Bowker's interesting article, the Successful Treatment of a Few Cases of Lupus, which appeared in THE LANCET of Nov. 14th, p. 1353. I agree that for suitably situated circumscribed patches of lupus complete excision is the most efficient and the quickest method of treating this disease and a linear scar is preferable to a superficial and large scar in all cases. In my hands, like those of Mr. Bowker, cases so treated have been absolutely free from recurrence. I have removed as many as five foci at one time by excision under general anæsthesia. I, however, fail to see the necessity of following up this operation by a course of tuberculin injections, presuming, of course, that all the foci have been completely removed. I should like to ask Mr. Bowker what is his *raison d'être* for the injection of arsenic, as such after-treatment is, in my experience, quite unnecessary. In very extensive and long standing cases of lupus injections of Koch's tuberculin, either the old or the new, when persevered in, have been followed by excellent, and perhaps I may even say brilliant, results, both as regards the cosmetic appearances and the absence of return. I am now largely using the modified Finsen light and the x rays and have seen numerous most satisfactory cures in the hands of other medical men by this means, but I am doubtful if the results obtained by this treatment are superior to those from tuberculin. After the old tuberculin injections the temperature in my cases has occasionally risen to 103° F., but with the new tuberculin I have never, except in the rarest instances, obtained a temperature reaching 101°. The notes lie before me of a most extensive case of lupus involving the whole of the face excepting the top of the forehead, perforating the septum nasi, destroying part of the alæ nasi, affecting the hard palate, and as the results of its old cicatrising action upon the skin practically crippling the use of the right hand. Under Koch's new tuberculin this patient has immensely improved and I know of no single remedy which could have, in so extensive a case, brought about equally satisfactory results.

In my opinion the value of the "light" treatment depends upon its efficacy and painlessness; even children can be easily induced to submit to it until practically cured. The results of "excision" are perfect and speedy; but there are still some very extensive cases of lupus involving perhaps many different parts of the mucous membrane and skin in which the injections of "tuberculin" are of the highest value.

I am, Sirs, yours faithfully,
Wigan, Nov. 17th, 1903. R. PROSSER WHITE.

MEETING OF LICENTIATES OF THE SOCIETY OF APOTHECARIES.

To the Editors of THE LANCET.

SIRS,—Kindly permit me to call attention to a notice which appears in your advertisement columns of a meeting of Licentiates which is to be held at the Apothecaries' Hall, Blackfriars, at 4.30 P.M. on Dec. 1st next.

I am, Sirs, yours faithfully,
Oxford, Nov. 21st, 1903. A. RIVERS-WILLSON.

THE FUTURE OF ST. BARTHOLOMEW'S HOSPITAL.

To the Editors of THE LANCET.

SIRS,—I must decline to wade through the letter in your issue of Nov. 21st, signed "A St. Bartholomew's Man," as I never attach any value to anonymous communications and in this particular one most of the assumptions are incorrect and do not bear upon the point from which I do not intend to be drawn, viz.:—1. Shall St. Bartholomew's Hospital be rebuilt upon Sir Henry Burdett's plan or upon a plan advocated by the medical council, whichever may be the better of the two, at a cost of roughly £600,000, or shall it be altered and tinkered at a cost of £350,000? 2. Is the most richly endowed hospital in the world, possessing an income of about £100,000 per annum (representing at 2½ per cent. a capital of £4,000,000), justified in asking the public for money if the money is not to be well spent and the effects permanent? 3 If the public find the money asked for, are "they" to decide whether the hospital is (1) to be rebuilt or (2) to be altered, or is the treasurer, who is over 70, and *the secretary, who has already exceeded his age-limit*, who practically control and manage the hospital, to do as they may think fit? 4. I desire to obtain, if possible, from the medical staff or council a public and almost unanimous expression of opinion stating whether they are satisfied with the plan put forward or whether they consider more ground essential for the building of a proper hospital.

In conclusion, may I say it is my intention to attend at the public meeting to be held at the Mansion House on Jan. 26th, when the points I have raised will be brought up and the matter finally settled.

I am, Sirs, yours faithfully,
ANDREW MOTION,
Banbury, Nov. 21st, 1903. Chairman of the Cannon Brewery Co.

AUSTRALIAN WINES.

To the Editors of THE LANCET.

SIRS,—THE LANCET of Oct. 24th (p. 1173) contains a very interesting leading article headed, "The Vintage and its Relationship to Health" It is with the following sentences in the first paragraph that we propose to deal.

You state: "The wines produced in our colonies, which are invariably richer and stronger than those produced in France or Germany, would lose much of the crude qualities which are characteristic of them were they left to mature. While these wines, be it said, have many excellent points they cannot at present compete as regards delicacy or *finesse* with the more classic wines of French growth."

In respect to this remark permit us to say that the Australians have not the least intention of competing in types or styles with the wines of France or Germany, of Portugal or Spain, Madeira, Sicily, or any other country in the world. These countries, one and all, produce wines excellent in themselves and specially characteristic. Australian *vignerons* take a similar position and produce wines characteristic of Australia.

No palate worthy that of a connoisseur would mistake the wines of any of these countries. They are separate and distinct in flavour and in characteristics—as distinct also are the wines of Australia. Therefore, in sampling Australian wines will your readers please taste them on their merits; let them consider what to expect from the juice of full ripe grapes produced under sunshine such as is general in

our English climate could never become like the wines of the colder countries we have mentioned and certainly would not compete with the wines of French growth. Why should they? We have from Australia wines more robust, more generous, more fruity, and natural in a greater degree than the so-called natural wines of any other country. Therefore, why compare the wines of one country with those of another? They all have their charm, whether of delicacy and *finesse*, or of fortified vigour on the one hand, or of natural vigour n the case of Australia. Let us, therefore, accept on their merits the wines of each country but not forget that the wines from Australia are no more than they profess to be—natural wines pressed from the finest wine-making grapes in the world.

One other point. Australian vineyards are 12,000 miles away and produce as delicate, as refined, as elegant wines as France has ever sent to England, but distance from the source of production would be one reason why we should not import such light wines into England and another reason is that our lighter, thinner wines come into competition with the vineyards of France and Germany, whereas with our full-bodied, generous, robust wines no country in the world can compete. And these generous wines are, we find during 33 years' experience, the wines most in demand.

We are, Sirs, yours faithfully,
P. B. BURGOYNE & CO.

Dowgate-hill, London, E.C., Nov. 17th, 1903.

PS.—A good description of the Australian wines imported into this country was given some time since in the *Standard* in which it was stated: "The Australian wines ...... are generous, well-flavoured, full of body, rich in bouquet, abounding in memories of the sun which begot them, ... and, like the wines of the ancients, will bear mixing with water."

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

A Medical Factory at Nasik.—Volunteers in India ignorant of English.—The Plague Epidemic.

THE scheme for establishing a factory at Nasik in the Bombay Presidency for the manufacture of drugs and other medical stores, which forms part of the general policy of making India as far as possible self-contained and self-providing against possible times of emergency, is now being steadily advanced. Colonel H. St. C. Carruthers, I.M.S., Madras, who was placed on special duty last year to push the scheme forward, has lately been in Simla conferring with the heads of the departments concerned.

Reports made at different times have drawn attention to the poor physique of the majority of volunteers in India. Now recently I hear of the inspector-general calling attention to the fact that many of the men cannot speak the English language and expressing the opinion that they should not have been enrolled. As a matter of fact, many of the
time. ˙ıv.ome of the corps are pure-bred natives. These two
ferable to mplaints against the volunteers have opened the
somnoform. hether conscription for all British, if not for
claims of eths, should not be adopted for India. The mere
anæsthetic litining of compulsory service would be health-
it has been ll European residents in India who at the present
country and o make sports in order to compel themselves to
quite possibke.
time now argue mortality has again advanced, the increase
often by quiy general. The week's total figures were 18,177.
should not s once more shown signs of a recrudescence. A
with reasont is reported at Coimbatore and an attempt was
et fire to the plague camp. The disturbance was
Edinburgh,e to some precautionary measures which had been
** We lague is at last dying down in Mhow. There is a
'ncrease in Bengal, especially in Patna, but in
the delay the disease is quiescent.
Guides to a
of date.—E

'AY NATURAL HISTORY SOCIETY.—MISS
at the meeting of the Torquay Natural History
d on Nov. 16th, read a lecture on "Eisenach"
been prepared shortly before his death by Mr.
SIRS,—In ykeek, medical officer of health of the town for
clinical lecture a past president of the society.
which invites en..

POST-GRADUATE WORK ABROAD.

(BY A SPECIAL CORRESPONDENT.)

VII. NEW YORK.[1]

PRIOR to the year 1882 post-graduate studies were conducted without any well-organised system in the three medical schools of the city. Large numbers of medical men visited the city during the sessions of the schools for the purpose of studying special branches but they found no other opportunities than the attendance upon the regular lectures and an occasional clinical lecture on a particular subject in one of the hospitals. The result was a great waste of time, little really useful instruction of the kind sought, and a strong tendency to seek the advantages of foreign schools. During the period between 1850 and 1882 American medical students thronged the clinics of the schools of Paris and Berlin. Clinical teaching has been of very slow growth in New York. Though clinics can be traced back a century yet that kind of instruction was withheld from the student and given only to the practitioner. The schools, therefore, discarded clinics from their regular course of teaching and only occasional lectures were given to the small number of physicians who visited the hospital wards. With the opening of Bellevue Hospital, the great almshouse hospital of the city, about the year 1846, and the appointment of a staff of young physicians and surgeons who had been trained abroad, clinical teaching began to assume an importance that had never been given to it before. Students of every grade of advancement eagerly attended these lectures and often at the expense of the regular didactic course of the schools. In vain the faculties of the schools endeavoured to counteract the current; the hospital lectures increased in popularity from year to year until the schools were obliged to organise clinics as a part of the general course of daily lectures. It is now apparent that the early clinical lectures at the New York and Bellevue Hospitals were of high order and powerfully aided in dispelling the illusion that such instruction is harmful to the undergraduate. Students and practitioners alike crowded the amphitheatre when Professor Alonzo Olark, Dr. James R. Wood, Dr. Valentine Mott, Dr. Willard Parker, and others of like reputation gave clinical lectures.

The first decided step to systematise post-graduate studies was taken in 1861 by the organisation of the Bellevue Medical College which was established on the grounds of the hospital and its professors were the physicians and surgeons of the hospital. One of the distinguishing features of that school was the regular and systematic daily clinical lectures in the hospital wards. The school was a success from the first and clearly demonstrated to the other schools that the great want of medical students and practitioners was clinical instruction. From this time the schools began to attach more importance to a connexion with hospitals where instruction could be given and to create dispensaries where the poor would find gratuitous treatment and at the same time be subjects for clinical teaching. One of the most noticeable features of this increase of facilities for clinical instruction was the much larger number of medical men in attendance upon the sessions of the schools. As these physicians came from their practices in the country to study special subjects the schools began to add special teachers to their faculties who classified their clinics according to the nature of the diseases of those in attendance, as diseases of the eye and the ear, the skin, the throat and the nose, and so on. This creation of specialties met the wants of practitioners and recent graduates and became very popular, attracting physicians and students in large numbers from all parts of the country. The schools became crowded with these graduates seeking special privileges and so much time was given to the specialties for the benefit of graduates that in some of the schools the undergraduates were in danger of being neglected. This condition led to the agitation of the question of supplementing the regular faculty with a faculty devoted to the specialties and for a time this was a feature of the course of instruction in the schools, being known as didactic and clinical instruction combined. But this arrangement had its disadvantages as the undergraduate course was interrupted daily by the special courses and the post graduate courses lacked that continuity so essential to the needs of the attending practitioners The University Medical College was the first to discuss the propriety of organising an independent post graduate faculty having its [illegible] wn diploma under [illegible] This proposition [illegible] ecial subjects who found it embarrassing to give their courses of lectures in a connected form in unison with the regular undergraduate courses The proposition was not regarded as feasible by the governing faculty and on its refusal to create such a separate post graduate faculty and course of instruction the professors of specialties determined to establish a separate and independent post-graduate school They accordingly resigned in a body and at once undertook the great task of organising a purely post graduate medical school, an enterprise hitherto unknown There were many predictions of its failure on the part of the faculties of the schools which were all hostile to the movement, as if it succeeded it would attract from their numbers that large and increasing class of medical men who annually visited New York to obtain special instruction To counteract the efforts of those engaged in establishing the new school the medical colleges increased their clinical facilities and largely added to their faculties teachers of the specialties

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[1] No. I. (Paris), No. II. (Berlin), No. III. (Vienna), No. IV. (Budapest), and Nos. V. (Florence) and VI. (Milan) were published in THE LANCET of Sept. 12th (p. 781), Sept. 26th (p. 912), Oct. 17th (p. 1121), Oct. 24th (p. 1194), and Nov. 21st (p. 1465), 1903, respectively.

It was in 1881 and 1882 that this new departure in medical teaching occurred and from this period may be dated the commencement of a new era in the department of medical education in this city Coincidently with the movement to establish the Post Graduate Medical College was the organisation of the New York Polyclinic Medical School and Hospital along the same lines and for the same objects It is now upwards of 20 years since these schools began their operations and it is possible to day to form an opinion of the results of their work It may be premised by stating that they have been eminently successful in all that pertains to attracting large classes, to imparting useful knowledge on all medical subjects taught and in securing financial support Great credit is due to the promoters of these schools, Professor D B St John Roosa of the Post Graduate School and Professor John A Wyeth of the Polyclinic, men of the highest standing in their profession in this country There is no doubt that these schools have been largely instrumental in giving to New York a commanding position as a great centre of medical education

Referring now to the special advantages which the medical schools and hospitals afford for clinical and post-graduate studies in this city the two schools devoted entirely to post-graduate teaching will be noticed first

The New York Post Graduate Medical School and Hospital was organised by the post graduate medical faculty of the University of the City of New York on April 4th, 1882 It is an incorporated body under the laws of the State It has a faculty of 55 professors 25 adjunct professors, and 77 instructors, or a total of 157 The teaching of the school is entirely clinical or demonstrative It has its own hospital with 205 beds, a babies' department with 54 beds, and an orthopædic division with 27 beds It has a large dispensary service in the same building, a maternity in an adjoining building, and a training school for nurses The laboratory is equipped for the most advanced instruction in bacteriology, histology and pathology The anatomical rooms are ample for teaching operative surgery The babies' ward has a special operating room and a roof garden for summer use The aim of the school has been to give personal instruction to the physicians who attend the clinics so that they may be qualified to carry out in their own practices the most approved methods of procedure The practitioner is brought face to face with the patient and allowed to examine personally the case except when such examinati[illegible] would be detrimental to the patient The school [illegible] vely for members of the profession whose creden[illegible] atisfactory to the directors and who have a lega[illegible] actise medicine in the States or countries fro[illegible] y come, undergraduates are not admitted on [illegible] The school year is divided into two distinct terms—viz, the winter and summer, the [illegible] ing from Oct. 1st to June 1st and the latter [illegible] st to Oct 1st The scope of instruction in [illegible] he specialties The total registration for the [illegible] is 639 and the number who have attended the [illegible] it was opened is 8990

The New York Polyclinic Medical School and Hospital was organised during 1881 and opened in 1882 It is chartered by the University of the State of New York Its faculty consists of 29 professors, 13 adjunct professors, 21 lecturers, 28 instructors, and 42 clinical assistants, making a total of 133 There are two terms—viz, a winter term from Sept 15th to June 14th and a summer term from June 15th to Sept 14th, thus the school is in continuous operation. The school has its own hospital with 80 beds and its own dispensary The terms of admission are the same as those of the Post Graduate School and the methods of instruction are similar The number registered last year was 340

The Greater City has four regular medical schools in addition to [illegible] d First, as reg [illegible] r-geons, estab [illegible] It is now the medical department of the University of Columbia It has a faculty of 37 professors and 77 demonstrators and instructors, a total of 114 The clinical advantages to the students are as follows The Vanderbilt Clinic is equipped with all modern appliances for the study and treatment of disease and was attended by 45,338 patients in 1902, the Sloane Maternity Hospital offers exclusive clinical advantages to the students of this school and contains 116 beds The other institutions open to the free admission of students of this school are the New York Hospital 150 beds, Roosevelt Hospital, 238 beds, Bellevue, 900 beds, Presbyterian, 350 beds, St Luke's, 225 beds; General Memorial, 100 beds, New York Foundling Hospitals, 1500 children, Contagious Diseases Hospitals, 200 beds, Babies' Hospital 50 beds; St Mary's Hospital for Children, 120 beds, and Hospital for Ruptured and Crippled, 250 beds This school has thoroughly equipped laboratories for every species of investigation which the student may require The number of students registered last year was 795 and the number of graduates after a four years course was 168

The Cornell Medical College is the Medical Department of Cornell University which is located at Ithaca, a small city some 300 miles from New York It was organised in 1898 and has a faculty of 39 professors and 103 instructors, a total of 142 Its students have admission to hospitals in addition to those of the College of Physicians and Surgeons already mentioned the City Hospital, with 1000 beds, Skin and Cancer Hospital, 100 beds, St Francis Hospital, 230 beds, and St Vincent's Hospital 250 beds The Loomis Laboratory is a five storey building fully equipped for every variety of study The total registration last year was 394 and 60 graduated after a four years course

University and Bellevue Hospital Medical College was founded in 1898 by the union of the University Medical College organised in 1841, and Bellevue Hospital Medical College organised in 1861 The faculty consists of 26 professors and 81 instructors, in all 107 The same hospitals that have been mentioned as furnishing clinical materials for the other schools are open to this school and in addition the Columbus Hospital, the Manhattan State Hospital for the Insane, and the Lying in Hospital The total registration last year was 311 and the number of graduates was 73

The Long Island Hospital is located in the borough of Brooklyn and was organised in 1858 It has a faculty of nine professors and 64 instructors a total of 73 Its clinical facilities consist of the College Hospital with 300 beds, and the following general hospitals to which its students have free access King's County, St John's Brooklyn, Norwegian Williamsburg, Methodist Episcopal, and Brooklyn Eye and Ear The Hoagland Laboratory, thoroughly equipped with all modern apparatus, belongs to the college. The total registration last year was 290 and the number of the graduates 40

It may be stated in conclusion that at the present time the clinical resources of New York, with its 30 hospitals and 75 dispensaries, are inexhaustible These institutions open their doors to the professors and the teachers and allow the materials to be utilised. And it is a gratifying fact that the change in the methods of teaching from mere formal lectures by six or seven professors in each school to the class recitations with a large corps of young men as instructors is stimulating the recent graduates to seek early entrance to the hospitals and the dispensaries for the purpose of becoming teachers The number of teachers in the six schools noticed above is 726 every one of whom has an official connexion with a hospital, a dispensary, or a laboratory. Thus the city is being supplied with an ever-increasing number of high-grade instructors in every department of medicine. Already it is very noticeable that the drift of medical graduates to European schools to study specialties has almost ceased, while the attendance upon the post-graduate schools is yearly increasing.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Hospital Sunday Fund: Annual Report.

THE committee reports another satisfactory year's work and notes with much pleasure that with advancing years this fund appears to deepen its hold on the affections and confidence of the charitable public and that the steady growth observable both in the Sunday and Saturday funds in recent years has been well maintained this year. The receipts of the Hospital Sunday Fund for 1903 amount to £6681 13*s.* 11*d.*, as against £6548 2*s.* in 1902. A slight change in the method of distribution has been introduced this year, a proportion of the total receipts being reserved for special grants to institutions whose circumstances seemed to justify special consideration. In no case, however, was the grant to any institution less than that of last year. New grants were made to the Hospital for Cancer and Skin Diseases and to the Samaritan Hospital for Women. The slight increase in the expenses (£53 14*s.* 4*d.*) is due to the extra advertising of Hospital Sunday in the daily local papers. No successor has yet been appointed to the late assistant treasurer and secretary. The committee deeply deplores the loss through death of Mr. John Brancker, Mr. Edward Mounsey, and Sir James Poole and regrets that it loses the services through removal of four ministers of religion. There is a balance in the bank of £231 18*s.*

Hospital Saturday Fund: Annual Report.

At the annual meeting of the Hospital Saturday Fund held on Nov. 20th the report showed that the systematic collections made in the various places of business were steadily increasing. The total amount (exclusive of interest) raised this year was £8045, an increase of £363 over that of the year 1902. The Lord Mayor (who presided) moved the adoption of the report and said that there was no more interesting or important charity organisation in the city than that of the joint Sunday and Saturday Funds. There were those who suggested that the hospitals should be placed on the rates. He for one would certainly deprecate any such scheme and he did not believe that there was any prospect of that coming about. He could not conceive of the damming up of the fountains of charity which, through the medium of those two organisations alone, were responsible for the large sum of £14,000 a year. But he thought the hospitals might very well be relieved from the payment of rates. That was a legitimate object to work for and he thought they might very well take into consideration how they could best bring that about. Those institutions afforded very sensible relief to the rates of the city and he thought that boards of guardians should assist the hospitals by making grants in compensation for those cases which, if such charities did not exist, would be compelled to go to the parish infirmary. The late Lord Mayor (Mr. W. W. Rutherford, M.P.) also advocated some such system in addressing a similar meeting during his year of office (if I mistake not).

Sanitation in West Africa.

At a meeting of the African trade section of the Liverpool Chamber of Commerce held on Nov. 9th a letter was read from Major Ronald Ross, C.B., F.R.S., the director of the Liverpool School of Tropical Medicine, commenting on the reply made by the Colonial Office to the suggestions of the Chamber that a sanitary commissioner should be appointed for West Africa and certain other points in connexion therewith. Major Ross strongly advised a conference between the chambers of commerce interested and the Colonial Office after the return of Sir William McGregor, K.C.M.G., who has made himself thoroughly conversant with the sanitary needs of West Africa. It was resolved to communicate Major Ross's suggestion to the chambers of commerce interested.

Liverpool Deputation to the Colonial Secretary on West African Affairs.

Mr. Lyttelton, the Secretary for the Colonies, received a deputation on Nov. 19th from the African trade section the Liverpool Chamber of Commerce on the subject West African affairs. Amongst the delegates representi the Liverpool School of Tropical Medicine were Profess R. W. Boyce, F.R.S., and Major Ronald Ross. Profe Boyce spoke of the work done by the Liverpool a London Schools of Tropical Medicine in investigation, teac ing, and the organising of expeditions of research a referred to the great results which had come from this mo ment initiated by Mr. Joseph Chamberlain. Major R also addressed the Colonial Secretary in the same directi Mr. Lyttelton, in reply, said that he associated hims strongly with the desire of his predecessor that all practi assistance should be given to the Schools of Tropi Medicine which had done such excellent work.

Sleeping Sickness: Report from the Liverpool Expedition the Congo.

The first report has now been received from the memb of the expedition of the Liverpool School of Tropi Medicine which was sent to the Congo Free State w the coöperation of the King of the Belgians. T expedition reached Boma on Sept. 23rd and it w arranged with the Vice-Governor-General that it shou inspect and report upon the sanitation, from the poi of view of "mosquito prophylaxis," of Boma, Matidi, a Leopoldville. Later, the expedition will proceed to so locality which seems suitable for beginning research wo The Governor and all the State officials were most courte and obliging and offered to help in every way. Quarters ha been supplied in Boma and will be provided in Matidi a Leopoldville by the State and the local State physicia have placed the native hospital, where there are about t cases of sleeping sickness, at the disposal of the expeditio Up to the date of writing the members of the expediti had examined 51 various native hospital cases and ha already performed two necropsies on cases of the diseas A missionary informed the members of the expedition th last year 4000 people died from this disease in the district Watken and it was stated that the depopulation of th country was feared at Bundunda at the confluence of th Kwango and Kassai rivers. Pest camps have been esta lished in various districts in accordance with the Governm orders and cases are isolated in them under the care soldiers as they occur. The Government hopes by the measures to check the spread of the malady. The native in some places at least, have acquired a lively dre of contagion. They are said to refuse to touch th effects of a man who has died from sleeping sickne or to eat with him while alive and cases of the desertion villages in which the disease has appeared are commo The expedition has written to missionaries and has al requested the Government to indicate to it a place in whic there is a large native population among whom sleepi sickness has been endemic and has now become ep demic. It has asked to be informed if it can obta living facilities and if the natives are amenable to th control of the local whites. The expedition will proceed whatever station seems best to fulfil these conditions for th purpose of getting general information concerning th disease. It has drawn up a list of questions on lines ve similar to those sent out by the Royal Society. The Cong State is printing them and copies will be sent to the vario Government officials throughout the Congo, as well as to mi sionaries and trading firms. A further letter, dated Oct 26t has been received by Sir Alfred Jones, K.C.M.G., the chai man of the Tropical School of Medicine, from the membe of the Congo expedition. They state that they were leavin for Matidi on Nov. 1st. The Governor has placed a Stat steamer at their disposal for the trip. They say that th Congo is certainly the right place to go for huma trypanosomes. They have already seen 18 natives—no cases of sleeping sickness—in whose blood trypanosome were found. They promised to send a short report by th next mail. It will deal with the distribution of mosquitoe in Boma, will give their observations up to date on trypano somiasis and sleeping sickness, and will contain an apprecia tion of the conditions existing in Boma from a mosquito mala riapoint of view.

The Royal Southern Hospital: Anniversary Sermon; Appointment of Honorary Physician.

There was a large congregation at St. James's church on Nov. 22nd, on the occasion of the anniversary sermon on behalf of the Royal Southern Hospital. The Lord

Mayor attended in state The pulpit was occupied by the Rev J B Lancelot, M A (the principal of the Liverpool College), who made an earnest appeal for a larger measure of public support of the charity The collection realised £74 9*s* 9*d*, as against £60 13*s* 1*d* last year At the conclusion of the service the Lord Mayor, with whom was the Lady Mayoress, visited the hospital His lordship was numerously and representatively accompanied in the tour of the building, with the arrangements of which he expressed himself much pleased —The election to the post of honorary physician, vacant by the resignation of Dr William Williams, took place to day (Nov 24th) Dr John Lloyd Roberts, honorary physician to the Stanley Hospital, received a majority of votes over the other two candidates and was declared duly elected The electorate (unlike the system of electoral committees adopted at the Royal Infirmary and David Lewis Northern Hospital) consists of subscribers of two guineas and upwards, two lady trustees being allowed to vote by proxy

Nov 24th

WALES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS)

New Workhouse Infirmary at Axbridge

THE Axbridge board of guardians is among the most progressive in the whole country The guardians have recently erected very excellent tramp wards at a cost of £1600, they have lighted their workhouse with electric light at a cost of £850, and a new infirmary connected with the Axbridge workhouse was formally opened on Nov. 14th by Mr Walter Long, the President of the Local Government Board. There is accommodation in the new building for 72 patients and the cost works out at about £120 per bed On each of the two floors there are two 12 bed wards and six two bed wards The amount of floor space per patient is 72 feet and of air space about 1000 cubic feet There are two day rooms provided with wide bay windows on the southern side of the building and along the whole length of this side there runs a verandah the upper portion of which can be utilised as a fire escape There are a small kitchen lift and a larger lift for patients The building is warmed by hot-water pipes and is lighted by electricity At the opening ceremony Mr Long made some remarks in connexion with the care of pauper children, with regard to which he [illegible] est and brightest [illegible] It was difficult [illegible] a workhouse and [illegible] ome independent self respecting citizens and he urged that they should be placed under the normal conditions of childhood where they could lead the sort of life which children in their position would lead if they were in their own homes and with their own parents Instead of continuing a race of paupers we should then be turning out into the world men and women trained and educated in their minds and bodies so as to be useful citizens

Cardiff Infirmary

Two years ago Mr Leonard D Rea the secretary to the Cardiff Infirmary, devised a scheme which has proved eminently successful for the purpose of eliciting sympathy and assistance in procuring structural improvements and additions to the institution Instead of asking for a lump sum the managing committee ascertained the actual cost of various requirements and then placed the different items before the people of Cardiff For example they stated that electric light could be installed for £1000 whereupon the Marquis of Bute sent them that amount for that specific purpose, a pavilion for the electrical treatment of phthisis was estimated to cost £1450 and this sum was forthcoming from an anonymous lady, verandahs for open air treatment could be erected for £700, and Lord Tredegar offered to defray this expenditure There are still requirements not yet carried out which will cost over £5000 including fire extinguishing apparatus to cost £450 indoor telephones to cost £178 laundry improvements £300, and improved cooking and heating apparatus The latest addition is a new accident receiving ward and out-patient dressing rooms given by Mr Thomas Webb of Tunbridge Wells at a cost of over £1000 Mr. Webb was the donor a few years since of a new operating theatre and his last gift has been designed on the same lines so as to be as aseptic as possible The terrazzo flooring, tiled and cemented walls, rounded corners, and absence of ledges offer no resting places for dust and the rooms can be cleaned out with a hose The shelves in use are made of marmorite, a material consisting of plate glass into which colouring matter has been introduced The only adverse criticism that it appears possible to make is in connexion with the inlet ventilators which are quite incapable of being cleaned out and will thus be dust receptacles Leading out of each of the two dressing rooms which are 18 feet square there is a smaller room 18 feet by 9 feet. This very admirably designed addition to the infirmary buildings was formally opened on Nov 18th by Sir John Williams who took the opportunity of advising the establishment of a branch convalescent hospital within a few miles of Cardiff in order to relieve the pressure on the infirmary itself That this or some other scheme of extension is required is evident from the statement that during the past six months there have been 300 patients always awaiting admission to the wards and of the 184 beds in the institution 164 are in occupation

The Incorporated Society of Medical Officers of Health

At a meeting of the West of England and South Wales Branch of the Incorporated Society of Medical Officers of Health held at Bristol on Nov 20th under the presidency of Mr J Tubb Thomas, medical officer of health of the county of Wiltshire, there was a discussion upon certain aspects of the question of the prevention of tuberculosis Definite resolutions were passed to the effect that it is desirable where practicable to utilise existing isolation hospitals for the isolation of cases of phthisis, that compulsory powers of isolation should not at present be extended to phthisis, and that in principle the compulsory notification of phthisis is desirable Mr C W Vickers, the medical officer of health of Paignton, spoke very strongly as a general practitioner in opposition to this last resolution and declared that if notification were enforced an immense amount of harm would follow

University College, Bristol

The annual meeting of the governors of University College, Bristol, was held on Nov 18th under the presidency of the Bishop of Hereford A satisfactory record for the session 1902–03 was presented. The report referred with "much regret to the death of Professor Joseph G Swayne, who was elected to the first chair of midwifery and on his retirement the title of professor emeritus was conferred upon him in recognition of his long and valuable services" Dr A. B Prowse was elected as representative of the faculty of medicine on the council of the College for the ensuing three years Mr Morris W Travers has been appointed to the chair of chemistry, vice Professor Sydney Young F R S Mr F E Francis, the lecturer in chemistry, has been appointed assistant professor of chemistry

Hospital Sunday Fund in Bristol

A meeting of the friends of the Hospital Sunday Fund in Bristol was held in the council house on Nov 19th the Lord Mayor presiding It was reported that the amount received for the fund in 1903 was £1565 being £45 less than in 1902 This sum had been allocated as follows Royal Infirmary, £609 General Hospital £511, Children's Hospital, £189, Eye Hospital £91, and smaller sums to the Orthopædic Hospital Lock Hospital Eye Dispensary Bristol Dispensary, Clifton Dispensary and the Medical Mission It was decided that the last Sunday in January should be observed as Hospital Sunday in 1904

Nov 24th

SCOTLAND

(FROM OUR OWN CORRESPONDENT)

Royal Army Medical Corps (Volunteers) New Headquarters at Aberdeen

THE Royal Army Medical Corps (Volunteers) has secured new headquarters in the back portion of the Albert Hall Buildings, Aberdeen, entering from Union Wynd Accommodation for office stores &c, has been provided while the corps will have the use of the large hall or of one of the smaller halls in the building on four nights of the week for drill purposes In addition to the office a waiting room has been acquired in which the men may forgather when awaiting the commencement of drill, while the store rooms are commodious and very suitable for the purpose for which they are intended. In these new headquarters the work of the corps will be carried on much more conveniently than at present.

Aberdeen Medico-Chirurgical Society.

The annual meeting of this society was held on Nov. 19th when the following office-bearers were elected for the year. President: Dr. J. Theodore Cash. Vice-President: Dr. George Rose. Secretary: Dr. John Marnoch. Recording secretary: Dr. Ashley W. Mackintosh. Treasurer: Dr. William Findlay. Librarian: Dr. Peter Howie. Members of council: Dr. G. M. Edmond, Dr. D. W. Finlay, Dr. Angus Fraser, Dr. J. Gordon, Dr. Gray, and Dr. George Williamson.

Nov. 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS).

Dublin University Biological Association.

THE opening meeting of the Dublin University Biological Association was held in Trinity College on Nov. 19th, when the President, Mr. R. Charles B. Maunsell, delivered the inaugural address on Surgical Intervention in some Gastric Diseases. Mr. Maunsell in the course of his address said that the subject which he had chosen, although practically unknown ten years ago, had already grown to such dimensions that it would be impossible to treat it in an exhaustive manner. Mr. A. W. Mayo Robson proposed that the best thanks of the association be given to the President for his address. He strongly urged the necessity of surgical treatment in gastritis where within a reasonable time medical measures had failed to give relief and pointed out that where 25 per cent. of cases treated medically terminated in death the mortality was only 5 per cent. when surgical methods were adopted. Sir Charles Ball, in seconding the motion, said that a few years ago the surgical treatment of diseases of the stomach might have been discussed in a few paragraphs; to-day it would fill a large volume.

Dinner to Professor D. J. Cunningham, F.R.S.

The past and present students of the medical school of Trinity College gave a dinner at the Shelbourne Hotel on Nov. 19th to Professor Cunningham, who for a number of years had filled the chair of anatomy in that school. He was presented with a massive loving cup of Celtic design. Professor A. E. Dixon presided and a large and distinguished company were present to do honour to the principal guest.

The Belfast Maternity Hospital.

Out of a large number of applicants Dr. R. J. Johnstone has been elected physician to the Belfast Maternity Hospital, in place of Dr John Campbell who has resigned the position of visiting physician.

An Outbreak of Fever at Enniskillen.

There are at present 18 patients in the Enniskillen Fever Hospital suffering from typhoid fever, scarlet fever, or diphtheria, 12 admissions having taken place during the last few weeks. Mr. John Wilson, the medical officer, has reported to the guardians that the responsibility must rest with them as he predicted and stated what was likely to occur to no purpose. The chairman said he would protect the board and would not allow the medical officer or anyone else to jump on it, but he agreed as to the need of a disinfecting chamber.

The Belfast Sewage.

At a meeting of the Belfast harbour board held on Nov. 17th one of the members drew attention to the insanitary state of the Belfast Lough owing to it being the receptacle of the city sewage which, with the ebb and flow of the tide, is simply deposited on the banks of the lough. By an Act passed in 1899 the corporation of Belfast was required to abate this nuisance within three years and it appears that it is constructing bacteria beds to cope with the problem, but it should be stirred up to complete the work without further delay.

Ulster Medical Society.

The annual dinner of the Ulster Medical Society was held in the Medical Institute, Belfast, on Nov. 20th, Dr. John Campbell, the President, being in the chair. There was a good attendance of members. The following were the toasts: "The King," proposed by the President; "The Lord Lieutenant and Prosperity to Ireland," proposed by the President and responded to by Dr. J. R. Davison; Professor J. A. Lindsay gave the toast of "The Irish Medical Association," to which Dr. L. Kidd (Enniskillen), President of that association, replied; "The Queen's College and Belfast Medical School" was proposed by Dr. F. McLaughlin, the President of the Ulster Branch of the British Medical Association, and the President of Queen's College, Dr. J. W. Browne, and Professor T. H. Milroy replied; Mr. P. C. Cowan, C.E., engineer-in-chief to the Local Government Board of Ireland, proposed "Our Distressed Brethren." The last toast was "The President of the Ulster Medical Society," given by Sir W. Whitla, to which the President replied. During the evening Dr. J. E. MacIlwaine, Dr. H. L. McKisack, Dr. J. McHarry, and Dr. Leslie contributed songs.

Nov. 24th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Range and Increase of Hearing in Deaf-Mutes.

AT the meeting of the Academy of Medicine held on Nov. 3rd M. Gariel read for Dr. Marage the results of some experiments made at Bourg-la-Reine for developing and measuring the range of hearing in deaf-mutes. 24 children who were perfectly deaf were taken and divided by drawing lots into two groups. The odd numbers served as controls and the even numbers were treated regularly day by day with vibrations from an apparatus which has already been employed in the treatment of deafness due to sclerosing otitis. At the end of six weeks all the children treated could hear the sounds of musical instruments although they had never heard anything before. Three of them could hear phrases pronounced close to the ear and two could follow a conversation with a person speaking at a distance of one metre and without raising the voice. M. Gariel laid stress upon these excellent results and in addition pointed out that hitherto it has been found impossible to express in exact terms the degrees of hearing possessed by deaf-mutes but that now, thanks to a siren (*sirène à voyelles*) invented by Dr. Marage they can be easily ascertained.

A New School for Hospital Nurses.

Among the improvements in hospital administration laid down in the plans which have been drawn up on such a large scale and approved by the municipal council is one for the foundation of a school where those who intend to become nurses will have a thorough training both theoretical and practical, capable of fitting them in every respect for the career which they have chosen. The plans have just been submitted to the municipal council. The buildings will be erected on some vacant land belonging to the Salpêtrière and are designed for 150 students who will be divided into two groups. On the ground floor the management and those in charge of each group will be accommodated. There will also be a lecture theatre, two refectories, recreation rooms, school rooms, and a library. The students will be lodged upon the upper floors and everyone will have a room to herself, of a fair size, well-lighted, and supplied with a lavatory apparatus. The building will be so arranged that the officials in charge will be enabled to exercise constant supervision over the pupils. The total expenses will amount to about 1,000,000 francs.

Pancreatic Opotherapy in Diabetes.

M. Lafitte has recently made some experiments in the treatment of diabetes by pancreatic opotherapy. He chose cases of diabetes with arthritis, of diabetes with wasting, and of simple glycosuria in arthritic patients. He read a paper on the subject at the meeting of the Hospitals Medical Society which was held on Nov. 13th. The results of opotherapy are practically the same as those obtained by the use of fresh raw pancreas. Shortly they are as follows. There exist a certain number of cases of constitutional diabetes which are favourably affected by pancreatic opotherapy. The glycosuria diminishes and may even almost disappear, the hunger and thirst become less, the genital troubles are much improved, and so also is the general health. The same results are obtained by the use of fresh raw pancreas. The gland must be given raw as soon as possible after the death of the animal. This is an absolutely essential condition of success A delay of even a few hours or the application of a very slight degree of heat so modifies the action of the gland as to render it practically useless The improvement in the degree of glycosuria is very fleeting and lasts for barely a week.

The Annual Proportion of Errors in Diagnosis committed by Military Surgeons

When the vote for the War Department came before the Chamber of Deputies the other day a deputy brought up two cases in which he alleged that the military surgeons had failed to recognise diseases in soldiers which were more or less serious The Minister of War gave the following answer The number of military surgeons is 1500 by far the great majority of whom are hard workers and thoroughly conscientious If any carelessness is proved the War Office punishes it severely To give some idea of the annual proportion of possible mistakes the Minister had consulted a medical man, who is also a senator, and had been favoured with the following argument Suppose that in a service of 30 years every military surgeon makes one mistake the proportion of mistakes calculated on the basis of 1500 medical officers, every one serving for 30 years, would be 50 mistakes every year But this figure is above the mark and the number of mistakes tends to grow less and less, for the whole military medical department knows that errors are no excuse and they are supported in this opinion by their feelings of professional honour

Antituberculous Dispensaries

On all sides efforts are being made to combat the terrible plague of tuberculosis both by care of the sick and protection of the healthy. Here are the figures published by the Municipal Bulletin of Statistics in regard to the deaths from tuberculosis per 10,000 inhabitants in those districts of Paris where the antituberculous dispensaries are in working order The mean figures for the district of Clignancourt for the last two and a half years are 43 2 in place of 74 2 which was the mean for the period 1892–96 For the district of Grands Carrières the mean of the last two and a half years is 47 97, instead of 69 6 as in the period 1892–96 For the district of Gouttes d Or the mean for the last two and a half years is 52 47, instead of 67 10 as in the period 1892–96 For the district of Chappelle, the mean for the last two and a half years is 48 33 instead of 58 6 as in the period 1892–96

Nov 24th

BERLIN

(FROM OUR OWN CORRESPONDENT)

Etiology of Dysentery

Staff Surgeon Dr Jurgens has published in the *Deutsche Medicinische Wochenschrift* an account of bacteriological researches carried out by him during an epidemic of dysentery which broke out in a regiment in the exercise camp of Gruppe in Western Prussia The epidemic extended to 26 men who presented typical symptoms—namely, severe diarrhœa, hæmorrhage from the bowels and prostration These 26 men were admitted into the military hospitals and in addition to them there were a number of men who suffered from diarrhœa and were treated in the barracks All the patients recovered in from three to four weeks The microscopical examination proved that neither entamœba histolytica nor any other protozoon was present in the bowels Bacteria of course, were present and Dr Jurgens detected a bacillus very similar in form and culture characteristics to Kruse's dysentery b[illegible] agglutination test, [illegible] bacillus discovered [illegible] In other e[illegible]idemics [illegible] monly found in pure culture in the bowels during the first days of the disease and this bacillus is therefore believed to be the specific germ of dysentery, although the bactericidal action of the serum against the bacillus has not yet been ascertained In the recent epidemic the bacillus of Dr Jurgens was agglutinated by the blood serum of almost all the patients both during the attack and during convalescence The serum taken from patients up to the second day from the beginning of the illness had no agglutinative effect, but on the third day and afterwards it agglutinated the bacillus of Dr Jürgens but not the dysentery bacillus of Kruse. Dr Jurgens therefore infers that the etiology of dysentery is not in all cases the same, as it is not caused always by Kruse's bacilli but sometimes by another species The disease though a definite entity as to its clinical symptoms, shows marked differences from a bacteriological point of view

Professor Virchow's Library

At the last meeting of the Berlin Medical Society the librarian, Professor Ewald, announced that the widow of the late honorary president, Professor Virchow had presented the library of her deceased husband to the society on condition that it should be kept separately as a special department of the society s library By this magnificent gift the number of books of that library becomes increased by about 7000 volumes The deceased savant was a first rate bibliophile and had collected a large number of rare books, especially valuable in respect of ethnology, anthropology, and the history of medicine A detailed catalogue will be issued within the next few months

The German Emperor s Health

The announcements relative to the Emperor s health continue to be very satisfactory It will be remembered that the operation was performed on Nov 7th and a bulletin issued about ten days afterwards stated that the small wound was nearly healed and that his Majesty was allowed to speak in a whisper No further bulletins will be issued The Emperor in fine weather walks every day in the great park of Sanssouci and has already attended a musical performance in his residence Notwithstanding the favourable news published by the court journals some degree of uneasiness still haunts the public mind owing to the fact that his Majesty's convalescence is obviously less rapid than was originally anticipated Moreover, he was desirous of attending the ceremony of the oath sworn on the colours by the recruits of the Guards This ceremony takes place in the Castle square in Berlin and since his accession to the crown the Emperor has always been present and has addressed the soldiers On this occasion the ceremony was postponed several times and has now taken place in the absence of the Emperor who, however sent a representative Some time ago it was rumoured that the patient would have to winter in a southern climate and this which was at first denied by the official press, is now confirmed It is understood that the Emperor will not visit a health resort but will cruise about the Mediterranean in his yacht It is, moreover, announced that he will not start before the month of January and that this trip has been proposed, independently of the local affection of the vocal cord, only for the purpose of providing him with some relaxation and of sparing him the rigours of a Berlin winter For medical readers the fact that arrangements have been made for a long journey to commence about two months after the operation proves that the medical attendants of the Emperor have no doubt as to the absolute innocuousness of the growth which has been removed, as otherwise a further operation would become urgent within that time The public, however, are not so optimistic and are only too willing to listen to sensational gossip The surgeon in attendance on his Majesty, in addition to his physicians in ordinary, Dr Leuthold and Dr Ilberg, is Professor Moritz Schmidt of Frankfort one of the most celebrated laryngologists of Germany He was one of the late Emperor Frederick s medical advisers during his fatal illness and about six months ago he gave up his very extensive practice in Frankfort. He will stay in Berlin until the recovery of his illustrious patient is complete Professor Schmidt lately attended a meeting of the Berlin Laryngological Society, of [illegible], and the chairman, Profe[illegible] him on his successful c[illegible] that the element of interest was the patient and not the operation which was performed frequently by every laryngologist.

Death of the Princess Elisabeth of Hesse

Coincidently with the Emperor s indisposition a sad event has occurred in another reigning family of Germany The Princess Elisabeth, daughter of the Grand Duke of Hesse, whilst on a visit to the Imperial Court of Russia at Skierniwice, unexpectedly died after only a few hours' illness with the symptoms of an infectious febrile disease At a necropsy which was made by Professor Orth of Berlin (who also examined the polypus removed from the Emperor's larynx) the cause of death, notwithstanding sundry vague rumours to a different effect, was ascertained to be enteric fever.

Nov 24th

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Sanitation of Sleeping cars.

AT the recent meeting of the American Public Health Association held at the city of Washington the subject of the spread of contagious diseases through the medium of insanitary sleeping-cars was discussed with great interest by medical and lay members of that body. It was not difficult to prove that these cars are rarely thoroughly clean and wholesome and it was finally admitted by a representative of the principal sleeping or "Palace Car Company" that the blankets were washed but once a year. It has long been known that railroad companies are very negligent in regard to sleeping-cars and health authorities have frequently suspected that local outbreaks of contagious diseases were due to the transmission of their germs in filthy passenger cars, but the admission of the fact that the bedding of the most popular sleeping-cars of the country was washed but once a year was a revelation of startling significance to the entire country. If it is true that this company has so little regard for the health, comfort, and even decency of the public what can be the condition of the sleeping-cars of ordinary roads? Already the public are questioning the propriety of travelling at night when it can be avoided.

Perils of the Street.

The thoroughfares of New York have become exceedingly perilous to the pedestrian. The congestion at many points is so great that one crosses the street at the risk of one's life. This fact finds a striking illustration in the police returns of two weeks. It appears that during that period 125 accidents to pedestrians were reported as due entirely to traffic. These accidents were of such severity as to require hospital treatment and a multitude of minor injuries are excluded. The larger number of injuries are fractures. The police attribute these accidents to careless driving of carriages, trucks, and carts, the recklessness of automobile drivers, the unfitness of motor-men of trolley cars, the imprudence of bicyclists, and the large number of boy drivers. Though the law is very stringent in regard to the age of drivers of wagons it is not enforced and the result is that the streets are often crowded by every conceivable form of vehicle with reckless boy drivers who by their daring [illegible] carelessness cause the entanglement which ends in [illegible].

Dr. Lorenz's Visit to the United [illegible]

There has been much discussion of [illegible] brought Dr. Lorenz to this country and [illegible] visit upon the treatment of congenital d[illegible] hip-joint. It now appears that the child [illegible] called upon to attend was in charge of Dr. [illegible] Chicago, a very competent orthopædic surgeon. [illegible] operated on both of the dislocated limbs of th[illegible] employing Lorenz's method. The operation was succ[illegible] so far as relates to the reduction of the dislocations. Wh[illegible] however, the dressings were removed at the proper time and after an interval of a few days the right femur slipped out of place while the left remained, and still remains, in good position. It was then decided to call Dr. Lorenz to the case and accordingly he was summoned to this country. He repeated his operation on the relapsed limb and replaced it in the position which it occupied when Dr. Ridlon operated. After allowing it to remain in this position for a long period Dr. Lorenz returned and removed the dressings. The head of the femur of the relapsed limb is still in the position in which it was placed by Dr. Lorenz, though the reposition is not regarded as complete. The functions of the new joint are fairly well performed. The only criticism on the whole procedure is that Dr. Ridlon was entitled to another trial, for his success with the left hip was complete and the operation was in a measure successful on the right. A second attempt would have secured, it is believed, results equally as good as were obtained by Dr. Lorenz. But in a larger and more important sense the visit of the Austrian surgeon has accomplished excellent and far-reaching reforms in the care of crippled children throughout the entire country. Much as the discussion of Dr. Lorenz's operation by the public press was condemned, it was by that means undoubtedly that the widespread public interest in the crippled, deformed, and defective classes was excited. On every hand private institutions for the care and treatment of these unfortunates are being organised and this movement has led to similar action on the part of municipalities and lately of States.

Larceny of Antitoxin.

The city of New York, through its Board of Health, has been, and still is, distributing free of charge to the poor people antitoxin to be used as a preventive against, and cure for, diphtheria. The method of procedure is to put the remedy in small phials and to consign them to certain druggists and to authorise them, on the presentation of a proper certificate by any physician of the city, to deliver to such physician free of charge, for the use of a poor patient, one or more phials of the antitoxin, the certificate stating that this antitoxin is for the treatment of a poor patient to whom payment for the same would be a hardship. A physician obtained three phials of this antitoxin on one of these certificates and used it in a case where he knew the patient was able to pay. He was prosecuted on this charge and the court held that he was an agent of the city to administer the antitoxin to the patient for whom he obtained it, provided she was unable to pay for it, and only in that event. But it appeared that he administered the antitoxin knowing that his patient was able to pay and therefore deviated from the terms of his agency and did so to his own pecuniary gain and advantage. In other words, he appropriated the antitoxin to his own use and rendered himself amenable to the penal code which declares it to be larceny for one to appropriate to his own use public property in his control.

A Crusade against Adulterated Food

The State Dairy and Food Department of Pennsylvania has begun a crusade against adulterated foods and the results show the immense extent of the practice of tampering with human foods. In one month 200 prosecutions were commenced and $6000 were collected in fines. Upwards of 100 dairymen in the western portion of the State have recently been prosecuted and fined for putting formaldehyde in milk. Grocery firms when arraigned acknowledged selling adulterated goods, brandy, vinegar, lemon extract, &c. While it is admitted that many firms sell adulterated goods ignorantly these prosecutions are extremely useful in compelling every dealer in foods to examine carefully the [illegible] articles which he purchases and thu[illegible] the refor[illegible]

[illegible] Longevity.

The Inte[illegible] Insurance Actuaries recently [illegible]ld in New [illegible]iscussion the question of the [illegible]fe. It appears that the fact [illegible] sent pros[illegible] of life in civilised countries [illegible] establish[illegible] been ma[illegible]ened. This improvement was a[illegible]ted to th[illegible] hospitals, the advance of improveme[illegible] in the pr[illegible]edicine and surgery, and the more enlig[illegible]ened car[illegible] poor, and especially of children. It is [illegible]teresting [illegible] note the influence of widespread epidemics on th[illegible]ortality rate. Thus the small pox epidemic of 1870-74 caused an increased death-rate among all classes and ages; in the period 1880 84 the wide distribution of diphtheria, scarlet fever, and measles markedly increased the mortality among children; and the epidemic of influenza of 1891 caused a high death rate among adults. In commenting on these facts various views were expressed. One contended that the increase in longevity was not with the strong but with the weak and feeble owing to better care. Another believed that child life was now conserved as never before and hence there was a diminished average mortality. Probably these causes are only a part of a large category of efficient causes of increased longevity. The interesting fact remains that actuaries are adjusting their life risks to new conditions.

The New Harvard Medical School.

Harvard was the first of the older medical schools to take advanced ground in the improvement of medical education and the prediction was freely made that it would suffer as a consequence. It was even predicted that its classes would disappear owing to the lengthening of the term to four years and to the high standard of qualification exacted from those who entered its portals. These prophets of evil have been sorely disappointed, for instead of diminished classes they have steadily increased, money has flowed into its treasury from quite unexpected sources, and now it is about to construct an entirely new plant The administrative building will be 166 by 124 feet and will cost $535,000; the physiological laboratories will cost $431,000; the laboratories for bacteriology and pathology will cost

$390,000; histology and anatomy will have a building costing $396,000; and pharmacology and hygiene will require a structure at a cost of $346,000 When this series of buildings is completed Harvard will have no peer in equipment in this country.

Nov. 18th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

The Annual Report on Charitable Aid and Hospitals: Increased Expenditure.

THE total expenditure on charitable aid in New Zealand in 1901 was £79,873, in 1902 it was £88,848, and for the year ending March 31st last it amounted to £93,158. The amount distributed on outdoor relief for the year ending March 31st, 1902, was £38,934 and for the year ending March 31st last it amounted to £43,421. In the four large towns the expenditure on outdoor relief alone was as follows:—Auckland Charitable Aid Board, £4923; Christchurch Charitable Aid Board, £7356; Dunedin Benevolent Trust, £6048; and Wellington Benevolent Trust, £4681. It will be seen that there is a considerable increase in outdoor relief all along the line. The Wellington Benevolent Trust has increased its outdoor relief during the past year by £1305 Dr. D. McGregor, the Inspector-General of Hospitals, remarks: "It is a fact accepted by all careful students of social science that pauperism grows by giving too freely and badly administered outdoor relief merely intensifies the evil its administrators desire to mitigate." The Benevolent Institution at Caversham, the report says, is still over full and understaffed. Many years ago, before the new buildings began to be erected, the Inspector-General did his best to impress upon the trustees how unwise it was to erect new buildings on so small a piece of ground, amounting to not more than eight and a half acres. A piece of good land must be obtained somewhere in the Taieri and a building must be erected to be worked in connexion with the central institution. The item "wines and spirits" for Auckland Hospital amounted to £314 for the year, for Christchurch Hospital to £61, for Dunedin Hospital to £186, and for Wellington Hospital to £173 "The Nurses' Registration Act," the Inspector General observes, "has now been in force for a year and a half and is working smoothly. There are 320 names of nurses on the register. There were 29 nurses entered as candidates for the examination held in May last and 27 of these passed and are duly registered. Such an Act is necessary owing to the advance of scientific surgery and the progress of medical knowledge. It protects medical men and also the public from the increased number of unqualified women who pose as nurses and who too often prove a real danger in critical illness and in operations. It is interesting to note that within the last few months five of the American States—North Carolina, New York, Illinois, Virginia, and New Jersey—have followed the lead of this colony and passed Acts for the State registration of duly qualified nurses. The Nurses' Registration Act of New Zealand uses no compulsion except that of enlightened self-interest on the part of the nurses themselves, and it is daily becoming more apparent that by the silent pressure of this law the nursing profession of New Zealand will be effectively organised. The whole working of it has been entrusted to Mrs Grace Neill and the tact and skill by which she has carried on all the arrangements, often complicated and difficult as regards the examinations, have earned my highest appreciation and gratitude These biennial examinations have been moulded on the system of the New Zealand University. The examiners have no knowledge of the name or hospital of the candidates whose papers they are examining and great care has been taken in electing as examiners medical men who have had especial knowledge of the training of nurses. The examination in the practical work of each nurse is undertaken by a medical man and a registered nurse conjointly."

Lunacy Report: Increase of Insane Patients; Overcrowding of the Asylums; a Plea for the Attendants.

The lunacy report, laid on the table of the House of Representatives, shows that on Dec. 31st last there were 2848 registered insane persons in the colony, being an increase of 75 over the previous year. The proportion of the total insane to the total population was, exclusive of Maoris, 3·50 per 1000 or 1 in 286; inclusive of Maoris, 3·35 per 1000, or 1 in 299. The admissions during the year for the first time totalled 440 and the re-admissions 104. The percentage of deaths on the average number resident during the year was 6·28, as compared with 6·41 for the previous year. The percentage of deaths on admissions was 32·17 and the percentage of recoveries on admissions 43·01, as compared with 41·17 for the previous year. The average cost per patient for the year was £29 6*s* 10*d*., as against £28 16*s* 11½*d* for 1901, the increase being mainly due to the rise in the price of meat and flour. Wellington (£34 11*s*. 7¼*d* per patient) was the most costly asylum and Auckland (£24 7*s*. 0¼*d*) was the cheapest. Dr. McGregor reports that at Auckland there are 551 patients but only floor space for 493 The asylum is therefore overcrowded to the extent of 58 patients. The following figures show the extent of overcrowding at our asylums: Auckland, 58; Christchurch, 96; Seacliffe, 61; Nelson, 4; Porirua, 10; and Wellington, 47; total 276. There is room at Hokitika for 24. The Inspector-General observes that one thing in which we are helplessly astern of the whole British empire is the overcrowding of our asylums, a fact which goes far to nullify, so far as the rational treatment of patients is concerned, all our other advantages. He has some hopes, however, that the Government may soon take steps to provide intermediate accommodation for uncertifiable cases near Christchurch. In view of the universal change in the condition of the labour market Dr. McGregor thinks it necessary to raise the wages of the asylum attendants. Artisan and charge attendants ought to receive an increase of 25 per cent. and the ordinary attendants an increase of 20 per cent. It will be necessary also, in his opinion, to increase the salaries of assistant medical officers to £300 instead of £250, rising to £350 after five years' service, for it has been found impossible to get suitable applicants at the lower figure. It is again recommended that Parliament should agree to give medical superintendents 12 months' holiday on full pay every sixth year. The great strain which they have had to bear has all but broken down every one of them. From the statistics comparatively little is to be learned. Medical experts will probably agree that they are very wide of what such statistics should be. To classify a man as a "labourer" or a "farmer" in such a colony as ours or to give "domestic duties" as an index to a woman's past history is rather farcical Practically nothing is being done in this direction, which is admittedly of supreme importance in the study of the question The asylum medical officers, overworked and under-staffed, cannot possibly be expected to give the time that would be required to make even an intelligible statistical return. Fuller returns on this question would meet with grateful recognition from all students and experts.

Wanganui, Oct. 12th.

Obituary.

SIR ROBERT MARTIN CRAVEN, KT., F.R.C.S. ENG. AND EDIN., J.P.

ON Nov. 15th there passed away at the ripe age of 80 years Robert Martin Craven, for many years a well-known practitioner of Hull. He came of a medical family, for his father, Robert Craven, and his grandfather, Robert Martin Craven, were both surgeons practising in Hull Robert Martin Craven the second, the subject of this memoir, was born in Hull in 1824 and was educated at Kingston College, Hull. He commenced his professional studies at the Hull General Infirmary and continued them at St Bartholomew's Hospital, London, and at the hospitals of Paris. In 1846 he was admitted a Member of the Royal College of Surgeons of England and in 1847 he became a Licentiate of the Society of Apothecaries, London. In 1849 he commenced the practice of his profession in partnership with his father and in 1852 was elected an honorary surgeon to the Hull General Infirmary, a post which he resigned in 1892, being then made consulting surgeon. In 1886 a ward had been named the Craven Ward in memory of services rendered by three generations of Cravens. From 1850 to its dissolution in 1870 he was lecturer in anatomy at, and secretary to, the Hull Medical School. In 1879 he was elected a Fellow of the

Royal College of Surgeons of Edinburgh, receiving the same honour from the Royal College of Surgeons of England in 1889. He was twice chosen President of the local branch of the British Medical Association and was also from time to time President of the various literary and scientific societies of Hull. In 1877 he was made a justice of the peace and in 1878 he was chosen as sheriff of Hull, being as a final honour knighted in 1896. With regard to matters outside a purely professional sphere Sir Robert Martin Craven was a Conservative in politics and a Churchman. From 1885, the year of its foundation, he was President of the Central Hull Conservative Council—a post which he held until his death. He was twice married, his second wife, a daughter of Robert Welsh, W.S., of Edinburgh, being a descendant of John Knox and a cousin of Jane Welsh Carlyle. Throughout his long life Craven was an earnest worker and was always held in great esteem even by those who differed from him. More especially was he honoured by his professional brethren, not only on account of the good work which he did, but also for the standard of strict professional integrity which he always held aloft. His body was buried in the General Cemetery, Hull, on Nov. 18th, the previous portion of the burial service having been said at St. Mary's Church.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Cézilly who founded the well-known French medical journal *Le Concours Médical.*—Dr. Vladimir Brodowski, formerly professor of anatomy in Warsaw.—Dr. Adam Gliszczynski, formerly professor of midwifery and gynæcology in Warsaw.—Dr. Barsis, formerly editor of the *Wiener Medicinische Presse*, at the age of 39 years, at Meran.—Dr. Otto Nasse, who was professor of pharmacology and physiological chemistry in the University of Rostock from 1880 to 1899. He wrote the portions of "Hermann's Physiology" dealing with chemistry and the metabolic changes in muscular tissue.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

TUESDAY, NOV. 24TH.

THE seventy-eighth session of the General Council of Medical Education and Registration was opened to-day in the offices, Oxford-street, London. The PRESIDENT, Sir WILLIAM TURNER, K.C.B., Principal of the University of Edinburgh, occupied the chair.

Introduction of Sir John William Moore, M.D.

Dr. LITTLE formally introduced to the President and to the Council Sir John William Moore who has been appointed to succeed Dr. Lombe Atthill in the representation of the Royal College of Physicians of Ireland.

President's Address.

The PRESIDENT then delivered his inaugural address.

[After referring sympathetically to the resignation of Dr. Lombe Atthill and to the death of Sir George Duffey he said:—]

I may remind the Council that the inspection of the final examinations of the Scottish universities, which in the customary course should have been undertaken during this year, was owing to Sir George Duffey's illness deferred until 1904. In order that this duty may be discharged at the respective periods of examination it will be necessary either to appoint an inspector before the Council separates or perhaps perferably to authorise the Executive Committee to do so at its meeting in February. In connexion with the series of inspections I should state that the report on the inspection of the final examination of the Apothecaries' Society of London held in January last, at which Dr. Bruce was associated as visitor with our inspector, has been completed by Dr. Bruce with the aid of the memoranda prepared by Sir George Duffey. I have also to intimate that Dr. W. P. Herringham, who has acted for three years as the Council's inspector specially appointed to report on the examinations held at the Apothecaries' Hall, Dublin, has resigned his office. The Council will no doubt wish to recognise that his duties have been discharged with judgment and discretion. In view of the character of recent reports and the improvements which have been effected in the examinations the Council may perhaps think it no longer to be required that each examination should continue to be inspected and as the Council has power under the Act to prescribe the duties to be discharged by the assistant examiners appointed by the Council that a visitation and report from time to time by a special inspector may be all that is now necessary.

I have received a communication from the secretary of the Dublin Apothecaries' Hall in which the request is made that it should be relieved of the burden entailed by the travelling expenses of the assistant examiners in surgery appointed by the Council. As the presence of these examiners is necessary in order to enable the Dublin Apothecaries' Hall to conduct a qualifying examination for the diploma, and as the statute requires that such remuneration as the Council determines is to be paid by the medical corporation at whose examinations they take part, it seems clear that the Apothecaries' Hall should continue to bear the charges attendant on the presence of the examiners. Since my address was in print the Society of Apothecaries Dublin has intimated its intention to resume on Jan. 1 1904, its preliminary examination in arts

[The President then pointed out that under the division Victoria University the new University of Liverpool has become entitled to hold qualifying medical examinations to be represented on the General Medical Council. understood that the appointment of Mr. Young, the prese representative of Victoria University, remained unaffect and that he holds his seat on the Council until resignati or the expiration of the term for which he was origina appointed. The President continued:—]

No charter has yet been granted to establish a univers in Yorkshire, although it is not unlikely that one may granted in the immediate future.

At the July meeting of the Council I was requeste to forward to the Royal Colleges of Physicians a Surgeons in London the reports of the Council's Educ tion and Examination Committees, together with th Council's resolutions thereupon, to call the attention of th Colleges to the unsatisfactory condition of the courses study and examination in chemistry, physics, and biolog disclosed in these reports, and to urge that in the interes of medical education immediate steps should be taken remedy the defects referred to. I was further authorised appoint a committee to join with me in conferring wi representatives of the Royal Colleges should it appear that conference on the questions raised was desired. Accordingl I communicated with the two Colleges and was informed due time that the Council of the Royal College of Surgeon had had under consideration my letter and the accompanyin documents and had appointed delegates to confer with del gates of the Royal College of Physicians respecting the pr posed conference. In the early part of this month a speci committee consisting of the two groups of delegates m and considered the questions raised in my letter. This com mittee has now reported to the Colleges and it recommend that the General Medical Council be thanked for the expre sion of its opinions respecting the courses of study and th examinations in chemistry, physics, and biology, and tha these opinions should receive the respectful attention of th two Royal Colleges. Further, the committee recommend that the Royal Colleges should express regret that they a unable to accept the invitation of the President of th General Medical Council to appoint representatives to mee the committee of the Council in regard to the question o medical education and examination in chemistry, physi and biology, which has been raised in the reports of th Council's Education and Examination Committees. An officia communication has now been received from each of the tw Colleges reporting the adoption of the recommendations o the committee of delegates as the reply of the Colleges to m communication.

In my address from the chair in May last I referred to th question of reciprocity between the United Kingdom and Canada in regard to the registration of their respective medical qualifications and I made a suggestion which in the event of one of the provincial legislatures declining to avail itself of the Canadian Medical Act, 1902, would, if adopted, enable the other provinces to establish reciprocal relations with the United Kingdom under Part II. of the Medical Act 1886. The Provincial Medical Board of Nova Scotia has sent me a resolution passed at the annual meeting in which it endorsed that suggestion. As requested by the Council I communicated with both the Privy Council and the Colonial Office to ascertain if the suggestion was likely to be favourably regarded by the Government of the Dominion of Canada or by the medical authorities who have supported the Canada Medical Act, 1902 In reply I have been informed that the Canada Medical Act was introduced and carried through the Dominion Parliament by a private member, no legislation having been initiated by the Government of Canada, and that the Ministers are not aware if an amendment of the Act is in contemplation during the present session.

In accordance with the request of the Council I asked the attention of the Lord President of the Privy Council to a Pharmacy Bill then before Parliament, in which the rights of the medical profession as safeguarded by existing Pharmacy Acts appeared to be encroached upon. In reply I am assured that the Council of the Pharmaceutical Society has no intention of interfering with medical practice and that it has prepared a clause for insertion in a future Bill to insure that it shall not interfere with or abrogate any of the rights reserved in the Pharmacy Acts, 1868 and 1869. A communication to the same effect has been received directly from the secretary to the Pharmaceutical Society.

A letter has been addressed to us by the Consultative Committee of the Board of Education with regard to the institution of a general system of leaving examinations for secondary schools in England, which could be accepted in lieu of the preliminary examinations now required for admission to the various professional bodies. The Council is invited to send one or two representatives to a conference with the Consultative Committee to be held on Friday, Dec. 4th. Those of us who live in Scotland are familiar with the beneficial effect which the introduction some years ago of a national system of leaving examinations and certificates has had in raising the standard of education in the secondary schools in that division of the United Kingdom. It is very satisfactory to hear that it is proposed to introduce in England a similar system and it must be gratifying to this Council to be asked to take a part in so important a conference. It is to be hoped that the conclusions arrived at and the subsequent action of the Board of Education thereupon will result in the establishment in England of a system of leaving examinations which, so far as this Council is concerned, will simplify the much discussed question of the preliminary education of students of medicine. For in questions which do not directly fall within its own competency the Council cannot stand outside a well considered national scheme of education and examination intended to qualify for admission to the various professions.

[The President then referred to the reports of the Examination Committee and Education Committee to be placed before the Council and continued :—]

The Council having adopted at its meeting in May a memorandum which I then submitted to it on its financial position and on the inadequacy of its income, I have communicated the memorandum officially to the Lord President of the Privy Council and have requested that consideration would be given to the subject, with a view to the financial difficulties being removed, either in the manner suggested in the memorandum or in some other way. I have reason to know that the question is now being carefully considered.

A communication has been sent by the Home Secretary inclosing a copy of a letter which he had received from the coroner of the Pickering Division of the North Riding of Yorkshire with regard to inquests in cases where the deceased has been attended by a person who is not a registered medical practitioner. The attention of the Council has on various occasions been called by coroners and other official persons to this matter and it has been made the subject of repeated representations by us to the various Government authorities, but up to this time no remedial legislation has been provided. Subject to the approval of the Council I propose to make a further representation to the Local Government Board on this question A number of registered medical practitioners in Glasgow have presented to the Lord President of the Privy Council a petition respecting the action of the Pharmaceutical Society of Great Britain and of the General Medical Council with reference to the sale of scheduled poisons by unqualified assistants This petition has been transmitted by the Lord President for our information.

[The President concluded by expressing a hope that the Council would be able to complete its work at the beginning of next week.]

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, the Council thanked Sir William Turner for his address.

Service Examinations.

Mr. ALLEN, the Chief Registrar, presented to the Council a series of tables showing the results of certain examinations for commissions on the medical staffs of the Royal Navy, His Majesty's Army, and the Indian Medical Service.

The tables were received and the thanks of the Council were accorded to the Government officials who supplied the information.

Mr. G. BROWN intimated that he would place upon the business paper a notice with regard to the number of rejections disclosed in the tables in order that the subject might be discussed at a subsequent stage by the Council.

In Camerâ.

The Council sat for a while in private but no announcement was made as to the subjects under discussion or as to the results.

Leaving Examinations for Secondary Schools.

The following communication was received and entered on the minutes :—

Board of Education, South Kensington,
London, S.W., Oct. 27th, 1903.

CONSULTATIVE COMMITTEE.

[illegible]

confer:—

Whether it is desirable and feasible to institute for secondary schools in this country (excluding for the present Wales and Monmouth) a general system of leaving examinations of such a nature as to be acceptable in lieu of the preliminary examinations now required

[illegible]

discussion.

[illegible]

invitations.

They will be ready carefully to consider any scheme put before them, with any accompanying ob

[illegible]

ervant,
A. R. GUEST,
Secretary to the Consultative Committee.

The Registrar,
General Council of Medical Education and Registration.

Dr. PAYNE moved—

[illegible]

He mentioned that Dr. Windle was a member of the Consultative Committee.

The moti[illegible] seconded by Dr. NORMAN MOORE and was agreed to.

The Cour

Wednesday, Nov. 25th.

The Council resumed to-day, Sir William Turner, the President, being in the chair.

The Case of Dr. William George Niall.

Consideration was resumed of the case, partly heard on May 27th and 28th last, of Dr. William George Niall, registered as of Kinkora, Dabdune-crescent, Guildford, M.D, Mast. Surg. 1886, R. Univ. Irel., who had been summoned to answer a charge formulated by the Council's solicitor (Mr. Winterbotham).

The President ordered parties to be called and said: I would remind the Council that this case was before us on the 27th of May last, when it was decided that it should be heard *in camerâ*. The Council will proceed with it *in camerâ*, and strangers, therefore, will withdraw.

The rest of the sitting was occupied with the case. On the re-admission of parties and the public, just on the usual hour of rising for the day,

The President, addressing Dr. Niall, said: The Council has deliberated on your case and I have to inform you that the facts alleged against you in the notice of inquiry have not been proved to the satisfaction of the Council. That completes the case.

The Council adjourned.

Medical News.

Royal College of Surgeons of England.—The following gentlemen having passed the necessary examination have been admitted as Members:—

George Basil Doyne Adams, B.A. Oxon., Oxford University and St. Bartholomew's Hospital; Robert Grenville Anderson, Guy's Hospital; Edward Guy Anthonisz, St. Mary's Hospital; John Gerald Atkinson, St. Bartholomew's Hospital; Seymour Gilbert Barling, Birmingham University; Charlie Barlow, L.R.C.P. Lond., and Thomas Edward Blunt, London Hospital; Gerald Eade Bellamy and Bertram Raleigh Bickford, Charing Cross Hospital; Percy Claude Vincent Bent and Sidney Clement Bowle, L.D.S. Eng., Guy's Hospital; Hugh Wood Bethell, B.A. Camb., Cambridge University and Guy's Hospital; Amelius Cyril Birt, St. Thomas's Hospital; Henry Jameson Cardew, B.A. Camb., Cambridge University and S[illegible] Fergusson Titton Carr-Harris, M.D. Canada, [illegible] Canada, and University College Hospi[illegible] King's College Hospital; David Brynm[illegible] College, Cardiff, and University College Hospital; Harold Clapham, St. Mary's Hospital; Frederick Cock, Charing Cross Hospital; James Douglas Cooke, Melbourne University and London Hospital; William Lawrence Cripps, Cambridge Universit[illegible] Hospital; William Allen Cumming, M[illegible] University, Montreal, and St. Mary's [illegible] Davies, University College, Cardiff, and Charing Cross Hospital; Mervyn Eager, King's College Hospital; Leonard Erasmus Ellis, L.S.A. Lond., St. George's Hospital; Herman Falk, B.A. Camb., Cambridge University and St. Thomas's Hospital; George Ernest Oswald Fenwick, University of New Zealand and University College Hospital; Arthur Edwin Fiddian, [illegible] Cardiff, and St. Mary's Hospital; Walter [illegible] Mary's Hospital; Henry Richmond Fisher, [illegible] University and London Hospital; Leona[illegible] M.A. Camb., L.D.S. Eng., Cambridge Univ[illegible] Hospital; Frank Medwin Gardner-Medwin, B.A. Camb., St. Bartholomew's Hospital and Cambridge University; Wilfrid Garton, St. George's and Westminster Hospitals; Owen Binns Gauntlett and Harry Morgan Gilmour, St. Thomas's Hospital; Francis Willoughby Goyder [illegible] University and St. Mary's Hospital; [illegible] College and Royal Infirmary Manc[illegible] M.B. Toronto, Toronto University; Arthur Hallowes, St. Bartholomew's Hospital; William Thompson Hamilton, M.B. Toronto, University College, Toronto; Sydney Lawrence Harke, B.A. Camb., Cambridge University and St. Bartholomew's Hospital; Bernard Higham, St. Thomas's Hospital; Robert B. Dennis Hird, Birmingham University; Geoffrey Gratrix Hirst, B.A. Camb., Cambridge University and Middlesex Hospital; Basil Hood, Charing Cross Hospital; William Stanley Hughes, St. Mary's Hospital; John James, King's College Hospital; William Johnson and Herbert Stanley Jones, Guy's Hospital; James Douglas Judson, Owens College and Royal Infirmary, Manchester; John Newport Kilner, St. Mary's Hospital; Stephen March Lawrence, St Bartholomew's Hospital; William Collins Lewis, Guy's Hospital; Travis Clay Lucas, B.A. Camb., Cambridge University and Guy's Hospital; Evelyn John Hensler Luxmoor, St. Mary's Hospital; William Cameron Macauley, B.A. Lond., Middlesex Hospital; Charles Markus, M.D. Germany, Freiburg and University College Hospital; James Ernest Martin and Roy Charles Merryweather, University College Hospital; Arthur Martineau, B.A. Camb., Cambridge University and London Hospital; Cecil Francis Nicholas, St. Ba[illegible]w's Hospital; William Wilson Nock, Birmingham Univ[illegible] William Boyle Norcott, Queen's College, Cork; Robert Geor[illegible]hwanger, M.A. Camb., Cambridge and St George's Hospita[illegible]derick Pitcairn Nunneley, B.A. Oxon., Oxford and St. George's Hospital; Basil Hewitt Pain, B.A. Camb., Cambridge University and St. Bartholomew's Hospital; Russell Edwards Palmer, George Ernest Peacholl, and Ernest Aubrey Price, St. Mary's Hospital; Leonard Gregory Parsons, Birmingham University; Percy Clift Peace, University College and General Infirmary, Sheffield; Charles T[illegible] and Charles Alfred Whiting P[illegible] and St. Bartholomew's Hospit[illegible] Thomas Edward Regan, Owe[illegible] chester; Donald Murray [illegible] Thomas's Hospital; John Bar[illegible], St. Mary's Hospital; Job Latham Rushton, King's College Hospital; Henry Thomas Samue[illegible] University College, Cardiff, and St. Bartholomew's Hospital; Harold [illegible]liff, M.A. Oxon., Oxford University and St. [illegible] Walter Henderson Scott, Alec Job Lincoln [illegible] Ernest Taylor, St. Bartholomew's Hospital [illegible] Sidgwick, B.A. Camb., Cambridge University and St. Bartholomew's Hospital; Charles Joseph Singer, B.A. Oxon., St. Mary's Hospital; William Gordon Taylo[illegible] M.A. Ab[illegible] College [illegible] Universi[illegible] Vaughan [illegible] Alexander Moxon Webber, and Richard Willan, Guy's Hospital; George Delaval Walsh, London Hospital; Solomon James Weinberg, Owens College and Royal Infirmary, Manchester; Hugh Wheelwright, St. Thomas's Hospital; Edward How White, B.A. Oxon., Oxford University and St. Bartholomew's Hospital; Robert Glover Wills, B.A. Camb., Cambridge University and University College and Royal Infirmary, Liverpool; Oswald Charles Withrow, M.B. Toronto, Toronto University and Middlesex Hospital; Alexander Frederick Richmond Wollaston, B.A. Camb., Cambridge University and London Hospital; and Harold William Wilson, Lauriston Leonard Winterbotham, and Walter Perceval Yetts, St. Bartholomew's Hospital.

Society of Apothecaries of London.—At examinations held in November the following candidates passed in the subjects indicated:—

Surgery.—G. Nunn (Sections I. and II.), Guy's Hospital; P. J. Pagonis, Athens; P. A. Pettavel, Lausanne; C. H. Pring (Section II.), Westminster Hospital; and L. S. Shoosmith (Sections I. and II.), St. Mary's Hospital

Medicine.—S. Bentley (Section II.), Sheffield; C. C. Bernard (Section I.), Royal Free Hospital; P. Elias (Section I. and II.), Amsterdam; F. Hansen (Section II.), Copenhagen; W. B. Harris (Sections I. and II.), St. Mary's Hospital; P. S. Klots, Leyden; W. S. Lewis (Section II.), Birmingham; and C. H. Pring (Section II.), Westminster Hospital.

Forensic Medicine.—C. C. Bernard, Royal Free Hospital; F. M. Boclet and G. C. M. Davies, Charing Cross Hospital; P. Elias, Amsterdam; J. H. Harrison, Sheffield; H. M. Jones, Royal Free Hospital; P. S. Klots, Leyden; and T. R. Waltenberg, Manchester.

Midwifery.—L. F. Cope, St. George's Hospital; G. C. M. Davies, Charing Cross Hospital; P. Elias, Amsterdam; A. T. Greenhill, St. Bartholomew's Hospital; R. J. S. Verity; Charing Cross Hospital; and A. Whitby, Dublin.

The diploma of the Society was grantec [illegible] candidates, entitling them to practise medicine, surger[illegible] F. M. Boclet, F. Hansen, W. B. Harris, P. [illegible] Pettavel, C. H. Pring, and L. S. Shoosmith.

Royal College of Surgeons in Ireland—Fellowship Examination.—The following candidates have passed the Primary part of the Fellowship examination:—

P. F. Foran, Dublin; Miss C. E. O'Meara, Dublin; H. J. Perry, Cork; and H. Stevenson, Belfast.

Trinity College, Dublin.—At the Previous Medical Examination at Michaelmas term the following gentlemen passed in the subjects indicated:—

Anatomy and Institutes of Medicine—Alfred C. Elliott, Francis J. Usher, Daniel M. Corbett, Hercules J. Knox, Michael P. Leahy, and Ernest C. Phelan.

Physics and Chemistry.—Edmond H. Sheehan, Johann A. L. Hahn, Thomas P. Dowley, James G. M. Moloney, Frederick R. Sayers, William H. Sutcliffe, Gordon A. Jackson, John W. Lane, Charles H. O'Rorke, and Henry de C. Dillon.

Botany and Zoology—Thomas H. Gibbon, Frederick C. Anderson, Horace F. Blood, Samuel F. A. Charles, Henry D. Woodroffe, and Thomas J. T. Wilmot.

Bradford Sanatorium for Pauper Consumptives.—A sanatorium for the treatment of consumptives in the Bradford Union was opened at Eastby, near Skipton, on Nov. 3rd by Sir Francis S. Powell, Bart., M P; it was commenced in October, 1902. The area of the site is six and a half acres. So far only one pavilion, a wooden structure 165 yards in length, has been provided. The patients' rooms, which number ten, are all on the ground floor. The nurses' quarters are upstairs and the bathrooms, lavatories, and other conveniences are at the rear of the pavilion. All corners are rounded to prevent the accumulation of dust and the staircase is open both at the back and the sides. The administrative block is of stone and is a one-storeyed building. Water has been secured from a bore-hole 200 feet deep from which it is pumped by means of a small windmill. An electric plant is provided and the buildings are heated by hot water. The adjoining woods have been placed at the disposal of the patients by the Duke of Devonshire. Mr. F. H. Bentham, chairman of the Bradford board of guardians, said that the estimated cost of the scheme was £10,000. The scheme provided for 52 patients. At the present time they were ready to treat 21 but it was anticipated that a second pavilion would be erected shortly. The cost would probably work out at £200 per bed as against £600 in other sanatoriums in various parts of the country. There was no reason why the patients should be confined solely to the pauper class and he hoped other sufferers would eventually find succour there.

PRESENTATION TO A MEDICAL MAN.—Mr. R. A. D. Daniel, M D *Durh.*, L.R C P., L.R C.S. *Edin.*, L.F.P.S. Glasg., who until recently had an extensive practice in the Hammersmith and Chiswick districts, was on Nov. 23rd the recipient of a testimonial from a number of his old patients in the shape of a silver Georgian tea and coffee service, a hot-water jug to match, and a cheque for 35 guineas to purchase any personal present he might desire.

UNIVERSITY OF OXFORD.—In a Convocation held on Nov. 17th the names of the following persons who had been duly nominated to serve as examiners in the examinations for the degree of B M. were submitted to the house and approved (*nemine contradicente*):—First examination: Francis Gotch, M A, D Sc., F.R S, Fellow of Magdalen College, Waynflete professor of physiology (in human physiology); second examination: Gustave I. Schorstein, M.A, B M., Christ Church, F.R.C.P. (in medicine). The following are the dates announced for the examinations for the scholarships in natural science: Dec. 8th, Balliol College, Christ Church, and Trinity College; Jan. 12th, 1904, Jesus College; Jan. 19th, Lincoln College; March 15th Keble College; March 22nd, Magdalen College; and April 19th, Merton College, New College, and Corpus Christi College.

ST. MARY'S HOSPITAL.—The retirement of Sir Anderson Critchett and Mr. Malcolm A. Morris from the hospital staff of St. Mary's Hospital after 20 years of service was signalised on Nov. 20th by the presentation of two silver candelabra to Sir Anderson Critchett and 145 volumes of the *Annual Register* to Mr. Morris The ceremony took place in the board room of the hospital and Sir William H. Broadbent, Bart., K.C.V.O., was the spokesman for the subscribers to the testimonial. The friends of the two retiring members of the staff assembled in full force and loudly applauded the eulogistic sentiments uttered by Sir William Broadbent He said that they had gathered there to do honour to Sir Anderson Critchett and Mr. Morris and to offer them on the part of old and present St Mary's men some small testimony of the esteem and regard in which they were held. Continuing, Sir William Broadbent said that the occasion marked the severance of the active connexion of the two retiring gentlemen with the hospital and that entailed a great loss to them and to the institution. After discussing the merits and demerits of the regulation that obliged members of the staff to retire after 20 years' active service, Sir William Broadbent proceeded to deliver a panegyric on the services rendered to the hospital by Sir Anderson Critchett and an eloquent appreciation of Sir Anderson Critchett's work in ophthalmology was greeted with hearty applause. In regard to Mr. Morris Sir William Broadbent particularly emphasised his enthusiasm and observed that all would agree that Mr. Morris's restless energy was his great characteristic He praised the book on "Skin Diseases" that Mr. Morris had written and detailed the benefits which the public had derived from the influence of the National Association for the Prevention of Consumption and other Forms of Tuberculosis which Mr. Morris was so largely instrumental in founding. Sir [illegible] monial, said th[illegible] father of the [illegible] Hospital, beca[illegible] existed as a w[illegible] theless he could at any rate claim that he was its foster father. He traced the growth of his department from an average attendance of ten or 12 to the large number of patients attending at the present time and described how he had had a large share in the ophthalmological education of some 40 house surgeons Mr. Morris contented himself with a short but effective farewell speech. He spoke in a feeling manner of how hard it was after 20 years' friendship suddenly to part with valued friends and colleagues. He looked on the occasion as a tribute of sympathy offered to him in alleviation of the unpleasant ordeal of retiring from active service on the staff while still in full possession of his faculties Mr. Edmund Owen, in a neat and witty speech of a few minutes' duration, in which he referred to open graves, lamentations, rue, and rosemary, proposed a vote of thanks to Sir William Broadbent for presiding and shortly afterwards the meeting came to an end.

THE NATIONAL DENTAL HOSPITAL.—The £40 entrance exhibition for this session has been won by Mr. G. W. Geekie, B A. *Oxon.*, and the one for £20 has been divided between Mr. Walter Rose of Liverpool and Mr. C. H. Taylor of Hornsey, N.

LITERARY INTELLIGENCE.—Owing to the greater portion of the 1904 edition of *Who's Who* having been destroyed by fire at the binders, subscribers may in some instances experience delay in getting their copies. The reprinting is being rapidly pushed forward.

ROYAL ALBERT HOSPITAL, DEVONPORT.—The working men of the Keyham and Devonport dockyard have handed to the treasurer of the Royal Albert Hospital, Devonport, the sum of £340 which has been collected by them during the past 12 months for the funds of that institution.

ATTEMPTED MURDER OF A MEDICAL MAN.—Mr. George Whittenbury White, junior resident medical officer at the Union Infirmary, Fir Vale, Sheffield, has been the victim of an attack by a ruffian named Edward North. The man complained of pains in the back and while Mr. White was examining him drew from his sleeve an open clasp knife and lunged with it towards Mr. White's head. Mr. White dodged and escaped the first blow but the second blow caught him in the ear. North was at once felled and secured by the attendants. Revenge appears to have been the man's motive for the attack, as he is reported to have said that he hated all doctors for what he went through at Wakefield Gaol, when he got the "cat" and the medical officer stood by and allowed it. He had only recently been released from that gaol where he had served a sentence for burglary. Mr. J H. Bellamy, the senior resident medical officer, describes Mr White's injury as a punctured wound about an inch long and three quarters of an inch deep extending backwards from the lower border of the left external auditory meatus towards the mastoid process. It required suturing and is now healing well and neither permanent ill-effects nor prolonged absence from work are anticipated. Mr. White is to be sincerely congratulated upon the fortunate issue of a very determined attempt at murder.

DINNER TO PROFESSOR HOWARD MARSH.—On Nov. 17th a complimentary dinner was given at the University Arms Hotel, Cambridge, to Mr. Howard Marsh on his appointment as professor of surgery at the University of Cambridge by old students of St. Bartholomew's Hospital residing in Cambridge and the vicinity. Dr. P. W. Latham of Cambridge occupied the chair and those present included Sir William S. Church, Bart., Mr. A. Willett, Dr. A. Hill (Master of Downing College), Dr D. MacAlister, Dr. L. Humphry, Dr E. Lloyd Jones, Dr. H. K. Anderson of Great Shelford, Mr. T. W. Burn, Dr. W. Malden, Mr. J. Giles of Caxton, Mr. E. F. Bindloss of Swavesey, Dr. R. W. Michell, Dr. H. Skelding of Bedford, and Mr. F. E. Apthorpe Webb. After the usual Royal toasts the Chairman in well chosen words proposed the health of "Our Guest." Alluding to the brilliant career of Professor Marsh he said that the appointment was an honour no less to the hospital than to Professor Marsh. He thought it very gratifying that among the colleagues and pupils of Professor Marsh who had met to do him honour they had the presence of the Presidents of the Royal College of Physicians of London and of the Royal Medical and Chirurgical Society, together with the Master of Downing College. Professor Marsh, on rising to reply, was accorded a very hearty reception. He expressed his gratitude to those present for the compliment they had paid him and said that he would endeavour to keep up the traditions both of his school and of the University. Dr. Hill then proposed "Success to Our Sch[illegible] that the connexion between St. [illegible] University of Cambridge still [illegible] rch, in responding, said that [illegible] e to be present to show the regard and esteem in which Professor Marsh was held by all St. Bartholomew's men. Mr. Willett also replied and alluded to the changes which had taken place with regard to the work of the hospital during Professor Marsh's connexion with the school. Mr. Bindloss proposed "The Chairman." Dr. Latham, in reply, reminded those present that when the late Sir G. Humphry was a candidate for the post of house surgeon to Addenbrooke's Hospital two other St. Bartholomew's men also applied—viz, Luther Holden and Holmes Coote, both of whom afterwards became surgeons to the hospital. A vote of thanks to the honorary secretary terminated a successful and enjoyable evening.

BOOKS, ETC., RECEIVED.

ADAMS BROS., 27, Old Jewry, E.C.

The Diseases of the Mouth and Teeth. By Lloyd T. Levan, L.D.S., R.C.S., late Assistant House Surgeon, National Dental Hospital. Part I. The Diseases of the Antrum (Maxillary Sinus). Price not stated.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent-garden, W.C.

Aids to the Mathematics of Hygiene. By R. Bruce Ferguson, M.A., M.D., B.C. Cantab., M.R.C.S., L.R.C.P. Second edition. Price, cloth, 2*s.* 6*d.*; paper, 2*s.*

Manual of the Diseases of the Eye. By Charles H. May, M.D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York, 1890-1903. Third edition, revised. Price 8*s.* 6*d.* net.

BALE, JOHN, SONS, AND DANIELSSON, LIMITED, 83-89, Great Titchfield-street, W.

The Elements of Kellgren's Manual Treatment. By Edgar F. Cyriax, M.D. Edin., 1901; Gymnastic Director, Stockholm, 1899. Price not stated.

BELL, GEORGE, AND SONS, London.

Gloria (45 octavo pages of poetry). By the Hon. Stephen Coleridge. Price not stated.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ADAMSON, H. G., M.D. Lond., M.R.C.P., has been appointed Physician to the Skin Department, Paddington-green Children's Hospital.

BALLACHEY, H. H., L.R.C.P. Edin., M.R.C.S. Eng., has been appointed Certifying Surgeon under the Factory Act for the Heckington District of the county of Lincoln.

GAULT, DAVID, M.D., F.R.C.S., has been appointed Medical Superintendent to the Orokonui Home for Inebriates, Waitati, Otago, New Zealand.

JENKINS, A. W., M.B. Lond., has been appointed Certifying Surgeon under the Factory Act for the Hinckley District of the county of Leicester.

JOYNES, FRANCIS JAMES, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health of Dursley (Gloucestershire).

LINDSEY, ERIC C., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the Scarborough Hospital and Dispensary.

ROY, J. ALLAN C., M.B., Ch.B. Victoria, has been appointed Junior House Surgeon to the Manchester Royal Eye Hospital.

RUBBA, H. H., M.D. Brux., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer to the Hornsey Division of the General Post Office.

SHANAHAN, T., L.R.C.S. Irel., has been appointed Certifying Surgeon under the Factory Act for the Kilmacthomas District of the county of Waterford.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ARMY MEDICAL SERVICE.—Examination of Candidates for not less than 30 Commissions in the Royal Army Medical Corps.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House Surgeon. Salary £75 per annum, with board and residence.

BOURNEMOUTH, ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 a year, with board and residence.

BRIGHTON, HOVE, AND SUSSEX THROAT AND EAR HOSPITAL, Church-street, Brighton.—Non-resident House Surgeon for six months, renewable. Salary at rate of £75 per annum.

CARLISLE DISPENSARY.—Resident Surgeon, unmarried. Salary £150 per annum, with apartments.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road.—Non-resident Surgeon. Honorarium at rate of 40 guineas a year. Also Three Registrars (honorary).

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Registrar. Honorarium of £40 per annum.

DURHAM COUNTY HOSPITAL.—House Surgeon. Salary £120 per annum, with board and lodging.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Pathologist. Salary 100 guineas per annum.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—Assistant House Surgeon. Salary £75, with board, residence, and laundry.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—House Physician, unmarried, for six months. Salary £20, with board and residence. Also Clinical Pathologist and Bacteriologist, non-resident. Honorarium 50 guineas per annum.

HOSPITAL FOR WOMEN, Soho-square, London, W.—House Physician for six months. Salary £30.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £40 per annum, with board, residence, and washing.

JERSEY GENERAL DISPENSARY AND INFIRMARY.—Resident Medical Officer, unmarried. Salary £120 a year, with rooms, gas, and attendance.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Assistant Surgeon.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen square, Bloomsbury.—Gynæcologist.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—Medical Officer for Electrical Department. Salary £[illegible] per annum. Also Pathologist and Bacteriologist. Salary £50 per annum, with lunch.

NOTTINGHAM GENERAL HOSPITAL.—House Physician. Salary £100, rising to £120, with board, lodging, and washing.

NOTTINGHAM POOR LAW INFIRMARY. [illegible] Salary £120 per annum, with [illegible] attendance.

OLDHAM INFIRMARY.—Senior House Surgeon. Salary £100 per annum with board, residence, and washing.

ROYAL COLLEGE OF PHYSICIANS.—Milroy Lecturer for 1905.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Surgeon to Out-patients.

SHILLELAGH UNION, Co. Wicklow.—Medical Officer. Salary £120 per annum, with fees.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon. Salary at rate of £50 per annum, with board and residence.

SOUTH SHIELDS UNION.—Assistant (Resident) Medical Officer. Salary £200 per annum, with board, residence, washing, and attendance.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Lecturer on Physiology. Salary £400 per annum.

ST. PETER'S HOSPITAL FOR STONE, &c., Henrietta-street, Covent-garden, W.C.—Junior House Surgeon for six months, renewable. Salary at rate of £50 a year, with board, lodging, and washing. Also Clinical Assistan [illegible]

SWANSEA GENERAL AND [illegible] Surgeon for six months. Salary £75 [illegible] artments, washing, and attendance. Als [illegible] y £75 per annum, with board, apartments, washing, and attendance.

TEIGNMOUTH HOSPITAL, South Devon.—House Surgeon. Salary £[illegible] a year with board, lodging, and washing.

UNIVERSITY COLLEGE, LONDON (UNIVERSITY OF LONDON).—Chair of Hygiene and Public Health.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician, also House Surgeon, both for six months. Board and lodging.

WEST NORFOLK AND LYNN HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

WINCHESTER, ROYAL HANTS COUNTY HOSPITAL.—House Surgeon. Salary £65 per annum, rising ts £75, with board, residence, &c. House Physician, unmarried. Salary £65 per annum, rising to £75, with board, residence, &c.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory Act at Middleton in the county of Lancaster, and at Shaftesbury in the county of Dorset.

Births, Marriages, and Deaths.

BIRTHS.

BARR.—On Nov. 17th, at Wentworth, Rotherham, the wife of Horace Carlos Barr, L.R.C.P., M.R.C.S., of a son.

BOWEN DAVIES.—On Nov. 21st, at Pendinas, St. Asaph, N. Wales, the wife of W. L. Bowen Davies, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

HUDSON.—On Nov. 19th, at Vine House, Cobham, Surrey, the wife of Arthur B. Hudson, M.R.C.S., L.R.C.P. Lond., of a son.

TYSON.—On Nov. 18th, at Folkestone, the wife of W. J. Tyson, M.D., F.R.C.P., of a daughter.

MARRIAGES.

MATHEW—SAUNDERS.—On Oct. 29th, at St. James', Sea Point, by the Very Revd. the Dean of Cape Town, assisted by the Revd. J Deacon, Mabel, younger daughter of John Saunders, Esq., of Sea Cliffe Sea Point, to G. Porter Mathew, M.A., M.D. Cantab., of Port Elizabeth, Cape Colony.

TURNER—MAHOMED.—On Oct. 23rd, at Cape Town, George Albert Turner, M.B., M.O.H. for Kimberley, to Nellie, eldest daughter of the late F. A. Mahomed, M.B., F.R.C.P., and of Mrs. Mahomed.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE OD CHEM CO

WE have upon previous occasions had to animadvert upon the business methods of this firm but portions of its latest "literature" which is now being distributed broadcast to the members of the medical profession exceed in filth anything to be found in the pages of Casanova or of other 'curious' works As usual the Od Chem Co is puffing its preparation sanmetto which we are quite willing to allow may *be useful in certain cases The company has* apparently got some medical men to write articles about the treatment of sterility and on Normal Reciprocity and How it is Obtained These articles are reprinted in the pamphlet before us not so much with the desire of instructing the medical profession as of calling attention to the virtues of sanmetto We are not going to quote the passages to which we refer, suffice it to say that they repeat in the plainest and most bald language the advice which van Swieten gave decorously veiled in Latin to the childless Maria Theresa The advice has, we believe, been found by competent medical authorities to be sound but our contention is that these matters should not be made an advertisement of, nor should they be distributed broadcast through the post We can only adjure all medical men to abstain from all dealings with the Od Chem Co A trading concern which manages its business and tries to win approval for its wares by such infamous measures as we have referred to above should be boycotted and, moreover, we hope that it will [illegible] be very long before His Majesty's Postmaster-General will find some way of dealing with such filthy publications Surely they should come under the heading of Section 1 of the paragraph "Articles not allowed to be sent by Post' as laid down in the regulations published in the Post Office Guide Medical details which are in no way filthy when published as part of a scientific work *become so at once when part and parcel of an advertisement.*

A CHRISTIAN SCIENCE BURGLARY

THE New York correspondent of the *Daily Telegraph* states that Mrs Mary Baker Eddy's house has been ransacked by burglars and that many articles of value including gifts offered to Mrs Eddy by her followers, were stolen It will be interesting to see whether or not Mrs Eddy applies to the police or whether she will just think that she has not lost anything, for this, we imagine, is the orthodox Christian Science treatment of disease and evil

THE VAGINAL DOUCHE

To the Editors of THE LANCET

SIRS,—From time to time various modifications and improvements [illegible] There is an erroneous principle that [illegible] opening at the point of [illegible] he tube in position. Let two ounces of water be injected Then there is round the cervix a cavity containing fluid in which the nozzle is lying No fluid runs out, for the vaginal opening remains closed round the tube and probably more than four or five ounces will be injected before any fluid begins to flow At this point, therefore, there is fluid in the closed cavity under some considerable pressure The pressure acts equally in all directions the force at the opening of the cervix being equal to that at the opening of the syringe It can easily be seen what will be the result of vigorous syringing especially if the two openings are in a line with each other as must at least sometimes happen The object of vaginal douching is in general to wash out the vagina There can hardly be a doubt that in some cases gonorrhœal peritonitis is brought about by awkward syringing, the infection being thus conveyed directly into the uterus When a woman has any increased discharge she goes straight away and buys a syringe, and when the mischief is done she comes into the consulting room For further possibilities of harm see THE LANCET of Oct 3rd p 979 The ideal syringe-tube would be closed at the apex, there being one or two openings on the side close to the extremity, rounded or oval, and big enough to let the head of a hare-lip pin or bonnet pin through The material would be toughened glass or clear celluloid, shorter by one or two inches than the usual gum elastic tube and wider, so as to lessen the pressure within Perhaps one might ask for another name than the present cumbrous and indelicate term Something like "Re-lave, meaning to wash back, would be at once explicit and sufficiently euphonious

I am Sirs yours faithfully,

Earl's Court road, W, Nov 23rd 1903 GEORGE CRICHTON, M D Edin

ETON COLLEGE BEAGLES

A MEMORIAL has been addressed through the Humanitarian League to the chairman of the governing body of Eton College It is signed by the headmaster of the Handsworth Grammar School, by the honorary secretary of the Martock District of the South Somersetshire Branch of the Royal Society for the Prevention of Cruelty to Animals, and by some other better known gentlemen It has also, we understand, been signed by Lady Florence Dixie, Mr Keir Hardie, Dr Gordon Stables, and Mr Hopwood, the Recorder of Liverpool The Humanitarian League, "without entering on the general question of the morality of field sports as practised by adults,' desires the governing body of the college to do away with the Eton beagles The Provost has replied, stating that the governing body were not going to interfere with the headmaster's discretion The Rev J Stratton, secretary to the Sports Committee of the Humanitarian League, thereupon wrote to Dr Warre who with admirable common sense replied that he was not prepared to interfere with the liberty of the boys in the matter and that he had no evidence to show that in any single [illegible] for our own part, [illegible] are or does not [illegible] the authorities of the college decide that the exercise is good for the lads they will take care that it is obtained without any brutality to animals We object to the licence that bodies like the Humanitarian League allow *themselves The memorial is accompanied by a fly sheet* saying that "the Eton boys seek amusement in the infliction of pain on animals' The league has no business whatever to assume that it is the pain of the hare that amuses the boys, and such insinuations are constantly made by antivivisection societies and similar conceited ill informed bodies

A SPECTACLE QUACK

WE have upon many previous occasions referred to the injury inflicted upon patients with defective sight by their being drawn into the net of the "oculist optician" One of this fraternity, whose name is

Mr J Hamilton,
Bridge Avenue,
Hammersmith, London,

has recently been travelling in the West of England and has distributed circulars to medical men and presumably to others Two of these have been forwarded to us, one by a medical man at Sherborne and one by a medical man at Templecombe In one case Mr. Hamilton called for the circular himself The circular, we may add, is endorsed, "The forty seventh annual visit to this town,' and proceeds —

> MR J. HAMILTON respectfully announces to the Nobility, Clergy, and Gentry of this Town and its Vicinity his arrival, and begs to introduce his newly invented *CRYSTAL SPECTACLES* and *EYE GLASSES* celebrated for their superiority, a trial of which he feels confident must ensure unqualified approbation for the protection they afford to the Eye from the injurious effects of gas, fire, the sun or variations of the atmosphere
>
> In his long and widely-extended practice, MR HAMILTON has met with numerous cases of ruined sight, caused chiefly by the use of unsuitable or defective Spectacles, purchased of ignorant pretenders to optical science, who undertake to assist the sight with Glasses the properties of which they know nothing, and as they have not made the anatomy and physiology of the eye their study, they are not qualified to make that delicate adjustment of the Glasses to the concavity or convexity of the eye without which clear and easy vision is impossible
>
> [illegible] nify [illegible] not [illegible]
>
> *Single Eye Glasses should in all cases be avoided*
>
> Mr J HAMILTON will call personally to morrow, when he may be consulted on all Diseases of the Eye and Ear.
>
> CAUTION —*Mr J Hamilton begs to caution the Nobility and Gentry of this Town against any persons making use of his Name for Trade purposes He has no connection with any other person of the same Name, neither has he any Son or Nephew travelling — (Signed) J. HAMILTON*
>
> MR J HAMILTON HAS ALSO A LARGE ASSORTMENT OF OPERA GLASSES

Mr Hamilton is kind enough to give "a few testimonials from many hundreds' Most of the "testimonials are simply names and those names preceded by "Dr do not appear in the Medical Directory at the places where Mr Hamilton says that the owners live There are two testimonials one dated 1866 and one 1868

A FREAK OF HEREDITY

To the Editors of THE LANCET

SIRS —Will you allow space in your columns for the following notes and questions? The case to which they relate may be of interest to those who study the phenomena of heredity. My grand niece has a head of hair unlike any other I have ever seen outside my own family, each hair being twisted up separately and the whole standing out almost straight from the head when let down and combed The child's mother has similar hair, so has her grandmother, her great-grandmother had not but she evidently inherited and transmitted the tendency to it, for her brother showed the trait fully Going back

Communications, Letters, &c., have been received from—

A.—Dr. P. H. Abercrombie, Lond.; Messrs. Arthur and Co., Lond.; Messrs. Armour and Co., Lond.; Apollinaris Co., Lond.; Messrs. Allen and Hanburys, Lond.; Another Ship's Doctor, Lond.

B.—Mr. G. F. Blake, Dublin; T. B. Browne, Ltd., Lond.; British Electro - Therapeutic Society, Lond, Secretary of; *Bridgwater Infirmary*, Secretary of; Mr. P. Bothamley, Lond.; Mr. Anthony A. Bowlby, Lond.; Messrs. P. B. Burgoyne and Co., Lond., Mr. L. A. Bidwell, Lond.; Mr. Haydn Brown, Eversley; Messrs. J. H Booty and Son, Lond.; Dr. A. M. Barford, Lond.; British Druggists, Ltd., Lond.; Messrs. Boulton and Paul, Norwich; Mr. C L. Bedford, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. Ball, Lond.

C.—Cortland Wagon Co., Lond.; Canterbury Borough Asylum, Medical Superintendent of; Carlisle [illegible] of; Mr. [illegible] Messrs. E Cook and Co., Lond.; Central London Throat, and Ear Hospital, Secretary of; Messrs. J. A. Carveth and Co., Toronto; Camberwell House, Lond., Secretary of; Messrs. Chavasse and Kerr, Birmingham.

D.—Dr. W. Lee Dickinson, Lond.; *Daily Chronicle (The)*, Lond., Editor of; Duryea Co., Coventry; Mr. P. C. Dun, Liverpool; Mr. W. G. Deuvall, Lond., Messrs. Durand, Bennett and Co., Lond.; Dr. T Orme Dudfield, Lond.; Devonshire Library, Buxton.

F.—Dr. C E. P Forsyth, Lond.; Dr. Bedford Fenwick, Lond.; Fellows Manufacturing Co., New York

G.—Mr. W C. Godden, Vienna; Messrs. Grindlay and Co., Lond.; Messrs. R. W. Greeff and Co., Lond.

H.—Dr. H. B. Howard, Boston; Mr. J. Hopkins, Shillelagh, Mr. C. A Hardman, Reigate; Mr. E Huxley, Lond.; Mr. W. R. Hall, Lond.

I.—Invalidendank Annoncen Expedition, Berlin.

J.—Mr. J. R. Jack, Lond.; Dr. T. Battersby Jobson, Ilford; Mr. W. Jopling, Maidenhead; Mr. Arthur R. Jones, Whitby; J. H. L. A.

K.—Dr. D. Barty King, Lond.; Messrs. Killick and Davies Eastbourne; Dr Arthur Keith, Lond.

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An Address

ON

CONTINUOUS LOCAL INFECTION.

Delivered before the Bradford Medico-Chirurgical Society on Oct. 13th, 1903,

BY RICKMAN J. GODLEE, M.S. LOND., F.R.C.S. ENG.,
HOLME PROFESSOR OF CLINICAL SURGERY, UNIVERSITY COLLEGE, LONDON.

MR. PRESIDENT AND GENTLEMEN,—It is often borne in upon him who has himself mounted the hill with his fellows and like them begun the downward journey that many of the diseases of middle and later life are due to the absorption of small, it may be minimal, doses of poisons. He will be *sure to have a friend of temperate and domestic habits* who daily and without thought divides a bottle of champagne at dinner with his wife and at the age of 45 or 50 has a liver that reaches down to his umbilicus and is shocked to hear that he is the subject of alcoholic poisoning. Or it may be that he is the hungry dyspeptic who suffers not so much from the nature of the food which he swallows, although in this respect it is to be feared he is often far from judicious, but rather from the deleterious products which his imperfect digestion manufactures out of the materials which are for the eupeptic not only harmless but nutritious. Is it possible to doubt that many of the degenerative changes of middle and advanced life are due to this cause, just as they are to the poisons circulating in the blood of those who suffer from such definite morbid states as Bright's disease and diabetes?

It is not, however, to such well-recognised forms of chronic poisoning that I wish to draw your attention but to two or three which though common enough have not perhaps received the attention which they deserve. And I naturally turn first to the most fashionable disease of the present day—appendicitis. Probably all of us have been surprised at the amount of good which some patients experience from the removal of appendices which are apparently not very seriously diseased, say, for example, those in which the proximal end is contracted without being quite closed and the distal end is dilated. I found it difficult to give a rational explanation of what appears to be a fact, that such patients are not only relieved from the recurrent attacks of peritonitis, or the easily comprehensible chronic constipation which is so common, but from other general symptoms which are apparently unconnected with the local trouble; and that they often put on flesh and regain a condition of health to which for years they have been strangers.

The key to the situation appeared to be supplied by a case in which I was associated with my colleague Dr. Sidney Martin who has published it in the Transactions of the Royal Medical and Chirurgical Society, vol. lxxxiv., p. 197. A man, aged 50 years, had suffered more or less for eight weeks from intestinal symptoms which *started on his way back from a fishing expedition in Norway* in the autumn of 1899 There was no indigestion of food but there was gradual loss of appetite with final complete anorexia. There were a bad taste in the mouth and a dry tongue, with a deficient secretion of saliva. The motions, although not very frequent, were never solid and became more and more offensive and very offensive flatus was also passed. ugh in
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motions. e was
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there was a similar slight tendency to rise. He was pale, cachectic, and much emaciated. The muscles were flabby and the wasting was continuous, so that he lost 11 pounds in 15 days, and in spite of treatment in bed, careful dieting, intestinal antiseptics, and douching of the colon with boric acid solution he seemed to be passing into a desperate condition. There was no distension of the abdomen and no tumour could be felt except something in the neighbourhood of the right kidney which it was thought might be no *more than this organ. The lymphatic* glands throughout the body were somewhat enlarged, the most marked enlargement being of those in the right groin. He had the *appearance of one suffering from malignant* disease and I was asked to see if this doubtful lump in the
r was not a carcinoma of the
l out to be the right kidney
but on exploring the surrounding parts the cæcum appeared to be thickened and an elongated and distended appendix, the presence of which we had, I think, none of us suspected, was pulled out into the wound and removed. Its proximal end was narrow but patent, the walls were enormously thickened except for an inch at the proximal extremity where there were two small erosions, and the contents consisted of horribly offensive liquid matter with a few fæcal concretions. Here was then presumably, as Dr Martin suggests in his paper, the real *fons et origo mali*—an automatic syringe squirting into the cæcum hour by hour and minute by minute not only the noxious products that the micro organisms produce but the micro-organisms themselves. I feel sure that the explanation is the right one, for although the recovery was slow it has been complete. There were a gradual disappearance of the symptoms and a *gradual recovery of strength. Ten months after the* operation he had attained his usual weight and now, more than three years afterwards, he is fat and well. The enlarged glands disappeared rapidly after the operation; and it is interesting to note that the gland in the right groin was obviously infected from a mass of old calcareous and recently inflamed glands which occupied the angle between the end of the ileum and the cæcum—that mass of glands which often forms a considerable part of the *lump* in cases of appendicitis. I removed some of them for microscopical examination but no organisms were found either in them or in the walls of the appendix.

The cases of recurrent appendicitis in which we hesitated to recommend radical cure used to be very numerous, in fact not many years ago they all belonged to this category. Now it dwindles and apparently approaches extinction, as we recognise how slight are the dangers of the operation and how perilous is the condition often met with in operating after the first attack. I make a point now of inquiring into the question of chronic septic poisoning and if there is any suspicion of it I consider it a strong argument in favour of recommending the removal of the probable source of the trouble.

In operating upon cases of appendicitis in the quiet stage we often meet with buff-coloured patches looking not unlike necrosed fat. Sometimes the interior is quite soft, sometimes it looks like actual pus. I am informed on good authority that the bacterium coli commune is to be found in this material. There can be little doubt that these yellow masses are the remains of abscesses. I remember once coming across such a deposit in the process of formation. The case had apparently commenced in the ordinary way but suppuration had extended across to the left side of the abdomen, where a huge collection of pus existed. Round the appendix, where there was a very slight swelling, there was a minute collection of pus which was evidently becoming inspissated but was separated by a considerable extent of peritoneal adhesions from the main collection in the pelvis and on the left side.

Probably in the majority of cases of relapsing appendicitis small abscesses are formed, I expect *that* quite appreciable collections of pus exist in many, but that they are absorbed by the peritoneum. For my present purpose it is interesting to inquire whether the patient suffers in any way from the presence of these inspissated abscesses, either because their contents are absorbed or because they are liable to light up again independently of fresh acute mischief occurring in the appendix. That this occurs sometimes is rendered highly probable by the fact that it is not uncommon in operating within a few days of the subsidence of an acute attack to meet unexpectedly with a small collection of pus. I have actually found in such an abscess the stercolith which had escaped from the appendix, although the lump had gone and the temperature had for days been normal.

One of the most important diseases of this class is *pyorrhœa alveolaris* and I make no scruple in referring to it, although it is now rather prominently before the profession and the public and I have already myself published something upon it.[1] It is important first because it is so common and so insidious; secondly, because its effects are so pernicious and so varied; and thirdly, because it is so difficult to cure that our friends the dentists are apt to give it up as a bad job. *Spongy gums* seem to be such a trivial complaint and the inconvenience is to many people—people who are not very particular—so slight that they seldom, unless the importance of it is pointed out by the medical attendant or the dentist, think it worth while to apply for treatment. The people who never wash their teeth seem to suffer but little from it, even when it is far advanced and their mouths are in a foul condition, though what their sensations must be I find it hard to conjecture. In our own walk of life the complaints usually made are: (1) that the gums bleed when the teeth are washed or when they are sucked; (2) that there is a disagreeable taste in the mouth; and (3) sometimes, but by no means always, that there is a large amount of expectoration which may have the appearance of pus mixed with saliva or be more or less deeply blood-stained. The patients will often tell you that it has not only a highly offensive taste but an offensive smell, though of this they are often quite unconscious. Anyone, however, who has once recognised the very disagreeable sickly odour which is associated with the disease has unfortunately only too often the opportunity of recognising its presence amongst his own acquaintances. It is often asserted most positively that this expectoration comes from the back of the nose or the throat or is coughed up from the lung and patients are only convinced that they have been mistaken when the disease has been cured or placed in abeyance. Occasionally the saliva or bloody fluid runs out from the mouth at night on to the pillow and this when it does occur is almost pathognomonic of the disease. If the expectoration be allowed to settle the deposit has a very close superficial resemblance to pus. It does, indeed, contain a certain amount of pus but by far the greater part of it consists of squamous epithelium which should at once suggest its source. It is perhaps not generally known that a small amount of fluid of this sort—I mean one looking like pus mixed with saliva—may be obtained by anyone, however clean his mouth, by sucking for a few minutes at his gums with the tongue. The signs of the disease are not very obvious if the patient is particular and brushes his teeth frequently; perhaps only a bright red line at the edge of the slightly retracted gums. I particularly want to emphasise the fact that such appearances are consistent with a very advanced stage of the disease. A very fine probe will very likely, even when there is nothing more to be seen, pass a long way between the separated gums and the fangs of the teeth and it is from these pockets that the noxious material is being constantly expelled into the mouth. In advanced cases when the patient takes no care of his mouth there is no difficulty in making a diagnosis. The extensive retraction of the gums which are obviously spongy and probably bleeding, the yellow line of fur and pus, the absorption of the alveolus and exposure of the fangs covered with tartar, the gradual loosening of the teeth, and the stinking mouth are quite unmistakeable.

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[1] *Transactions of the Royal Medical and Chirurgical Society* vol. lxxxiii., p. 23.

Without attempting to summarise all that is known of pyorrhœa and before coming to the reason for including it in this paper there are two or three things more to be said: 1. It very often occurs in members of the same family, whether because it is hereditary, or infectious, or because the habits of the individuals are the same I do not know. 2. The fangs of the teeth, where they are surrounded by the pockets, are covered with tartar and it is impossible to cure the disease without eradicating these deposits. It is here that the chief difficulty of treatment comes in. The tartar is of two kinds, true tartar or salivary calculus consisting of phosphate and carbonate of lime with ptyalin and animal matter, and black tartar, dark in colour and of dense consistence. The relation of the tartar to the disease has been much discussed. By some it is supposed to cause inflammation of the gums by its presence and so to start the ulcerative process. By others it is supposed to be a secondary affair. For us it is important to remember that the black tartar is found on the fangs of the teeth right down to the bottom of the pockets. It was on the removal of this tartar that Dr. Riggs of Hartford, Connecticut, very strongly insisted in what was really the first rational suggestion for the treatment of the disease, and I do not altogether grudge his memory the name of "Riggs's disease" by which for long it was known. His treatment was by special powerful scarifiers and is said to have been painful but for a time successful.[2] 3 The disease usually starts in young adult life and if unrelieved will almost inevitably lead to premature loss of the teeth. 4. Controversy is still maintained as to whether or not it is often or ever caused by the gouty diathesis but the balance of evidence appears to be against this suggestion.

Now I will ask you to consider what it must be to be always swallowing day and night, year in year out, these septic organisms and their products. I can imagine an objector saying that the stomach is well able to give a good account of micro-organisms and that a mouthful of cheese contains more living inhabitants than does the continent of Europe, or urging that if the disease is so common we ought to see more of its results, or, again, that the human body is after all a joint stock concern and gets along very well with its associated organisms and, in fact, might be rather in difficulties without them. In order to answer these criticisms let us try to realise the actual state of things as far as modern investigations enable us to do so. An admirable work on "The Mycology of the Mouth" by Kenneth Weldon Goadby has appeared this year, in which he gives with careful detail his own observations as well as those of previous observers, of whom the best known are Miller and Galippe. It is there stated that the micro-organisms seen on direct examination may be tabulated as follows: (1) cocci, generally in diplococci, and massed around the epithelial cells in clumps; (2) thick bacilli generally jointed and often showing considerable irregularity in their staining characters; (3) thick bacilli with pointed ends and somewhat of the shape of a bean-pod (they frequently show a division in the centre and appear as two elongated triangles with the bases opposed); (4) various fine bacilli, $0{\cdot}5\,\mu$ and under in width, often exhibiting an irregular beaded marking, especially well marked in the larger threads which may be of great length; (5) spirilla, spirochætæ, and comma-shaped bacilli, all showing marked motility in the hanging drop; (6) various yeast forms, sometimes with a partially developed mycelium; (7) streptothrix threads, generally showing well-marked clubs; and (8) masses of bacilli associated with the threads, some jointed in chains, others free and often massed in clumps; some of them exhibit polar staining. Many of these organisms obtained in pure culture are pathogenic to animals, but it is remarkable that the best observers agree that the common pus cocci only occur in about 10 per cent. of the cases examined. Cocci, indeed, are found in all cases, but it is supposed that they are not precisely the same as the pus cocci. Be that as it may, it is clear that a vastly larger number of pathogenic organisms, and probably in a much more active state than normal, are constantly being swallowed. The stomach no doubt can deal with a good many organisms by virtue of the hydrochloric acid in the gastric juice. But there are many organisms which it will not kill—such, for example, as the typhoid bacillus—and it has not been ascertained how far the pathogenic organisms of the mouth are affected by it. They come down in great numbers and the re-resisting power of numbers is greater than the resisting powers of a few; in other words a concentrated dose is more effectual than a dilute one. They come down too at all times of the day, both when the stomach is full and contains hydrochloric acid and when it is empty and contains little or none; and Dr. William Hunter considers that he has demonstrated[3] that in cases where there is profuse purulent discharge into the mouth the pus cocci become permanent residents in the stomach after producing what he calls septic gastritis. Lastly, it is impossible to say why one person suffers from septic poisoning and another escapes, just as it is in the case of the exhibition of other toxins, whether septic or not. It is the personal equation which we do not understand. It is the amount of resistance that is greater in one individual than in another or is greater in the same individual at one time than at another, depending on the state of his bodily health at the time.

I now pass on to enumerate the diseases which have been supposed to be caused by pyorrhœa and other forms of oral sepsis, a long account of which is to be found in Hunter's paper and in the writings of others. They include septic fever, rashes, and profound septicæmia, purpuric hæmorrhages and bleedings from the gums, toxic neuritis, septic gastritis, stomatitis, pharyngitis, and tonsillitis, ulcerative endocarditis, pernicious anæmia, chronic dyspepsia, bronchiectasis, &c This is a sufficiently formidable list but not, I am sure, a complete one

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[2] Some dentists have recently denied that tartar is always present.

[3] Oral Sepsis as a Cause of Septic Gastritis, Toxic Neuritis, and other Septic Conditions, Practitioner, December, 1900.

I desire, however, to draw attention not only to the diseases which pyorrhœa may cause but also to those which it may simulate I reported three instructive cases in the paper above mentioned and to these, with one or two others, I will briefly refer

CASE 1 —The patient was a woman aged 45 years, with a long history of previous illnesses dating back to 1881, including a miscarriage, a bad confinement, uterine displacements, vaginal discharge, floating kidney, shivering fits and headaches, and five or six attacks of influenza with chest and bronchial troubles The expectoration began in 1897 and was at first green and then bloody and offensive The diagnoses made were pleurisy followed by a small empyema, pleurisy followed by bronchiectasis, and subdiaphragmatic abscess connected with the right kidney and bursting into the lung But there were no abnormal physical signs except slight retraction of the right posterior base with lessened movement, some increased resistance on percussion, and weak breath sounds Her principal complaint was the extremely offensive expectoration, amounting to five or six ounces in the 24 hours, not exactly coughed up but hawked up from the back of the throat a foul taste, and breath offensive to others The teeth were very carefully attended to and only showed the red line and slight retraction of gums to which reference has been made, but the pockets were numerous and deep All her troubles were removed by the effectual treatment of the gums Her daughter suffers from the same complaint

CASE 2.—The patient was a woman, aged 25 years, who had a well marked attack of right pleurisy in March, 1899 Expectoration began at the time of this illness and became bloody six months later and was always offensive It was brought up in the same way as in the last case She had lost flesh and perspired at night and was very anxious about her state and especially about the foul taste in her mouth and offensive smell of her breath A few physical signs resulting from the old pleurisy remained at the right base and I was requested to open a supposed abscess of the lung in this situation She had very marked pyorrhœa and was at once relieved on treating the gums Her sister suffered from pyorrhœa

CASE 3 —The patient was a man, aged 66 years, who had very marked pyorrhœa round his few remaining teeth He had suffered from three or four mild attacks of diarrhœa in quick succession when he was seized with an acute attack of glossitis and stomatitis with profuse and offensive salivation The gums became much more swollen and the suppuration copious The tongue was enlarged and thickly coated. Superficial ulceration appeared at several spots where the teeth impinged on the lips and under surfaces of the tongue There was for a few days considerable fever He also rapidly improved under vigorous treatment of the gums

CASE 4 —Dr Martin supplied me with notes of a case which was supposed to be cancer of the stomach depending on the same cause

CASE 5 —A woman was sent with obscure abdominal troubles which it was thought might be relieved by fixing the moveable right kidney, though her symptoms depended only on pyorrhœa

There are, however, other reasons why pyorrhœa is important to surgeons I need not remind my surgical colleagues of the importance of treating it thoroughly before undertaking any operation upon the mouth nor how much the mortality of operations on the stomach, the tongue, and the jaws has been reduced since a careful toilet of the mouth has been recognised as an essential preliminary I have always a supply of tooth brushes and Miller's excellent mouth wash at hand in my wards for all comers and direct the sister to inquire into the state of the patients' mouths and to deal out the tooth brushes when necessary Then I have seen quite a few where the disease has been mistaken for chronic pharyngitis diseases of the antrum, and other inflammatory diseases of the mouth and naso-pharynx Lastly, we must examine ourselves periodically and see whether we are the subjects of this disease, for it must not be forgotten that we become dangerous to the community if we have not clean mouths A short-sighted or over eager surgeon may spoil the effects of the most elaborate antiseptic preparation of his patients by breathing or coughing on to the surface of a wound; an irritable or didactic one may by injudicious speaking during an operation positively put his patient's life in danger, in fact, I have more respect for the practice of some surgeons who always antisepticise their mouths before an operation and wear a mask and rigidly refrain from speaking during its performance than for some of those elaborate details which almost seem like bowing down to, and worshipping, a fetich

One word must be said about the treatment It does not, of course, rest with us but with the dentists who have carefully and repeatedly to clear away the tartar from the fangs and then to attack the organisms contained in the pockets either by syringing or packing using such antiseptics as peroxide of hydrogen, chloride of zinc, or essentials oils and sometimes freely slitting up the pockets in order to gain access to the mischief and give free exit to the pus I regret to say that some dentists I have sent patients to have treated the notion that pyorrhœa could possibly cause such symptoms as I have described as moonshine or have plainly told the patients that they are incurable or have advised the extraction of all the teeth The last is certainly effectual but it is rather a strong measure and I know from ample experience that with patience and perseverance on the part of the patient and the dentist very much may be done without proceeding to the *ultima ratio* But it must be added that the problem of the effectual treatment of Riggs's disease amongst the poor has not yet been solved and I would earnestly commend it to the attention of scientific dentists I suggest that it will be found in making freer incisions into the gums so that the pockets can be done away with, treating them, in fact, like ordinary abscesses and then supplying the patients with good hard tooth brushes and some cheap but efficient oral bactericidal mouth wash It is not too much to hope that in otherwise unexplained cases of chronic septic poisoning we shall all get into the habit—that is the important thing—of critically examining the gums and insisting upon the treatment of this most insidious complaint

Amongst the conditions in which small amounts of pus or morbid products are constantly leaking into the system are some to which a brief reference only can be made The most striking amongst these is the development of lardaceous disease in the subjects of chronic suppuration A great deal is known about the morbid anatomy and chemistry and symptoms of this disease but remarkably little about its pathology All however, seem to be agreed that almost all the cases depend either upon prolonged suppuration or upon syphilis and that in many of the syphilitic cases suppuration is also present It is, indeed, almost hinted in the last edition of the ' Principles and Practice of Medicine" by Fagge and Pye Smith that it may ultimately be found that all will fall into one or other of these two categories They say "Many writers speak of scrofula, chronic tuberculosis, cancer, malaria rickets, and syphilis as being alike *constitutional diseases which predispose to the development of lardaceous degeneration*," and to these we must add some forms of kidney disease and lymphadenoma. They continue "In the first place, it is doubtful whether scrofula, or otherwise the presence of tubercle in the lymph glands or joints, *has any influence apart from its tendency to cause suppuration* In the second place it is certain that syphilis leads to the lardaceous change even when the formation of pus has occurred only to the most insignificant extent if at all We may therefore reduce the known causes of the lardaceous change to two—chronic suppuration and syphilis, sometimes combined but capable of acting separately" In 1876 Fagge brought before the Pathological Society an account of 244 cases collected during 24 years at Guy's Hospital Of these 153 were due to prolonged suppuration divided as follows phthisis, 67 cases, joint or bone disease, 51 cases; chronic diseases, dysentery, &c, 36 cases, very slight suppurations, such as chronic discharge from the ear and nose, suppuration of one testicle, caseous glands, &c, five cases This very interesting series of cases is brought up to the year 1899 by your last President Dr H J Campbell The total amount then reached 546 and of those only 19 remained unaccounted for by anatomical evidence of chronic suppuration or syphilis Of these 19 the post-mortem notes of six, at all events, are unsatisfactory and in all there must be the difficulty of excluding syphilis The remaining 13 died from miscellaneous diseases the relation of which to lardaceous change is not obvious

I do not want to ride my hobby too hard but is it too fanciful a suggestion that the mouth should be carefully searched in cases where lardaceous disease occurs without obvious cause? Each suppurating cavity round a tooth fang is, of course, a small one, but if they were added together the discharging surface would be one of considerable size and I can quite imagine that lardaceous disease may have to be added to the list of those depending on pyorrhœa alveolaris and other forms of oral sepsis.

The actual manner in which lardaceous disease is produced by chronic suppuration has yet to be determined, for we can hardly consider the question to be finally settled by the interesting experiments of Dr. Alan B Green (communicated to the Pathological Society by Mr. T. Strangeways Pigg on Feb. 6th, 1900, in a paper on the Production of Amyloid Disease in Animals). His method was to inject rabbits subcutaneously, intravenously, or peritoneally, or to inject into the pectoral muscles of hens one cubic centimetre of a broth culture of staphylococcus pyogenes aureus, the dose being repeated and gradually increased until toleration was established. Only a few animals survived for any length of time, but some of the rabbits lived for three, four, or five months, and one hen lived for 15 days. The organs after death showed appearances which were supposed to indicate lardaceous changes. It must be owned that the conditions thus produced were not very similar to those in which lardaceous changes are developed in man and that the results are not quite convincing, so as no further experiments have been reported up to date, we are still uncertain whether lardaceous degeneration is caused by some such process as was suggested by W. H. Dickinson in 1867—viz, that the draining away of alkaline salts by the pus transformed fibrin into lardacein—or whether, as is more likely, it is caused by the re-absorption of some of the products of the micro-organisms by the walls of the cavities in which the suppuration is occurring. It may be, indeed, that neither of these is the correct explanation.

Some peculiar points about lardaceous disease cannot fail to strike the clinical observer: (1) that whilst some individuals may remain free from it for many years who suffer from a chronic issue of pus others develop the disease and fall victims to it in a comparatively short space of time; (2) that though it is very often associated with clubbing of the extremities the two conditions may occur singly or one may precede the other by a long interval; and (3) that if the cause of the disease is removed an almost complete recovery may take place even when the viscera have been profoundly affected. I have seen, for example, a young man with a chronic empyema of small size which had been imperfectly drained and was still discharging; his liver was enormous, his urine became solid on boiling, and his fingers were tremendously clubbed. A free incision into the empyema led to its closure in a few weeks and all his symptoms and signs disappeared except that he never quite lost all traces of albumin in the urine whilst he was under observation although some samples were free from it.

I have under my care at the present time a tuberculous patient, 46 years of age, who has had an empyema running for 15 years or more but which was always very freely drained. He has enormously clubbed fingers but there is no albumin in the urine and there is no obvious enlargement of the liver. He has had attacks of albuminuria which have passed off and he has also had attacks of synovitis of the knees which have subsided, but he certainly has no characteristic signs of lardaceous disease. I attribute this to the free escape for the discharges which has always been maintained, and I think it is important, if we are driven to the conclusion in any particular case that a source of suppuration cannot be stopped, to maintain the most thorough drainage possible, in spite of the entreaties of the patient to be relieved of the bother of drainage-tubes; for I think it is in cases where the pus is confined that lardaceous disease is most rampant. A confirmation of this idea is to be found in the fact that all pathologists allow that lardaceous disease is far less common than it used to be before the modern improvements in surgery were introduced.

It is of course, a matter of every-day observation that the amount of absorption from the walls of an abscess is very much modified by the freedom of the escape of the pus; the immediate onset of symptoms of septic absorption when the exit becomes blocked is as familiar to everybody as is the rapid disappearance of such symptoms when either an acute or a chronic abscess is freely incised. There is another illustration of the same fact but of a totally different nature to which I do not recollect having seen any reference. I refer to cases where a septic abscess has existed under high tension without producing any serious symptoms, but where free evacuation has been followed by very rapid and even fatal septic absorption, presumably from an increased vascular flow through the pyogenic membrane. That such increased vascular flow is the immediate result of incision is shown by the copious and sometimes serious bleeding that follows the incision of acute or even chronic abscesses. Is it not then thinkable that the walls of a chronic abscess if imperfectly drained may absorb more readily than those of one in which the discharges are never allowed to accumulate? To illustrate my meaning I will mention two very striking cases. One was that of an old lady over 70 years of age who many years ago had an abscess connected with a perforated appendix which was left longer unopened than would be the case nowadays, but whose condition was quite good at the time of the incision. She rapidly died from septic absorption as soon as the pus was let out. The other case was that of a child with general peritonitis from the same cause, upon whom I only operated at the urgent request of the parents as she seemed to be *in extremis*. She, however, got better and seemed to be on the road to recovery, but after some weeks a left subdiaphragmatic abscess formed. Its evacuation was rapidly followed by a fatal result and I have seen the same thing happen after operating on very septic abscesses of the liver and other parts of the body.

Originating from similar causes to those which give rise to lardaceous degeneration is the disease, or rather are the diseases, known as pulmonary osteo-arthropathy, in regard to which I would only reaffirm my belief that more than one condition has been included under the description, and that the ordinary case (if I may be allowed the term) is a combination of clubbed extremities and septic osteo-arthritis. That the chronic septic poisoning is an important factor will be allowed by anyone who has observed a case develop, and still more readily by one who has attended, as I have done, at a cure. I have watched a man with this complaint who had an unopened empyema of long standing, urging him to allow me to lift his burden which he sullenly refused. At last perforation into a bronchus occurred and he expectorated the empyema and rapidly lost all his symptoms of pulmonary osteo-arthropathy and at the same time his disagreeable temper, for, although he still takes credit to himself for his cure and I believe has stated that I am but a poor doctor, he is now quite sweet-tempered and seems to be very grateful for all the attention he received in the hospital, for which at the time he showed little or no appreciation. Let it not be forgotten that pulmonary osteo-arthropathy of the type I am describing is a curable disease if the *causa causans* can be tackled, but as this is generally bronchiectasis or some other incurable condition the prognosis is usually hopeless.

The *septic osteo arthritis of young women often accompanying leucorrhœa*, and with which the name of the late Dr. Ord is associated, and the various forms of gonorrhœal rheumatism are matters of common knowledge and must not now delay us, though they clearly belong to the same class. I will only point out that the original cause of the mischief is, in my experience, frequently overlooked, especially if it be leucorrhœa, and I would urge the importance of inquiring into and treating it. It seems irrational to attempt to treat the joint disease without first attacking the source of infection.

I now pass to another group in which the morbid material has no obvious access to the general circulation or digestive or genito-urinary tract but remains for a time apparently encapsuled. Everyone must have observed that some, though not by any means all, patients with chronic tuberculous glands in the neck are always ailing—are in an indefinite state of ill-health—even though the glands may not be discharging. An operation is perhaps undertaken, partly for cosmetic purposes, partly in obedience to the teaching (which dates back certainly to the time of Niemeyer and perhaps even earlier) that the presence of cheesy (tuberculous) deposits may be under conditions of lowered vitality the source of a general tuberculous infection. And after the operation such patients often become quite robust. Now although it must be allowed that they are usually at the time of life when, even if nothing be done, there is a tendency for the body to become stronger and to get the better of tuberculous tendencies, the improvement is usually too rapid to be accounted for in this way. There seems to be some chronic poisoning going on, some secretion from these glands analogous to the internal secretion of such organs as the thyroid and the testicle, and this is I think a strong argument in favour of the removal of cheesy glands when they can be all got away.

It is amazing how long these tuberculous deposits may remain in an apparently quiescent condition. I had under my care a delicate middle aged lady who had recurring attacks of suppurating glands in the left side of the neck and cheesy glands in the left axilla. After many operations on the neck she encouraged me, when tackling the axillary glands, to remove a small hard lump in the breast of the same side which she told me Mr. John Burkett had seen 30 years before and told her it would never give her any trouble, no doubt taking it for a fibro adenoma or for chronic mastitis. It turned out to be a tuberculous abscess with calcareous walls which not improbably had a good deal to do with the development of the glands in the posterior triangle and her constant ill-health.

In this connexion I would refer to a man, 46 years of age, whom I first saw in 1901. He had never had good health and was always thin but had become much thinner—in fact, he was strikingly thin. For 23 years he had suffered from "crampy pains in the left hip if his bed was uncomfortable." For three years he had had lumbar pain, supposed at first to be lumbago, and pains in the left hip, and they had gradually become worse. His digestion was miserable and his circulation was very poor. He had an old lateral curvature, possibly due to an attack of pleurisy seven years previously. When I saw him he had a huge psoas abscess connected with caries of the lumbar spine. It was opened and treated in the ordinary way and he was kept on his back for a year. As soon as the abscess was opened he began to get better, his digestion rapidly improved, and at the present time he can eat almost anything. He quickly put on flesh and is now a very fat man. He has lost several nervous symptoms which previously troubled him and his old friends would hardly recognise him. Arguments about medical matters are notoriously liable to fallacies and it must be stated that he says his family usually get fat at about the age of 40 years, but I cannot doubt that he had had some pus pent up for many years and that the evacuation of this had much to do with the really extraordinary change in his condition that has taken place.

Another very remarkable case of a more acute type was that of a boy, seven years of age, who came under my care at the hospital on Jan. 24th, 1900, with *acute infective osteo-myelitis* of the right femur. A six-inch incision on the outer side of the thigh gave exit to a large amount of pus and it was found that the periosteum had been widely stripped off. A hole was made into the medullary cavity which was apparently healthy. Suppurative pericarditis rapidly followed and four days later the pericardium was opened and drained through an incision in the fourth left intercostal space by my colleague Mr. Raymond Johnson in my absence. Then acute suppuration of both elbows occurred, of which the right was incised on Feb. 4th, while the other slowly recovered without operation. He had also symptoms pointing to embolic abscesses in the lungs. On Feb. 16th he complained of headache. Double optic neuritis and other symptoms of abscess of the brain but without localising symptoms followed, but as the wounds closed the headache disappeared though the optic neuritis did not clear up. He left the hospital on May 15th with the pericardial and elbow-joint wounds closed but with a sinus leading down to bare bone in the thigh. He was cheerful and well but the temperature was not regular, sometimes running up to 100° F. and at the end of this period falling below normal. In a fortnight (on May 31st) he came back with headache and vomiting. Localising symptoms, consisting of weakness and ataxy of the left side of the face and body, and weakness of the right external rectus showed themselves on June 26th, and on the 28th a large abscess was opened behind the right fissure of Rolando, the odourless contents of which contained staphylococci. A large hernia cerebri formed. There was no improvement in the paralytic symptoms but there was a gradual return to health and the optic neuritis to a great extent cleared up by September. The temperature, however, remained a little erratic, occasionally rising to 100°. He now left the hospital and used to show himself from time to time, a fat happy boy, limping in on his crutches, for the hemiplegia did not improve and contracture set in. The hernia cerebri still formed a prominent tumour which was protected by a metal plate, and all his wounds, even that in the thigh, ultimately completely healed. And then on April 5th, 1901, after more than six months, he came back again with further symptoms of cerebral abscess which was opened after removing more of the bone. It was drained and irrigated but without avail and he died nearly 18 months after the onset of the disease. At the necropsy the scar of the original incision of the thigh was found to conceal a small abscess two and a half inches long by three-eighths of an inch wide in which lay a sequestrum completely separated from the greatly thickened femur. Is it possible to doubt that this abscess was the home of the staphylococci which were constantly poisoning his system? And is it not conceivable that if this wound had not unexpectedly healed and I had removed the sequestrum in the usual way he would have made as good a recovery as such cases not infrequently do?[4] One is here reminded of the long intervals that elapse between an attack of typhoid fever and the development of necrosis and one wonders whether the presence of the typhoid bacillus in the system is quite without any deleterious effect upon the patient in the meantime. And it is impossible to forget how long a liver abscess may remain dormant and how wretched the patient's health often is whilst it is in this condition. That small sequestra may remain dormant for a very long time was pointed out by Page[illegible]et necrosis" well expresses the [illegible] do apparently little or no harm [illegible] but that they are a real source of danger is perhaps not so generally recognised. I will now describe a case which illustrates this point in a forcible manner although the mischief here was less of a general kind than in most of those which form the subject of this paper.

In October of last year I saw a man, who was then 47 years of age, whose family history may be said to be tuberculous and who 40 years before had had necrosis of the lower end of the left femur. Whether it was acute infective osteomyelitis or tubercular it would be, of course, impossible to say. He was seen and operated upon by two most distinguished surgeons, whose names are now household words, and the wound healed and remained healed for years. 12 years before I saw him another distinguished surgeon had dealt with another abscess and had found much bare bone but no sequestrum. During all these 40 years he had numerous abscesses, but the interesting point is that they healed completely and in the intervals he could do a considerable amount of athletic exercise. The return of the abscesses became more frequent as time went on and at last occurred almost annually; each one was ushered in by acute fever and was accompanied by synovitis of the knee. The most serious attack of all was the one for which I attended him. During this the knee-joint suppurated and his life was in much danger. Free incisions into the joint, however, enabled us to save the limb and on a later occasion I made a careful exploration of the femur and there, embedded in an enormous mass of callus, were three or four small old sequestra, dating back, I have no doubt, to the original attack and which for all these 40 years had remained as possible poisoners of his system whenever a state of impaired vitality gave them a chance to invade it. Had the search for these sequestra been successfully carried out 39 years before how different would the best years of this man's life have been. Far be it from me to suggest that at the time it would have been possible or to impute any want of skill on the part of the surgeons who preceded me. For I am well aware how well-nigh impossible it is in some cases to discover such minute sequestra; and if I had been more modest I should have chosen a case in which I myself had given up the search in despair. It would have been easy to do so, though not to produce quite such a striking example. It is, moreover, exactly the case which I wanted in order to bring this paper to a close. a paper in which I have brought together a variety of subjects, differing in all sorts of ways, but all linked together by one idea—namely, that widespread disorders may depend upon small infections acting sometimes unperceived over long periods of time and that neglect of observing the cause may lead to the adoption of erroneous lines of treatment.

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[4] His heart weighed ten ounces. The pericardium was adherent but not thickened. The right lung was adherent to the chest wall by [illegible] and the left by scattered adhesions. The ventricles of the [illegible] ningitis. [illegible] he right [illegible]

It will not do for us to say, like our brethren of the long robe, "*de minimis non curat lex.*" The smallest things for the medical man are often of paramount importance. Why, the whole of modern surgery and a great part of modern medicine are based upon the study of objects so minute that they were a generation ago either quite unknown or looked upon as the curiosities of the microscopist. I do not pretend in any way to have exhausted the subject. I have dealt with it chiefly from the surgical side, but I feel that a physician might easily have said as much or more from his own point of view. I trust, however, that what has been said and suggested may prove not quite uninteresting and open up some fruitful lines of thought.

I met the other day a distinguished Yorkshire surgeon who said he was going to do me the great honour of coming to hear me to-night. I told him I was going to talk about little drops of pus. "Pus," he said, "we never see pus." Well, I always take a statement about never seeing pus with a grain of "salt," as I know those who make it intend it should be taken, for we must all see pus in abundance unless our practice is of a very limited nature. But I know what he meant. It is not, however, the pus that we see that I am now urging the importance of. He put the emphasis on the word *see:* I put it on the *little drops.* I am pointing out the subtle influences of the pus that we do not see, of the pus we have to go in search of, or even to recognise the existence of by a process of ratiocination, the unseen pus that walketh in darkness and wasteth at noonday. I am urging the necessity of not treating unexplained septic symptoms without searching for their cause and of remembering, as Jenner used to say, that we miss more by not seeing than by not knowing, and that while nature sometimes seems to spread her book wide open to our gaze she more often hides her secrets and for their disclosure demands our deepest thought and most painful scrutiny. So that for him who has failed to search her out and to meet her advances the "*history*" will for ever have remained a "*blank*" because—

"She never told her love,
But let concealment, like a worm i' the bud,
Feed on her damask cheek."

ABSTRACT OF

A Clinical Lecture

ON

A PATIENT WITH MITRAL STENOSIS.

Delivered before the Students at the Bristol Royal Infirmary, on Nov. 14th, 1903,

BY HENRY WALDO, M.D. ABERD., M.R.C.P. LOND.,
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GENTLEMEN,—This female patient, aged 31 years, unmarried, is the subject of valvular disease of the heart dating back five years only when she had an attack of rheumatic fever. It is chiefly the mitral valve which is involved. In the large majority of cases of mitral valve disease the left auriculo-ventricular orifice is distended but in this patient it is just the reverse for the left auriculo-ventricular opening is contracted. It is a case of mitral constriction or stenosis. In this pathological condition women are much oftener affected than are men. The etiology of mitral stenosis is that an inflammation of the mitral curtains is set up, a valvulitis or an endocarditis, from some cause which in some cases is ill understood, but in the majority of cases, as in this one, it consists of the rheumatic fever poison. When a child contracts rheumatic fever the affection of the joints and the fever may be very slight and easily overlooked. You will understand from this how difficult it is in some cases to get a history of rheumatic fever, and as a matter of fact the distemper sometimes expends itself solely upon the cardiac organ. As you know, girls are more liable to rheumatism and chorea than are boys and so it is we think that the female sex suffer so much oftener from mitral valve disease. In a few cases endocarditis may be set up by other febrile conditions, such as scarlet fever, or measles, or whooping cough, and the wonder is that patients with this last malady escape as they do, for the strain on the heart valves must be very great. Perhaps a very small percentage are congenital. Later in life mitral stenosis is associated with chronic kidney disease. The amount of constriction in cases of mitral stenosis varies very much, as well as does the shape of the opening. In extreme cases the opening from the left auricle into the left ventricle will scarcely admit a crow quill. I have seen valves in this condition. The most common shape of the opening resembles a button-hole and is well known as the "button-hole mitral." The valve is sometimes funnel-shaped, with the cone extending into the ventricle. The endocarditis extends from the valve segments to adjacent parts and we find the chordæ tendineæ are thickened and glued together.

The diagnosis of mitral stenosis is in the large majority of cases most reliable and if the physical signs are well marked you may feel confident about the condition of the valve, although you can never go so far clinically as to say whether the orifice is of the button-hole or infundibular shape. In listening for the characteristic presystolic murmur put your stethoscope over the area of the cardiac impulse. This murmur is usually very circumscribed and not conducted as a mitral regurgitant murmur is. It is rough in quality, extends all through the diastole or only during the latter part of it, as in this case, and ends abruptly in the first sound or in a systolic murmur which replaces the first sound. The rhythm is well described as thumping. We speak of a pure presystolic murmur when it is unaccompanied by a systolic murmur. Balfour thought that there was always a certain amount of regurgitation in all cases of mitral stenosis, although not necessarily accompanied by a systolic murmur. If we ask this patient to walk up and down the ward you will hear the presystolic murmur more clearly. We imagine that this murmur is produced by the left auricle, with its hypertrophied wall, contracting, which it normally does, just before the ventricular systole and so it is often spoken of as an auricular systolic murmur. It is also called the crescendo murmur of mitral stenosis. When you are listening to it keep a finger on the area of the cardiac impulse which enables you to time the murmur correctly.

There is in this case a systolic murmur heard inside the left nipple also which is, I think, conducted from the tricuspid valve. If it were mitral you would expect the cardiac impulse to extend outwards beyond the left nipple; the left ventricle would be hypertrophied and dilated but there is no evidence of this. You will notice that the second sound is inaudible at the apex which I have often noticed in other cases. In pure mitral stenosis the left ventricle is not enlarged; theoretically it should be smaller than in health, for it certainly receives less blood to deal with in consequence of the contracted mitral valve. In the late stage of these cases when the left auricle is very distended and the right ventricle fails to equalise the circulation the presystolic murmur disappears. The cardiac dulness to percussion extends to the right very considerably and not at all to the left. Owing to its breadth the heart has been likened to that of a turtle. The enlargement is due to the increased size of the auricles and right ventricle. The strain on the right side is so great in some cases as to induce chronic endarteritis of the branches of the pulmonary artery. Osler has seen two cases of paralysis of the left vocal cord caused by pressure of the enlarged left auricle on the left recurrent laryngeal nerve. If you place your hand over the seat of the cardiac impulse you will perceive a quivering sensation which is the presystolic valvular thrill. It is more marked during expiration and also after the patient has moved about the ward. It is a very important sign in confirming your diagnosis.

The pulse in this patient is infrequent and regular; in a more advanced stage it would be small, frequent, and irregular and some of the heart beats may then be imperceptible in the radial arteries. You will see clearly that this contracting mitral valve forms a diaphragm and so causes obstruction to the circulation in proportion to the size of its opening; there is in consequence more or less blood stasis which favours blood clotting. This is most likely to occur in the auricular appendices and pieces of this blood clot are liable to be carried with the blood stream until they are arrested, forming emboli. It is also thought that the blood may solidify in the vessels themselves, forming thrombi. When these emboli or thrombi are present in the vessels of the lungs they are the origin of infarcts and account for the attacks of hæmoptysis which these patients are so subject to. This patient has had several. The bleeding from the lungs is of course influenced by the increased blood pressure, the result of hypertrophy of the right ventricle. The emboli which find a lodgment in the systemic arteries are either pieces of vegetations from the mitral valve or broken up blood clot, usually from the left auricular appendix. These emboli not infrequently fix themselves in the cerebral arteries, usually in those of the left cerebral hemisphere, as being a more direct course from the aorta, and so explain the symptom which we call hemiplegia. So far this patient has escaped this form of paralysis. Embolism may sometimes be suspected in the renal vessels by the patient passing blood in the urine. In mitral stenosis the urine is usually scanty, as the renal vessels are inadequately supplied with blood and the arterial pressure is low.

Dropsy does not occur so often here as in cases of mitral insufficiency and it is not unusual when it shows itself to begin as ascites. The liver is often enlarged and tender and sometimes extreme pain is complained of in this region which depends upon stretching of the liver capsule. The deficiency of the circulation in the stomach and the bowels may give rise to indigestion and even to hæmorrhage.

The imperfect circulation through the brain would account for the sleeplessness which these patients frequently complain of. Bronchial catarrh is very easily set up on account of the abnormal moisture in the lungs. If the hepatic veins are much dilated a pulsating liver may be present. The blood tends to accumulate on the right side of the heart, notwithstanding Sansom's assertion that the circular muscular fibres in the pulmonary veins exert a powerful sphincter action, which, he says, can be demonstrated, and that it assists in keeping the backward blood pressure away from the lungs in cases both of mitral stenosis and mitral regurgitation.

In giving a prognosis a most favourable sign is a well-marked second sound heard at the pulmonary area, which is sometimes reduplicated. The closure of these cusps is sometimes so forcible that they can be felt by the hand in the second left interspace as a shock. This means that the hypertrophy of the right ventricle is well maintained and in association with this there is a pronounced pulsation in the epigastrium.

In treating these patients rest in bed is often necessary; they should at any rate be cautioned not to over-exert themselves. If the venous system is very full of blood opening a vein in the arm is sometimes a good palliative. In this condition of an over-distended venous system no drug is more valuable than blue pill, given perhaps in conjunction with enough compound colocynth pill to produce a watery evacuation. Compound jalap powder is useful for dropsical complications. When the pulse becomes very weak and frequent cardiac tonics are indicated and strychnia or digitalis should be given. If the urine is very deficient the best cardiac tonic to give would be caffeine which is stronger and better than the citrate of caffeine. Insomnia is frequently a troublesome symptom in these cases and it may be necessary to prescribe chloralamid occasionally at bedtime. Easily assimilated, light nourishment is all important, but see that all the food you give is digested, for although sudden death is a very [illegible] mitral stenosis it may be induced [illegible] and so allowed to press upon [illegible] cardiac pain is best relieved by advising very little fluid to be taken. A little alcohol is usually required in treating these cases.

THE MAIDA VALE HOSPITAL AND HOME FOR INCURABLE CHILDREN.—The President of this institution, H.R.H. the Duke of Connaught, occupied the chair on the evening of Nov. 25th at the festival dinner in aid of the charity in the Prince's Restaurant, Piccadilly, W. They had met, said His Royal Highness, in the interests of incurable children of the poor who by reason of the nature of their infirmity could not be received in the large hospitals and could not be properly looked after in their humble homes. There were 30 children in the home—15 boys and 15 girls, but more room, better air, and greater nursing facilities were needed and it was proposed to remove to a superior home in South Hampstead. The cost of the transfer would exceed £12,000, towards which £6000 had already been subscribed, and for the other £6000 he appealed to the company present. It was afterwards announced amid cheers that the sum of £5400 had been subscribed at the dinner.

ON THE PRESENT TREATMENT OF THE ENLARGED PROSTATE.[1]

BY C. MANSELL MOULLIN, M.D. OXON., F.R.C.S. ENG.,
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THE duty of the person intrusted with introducing a discussion upon a clinical subject such as the treatment of enlargement of the prostate is not so much to read an exhaustive paper on it himself as to define those conditions of the affection which appear to him to be most likely to repay discussion, and to indicate the methods of treatment which, in his experience, are best suited to those conditions, and the reasons for selecting them. In accordance with this idea I wish to leave altogether upon one side all those cases in which catheter life is so successful that the patient manages to lead a comfortable existence by passing a catheter for himself once, or at the utmost twice, in the 24 hours. There is nothing more to be said about them any more than there is about those happy old men who are not even aware that they possess a prostate. The treatment cannot be called ideal. It merely concerns itself with one of the consequences of the enlargement and leaves the cause untouched. But if all the symptoms, both those that are present at the time and those that are likely to occur as the patient grows older, are adequately met by such a simple proceeding, and if the frequency with which the catheter has to be used does not increase as years pass by, it must be allowed that the treatment meets the necessities of the case sufficiently well. Such cases may be placed once for all upon one side. I have nothing further to say about them I am only concerned with the exceptions, those in which this line of treatment is either a failure from the first or is morally certain to become a failure if it is persisted in; and I am sorry to say that it is my conviction that these exceptions are far more numerous than is generally believed. It is so easy to make use of a catheter after the first few attempts and it appears to [illegible] for a time, [illegible] for the [illegible] proportion [illegible] however, the results of ordinary catheter life are carefully recorded and the progress noted year by year there is not the least doubt that in the vast majority there is a steady change for the worse; and if candid inquiry is made it is impossible to avoid the conclusion that the downward progress is to a very large extent the direct result of the treatment. Enlargement of the prostate is a progressive disease, though it is curious how very seldom this is realised. Neither the patient nor the gland ever remains stationary. The one steadily grows older and feebler, less and less able to help himself, and the other is always increasing in size. The difficulty grows greater and greater as the ability of the patient to deal with it grows less. Year by year the catheter has to be passed more frequently. At last its use becomes almost incessant day and night. The intervals grow shorter and shorter. The pain becomes almost intolerable. The introduction of the instrument becomes more and more difficult until it may be impossible for the patient and even the surgeon may not find it easy. The bladder entirely loses its power. The habitual passage of a catheter is enough to destroy the contractile power of the bladder within two years. Hæmorrhage becomes more frequent. And far worse than any of these, septic inflammation, due to septic organisms carried in by the catheter, is certain to set in at last. Suppurative cystitis, ascending pyelonephritis, phosphatic calculi, septic prostatitis, thrombosis of the prostatic plexus, periprostatic abscess, epididymitis, and urethritis are some of the commonest consequences of the habitual use of catheters in cases of enlargement of the prostate and are the immediate cause of death sooner or later in the majority of cases that are treated by habitual catheterisation.

It is quite true that these septic troubles ought not to occur and that now that is an accepted fact that inflammation of the bladder is always the result of the introduction of septic organisms (except in the case of specific diseases such as typhoid fever), cystitis is not quite so frequent or so severe as it used to be, but it is absolutely impossible for an old man, growing year by year more feeble and less able to take care of himself, who has to pass an instrument upon himself many times by day and night often at a most urgent call, always, on every occasion, to take adequate precautions. Given abundance of time and assistance the greatest skill will scarcely suffice. With few exceptions the habitual employment of catheters means atony of the bladder and septic cystitis sooner or later; and septic cystitis, with enlargement of the prostate, means at last death by slow torture.

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[1] The opening paper at the discussion at the meeting of the Harveian Society on Dec. 3rd, 1903.

These are the cases the treatment of which I propose that we should discuss to-day. In actual practice there is no difficulty in finding out which they are; or if there should be a little difficulty in distinguishing them just at first a few weeks' treatment will always show. In case of doubt the catheter should be given a trial first, but if the frequency with which it has to be used increases; if the main feature of the complaint is not so much vesical inability or mechanical obstruction as irritability of the bladder; if the amount of residual urine grows larger; if there is a tendency to cystitis (for undoubtedly patients differ greatly in the degree of their susceptibility to septic organisms); if attacks of congestion are of frequent occurrence; if there is a valve-like outgrowth at the orifice of the bladder or a conspicuous thickening in the posterior median wall of the urethra; if there is any difficulty in the passage of the catheter; if the introduction of the instrument is liable to cause bleeding; if there is a tendency to the formation of calculi in the post-prostatic pouch or if the specific gravity of the urine steadily falls, it is clear that the use of the catheter does not fulfil the necessary conditions and the attempt will end in failure. It may answer for the moment. In the future it certainly will not and the sooner this is recognised and some other method of treatment adopted the better for the patient.

The first essential in the treatment of enlargement of the prostate is to form an accurate opinion as to its nature. It is not sufficient to say merely that the prostate is enlarged or even to describe its shape or size. The cause of the enlargement must be ascertained, whether it is simple congestion of the venous plexuses in and around the neck of the bladder, or actual overgrowth, or the two together in varying proportion. What relation these bear to each other, whether the overgrowth is not, in part at least, the consequence of the prolonged congestion, or whether both are not due to some more remote cause, such as the reflex influence of the testes, is a question of great interest but does not concern us now. We have to deal with the two conditions themselves, usually in combination, and the consequences to which they give rise.

Congestion of the tissues at the neck of the bladder is a much more potent factor (especially in the early days of enlargement of the prostate) in causing the symptoms of which the patient complains than is usually believed. It is the main cause of the early irritability. It greatly increases the susceptibility to inflammation. It weakens the strength of the muscular coat of the bladder by interfering with its blood-supply and at the same time it throws extra work upon the bladder by making it contract more frequently against greater resistance. It may be simply and entirely passive, the result of venous obstruction; or it may be due to the irritation caused by septic organisms or by an excess of uric acid or oxalates in the urine; or it may be reflex, the result of stimuli that originate in connexion with the sexual organs. Not uncommonly all these causes are at workt ogether. Its frequency and the frequency with which it leads to thrombosis of the prostatic plexus may be estimated from the frequency with which hæmorrhage occurs, from the chains of phleboliths which are so rarely absent from the prostatic plexus of old men, and, more than anything else, from the benefit derived in these cases from what is called general or constitutional treatment. I have not to deal to-day with this: I am only concerned with local measures, but I cannot help pointing out that the undoubted value of constitutional treatment depends entirely upon the effect that it has upon this congestion, and in every case in which congestion at the neck of the bladder is a prominent feature constitutional measures, such as rest in bed, hot baths, dieting, and free purgation, must never be omitted. Alone, when the congestion is chiefly passive, they are often sufficient of themselves to give relief, and though unfortunately they are not so beneficial when the congestion depends upon other conditions they are still of great value.

The local treatment of enlargement due to congestion need not detain us long. As a rule local interference with a congested organ tends to make the congestion worse. But there is one method which is not popular because I believe it is not well known but which I have found of great benefit. I allude to Bottini's cautery as modified by Freudenberg. The proceeding is very simple. The bladder is distended with air so as to keep the rest of the wall out of danger and three parallel incisions are made with the white-hot blade of the cautery, one along the floor in the middle line of the neck of the bladder, the others one on each side. An anæsthetic is not necessary if the patient is accustomed to instruments though I think it is advisable. There is very little pain afterwards and I have not met with any case in which the hæmorrhage was worth mentioning. The venous plexuses in the submucous and mucous layers and the nerves, which in this region are so exceedingly sensitive, are divided; and three linear cicatrices are left which contract and distinctly lessen the tendency to subsequent congestion. I cannot recommend this method for enlargement due wholly or even in great measure to overgrowth of the gland. It is inefficient for this and there are other better methods. But in cases in which there are but little growth and much congestion, and in which there is great irritability of the bladder with the imperative necessity for immediate micturition as a prominent feature, and in which the muscular coat of the bladder is beginning to fail, a respite can certainly be obtained, if not a cure, without serious risk. Whether it has any effect in checking the growth I should not like to say but I do not consider that it is probable.

The only other local measure that needs consideration in dealing with prostatic congestion is division of the vasa deferentia or, rather, of the nerves that accompany and surround them. There is no doubt that this operation (and, of course, the other operations that entail the same results upon the nerves coming from the testes) does check to some extent the liability of the prostate to congestive attacks and, so far as these attacks are dependent upon stimuli originating from the testes, it is of some benefit, while it certainly does not expose the patient to any serious degree of risk. As, however, division of the vasa deferentia cannot have any effect upon passive congestion, or upon that which is caused by septic organisms or by irritating substances in the urine, the operation is very often a failure.

The other form of enlargement of the prostate, that which is due to irregular glandular overgrowth, admits only of mechanical treatment. It may lead to obstruction, so that no urine can be passed voluntarily, or it may cause intense irritability of the bladder, according to the direction in which it grows and the amount of congestion that attends it, but whatever it does if palliative measures, such as treatment by catheters, fail, and they nearly always do sooner or later, there is no alternative but removal in some form or other. Drainage can only be regarded as the last resource when the patient is too far gone to stand anything else.

Removal can be effected either by inducing atrophy by means of some operation upon the testes or the spermatic cords or by operating upon the enlargement itself. Of these two methods, the former, like everything else which is novel, was boomed too much and now has met the usual fate by falling into, I cannot help thinking, somewhat undeserved discredit. That it benefited a very large proportion of cases—a proportion, according to American surgeons, as high as 85 per cent.—there can be no doubt; and equally there can be no doubt that it failed sometimes (especially in those cases in which the enlargement was largely due to inflammation) and that it was attended by a much higher rate of mortality than would have been expected from the severity of the operation. Moreover, certain cases were recorded in which very grave mental disturbance, imbecility and even mania, followed the operation; it is even stated that insanity followed the division of one of the vasa deferentia under cocaine, and though I do not believe for a moment myself that the brain and testes in old men are in such close functional relationship with each other as this would imply, the fear of such an occurrence, the strong sentimental objection to the operation, and the success attending removal of the enlargement by operation, all combined, have caused this procedure to fall completely into the background.

An enlarged prostate can be removed more or less completely either through a perineal or a suprapubic opening.

When the bladder is very small and rigid from repeated attacks of cystitis and the prostate is very hard and dense the former method is indicated Under all other conditions the prostate as from the nature of its surroundings it must grow up towards and into the bladder, is best approached through the bladder 14 years ago McGill advocated and performed this operation and though various modifications have been introduced since then it remains in all essential details the same McGill described how the growth was to be enucleated with the finger after dividing the mucous membrane of the bladder and himself enucleated and exhibited both lateral lobes removed in this way In 1892 [2] in the Hunterian Lectures delivered before the Royal College of Surgeons of England I pointed out that "if the operation is to prove successful it resolves itself into removing the whole of the vesical mass, whether it springs from the lateral lobes or is an upgrowth from the posterior wall or is a detached nodule and then extending the exploration down the whole length of the prostatic urethra " and I cited some instances in which the operation had proved, or nearly proved, a failure because the growth had not been followed down the prostatic urethra That was the operation I performed then, following McGill's directions , it is the operation that I have continued to perform since it is the operation that is performed now generally, and it is one that I can thoroughly recommend for these cases A certain amount of confusion, it is true, has been caused by *erroneous description of what has been called* the capsule of the gland But it has been conclusively shown by Shattock and Wallace that the covering on the enucleated masses is a pathological product formed around those masses out of the surrounding tissues by the way in which they press upon them and condense them in their growth The larger and the more lobular the masses of which the enlarged prostate is composed the more easily can they be shelled out because of this fictitious capsule which they form around them , and there can be no doubt that for this form of enlargement this method of operating will not only supersede all others but will do away with the treatment by habitual catheterisation for which these cases are by no means suited Only if the prostate in addition to being enlarged from glandular overgrowth is in a state of intense congestion this must be allowed to subside first under the influence of the constitutional treatment to which I have already alluded and the patient must be warned that if the muscular coat of the bladder has been ruined already by catheterisation and cystitis removal of the enlarged prostate cannot restore it, though it will help it by rendering its work more easy

Wimpole street, W

A CASE OF CHRONIC INTUSSUSCEPTION , EXCISION OF 42 INCHES OF SMALL INTESTINE , RECOVERY[1]

By F C WALLIS B A , M B , B C Cantab ,
F R C S Eng ,

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A healthy looking married woman, aged 32 years was admitted into Charing Cross Hospital on April 14th, 1903 suffering from intestinal colic She was in perfect health until May, 1901 Previously to this she had never had a *day's illness in her life* The bowels *always acted with* great regularity and aperients were rarely necessary She had never suffered from diarrhœa. The present illness began in May, 1901, with a sudden onset of most acute pain in the abdomen (there was no cause for it as far as she knew) The pain was of a colicky character but was not sufficiently bad to make her take to bed until the end of the week when the attacks became more frequent and vomiting commenced Food always excited the colic and vomiting always followed it She described an attack as a "general turning round and round feel in the stomach, followed quickly by vomiting " This attack lasted for three weeks and she was in Guy's Hospital for the latter part of it After this she was perfectly well until August, 1901, when she had a similar attack and there was a third attack in September, 1901 These attacks resembled the first except that the bowels were obstinately constipated for three or four days When the bowels acted she was much relieved and the attack would generally pass off There was no constipation at the beginning of an attack but pain and vomiting preceded it for three or four days. After the third attack she continued well until June, 1902, when there was another attack, since when there had been many milder in degree but all similar in character to the first She had never passed any blood or mucus in the motions The abdomen never became swollen and pressure neither increased nor relieved the pain No tumour had been felt She was admitted into the medical ward of Charing Cross Hospital during one of these attacks of pain and was in for five days, leaving on April 18th, 1903 apparently quite well She was re admitted on April 22nd for another attack of pain during which vomiting was more or less continuous , it was bile-stained but not offensive The abdomen was lax and not tender (this condition existed during all these attacks) On the 25th an indefinite mass was felt below and to the left of the umbilicus

It was decided that unless a distinct improvement took place in the next 24 hours an exploratory laparotomy should be performed As the patient was no better—in fact, getting weak—I operated at 11 A M on the 25th When the patient was under the anæsthetic a large freely moveable mass could be felt in the left umbilical region The abdomen was opened in the mid line below the umbilicus by an incision which was lengthened to five inches in all The palpable mass was an intussusception involving small intestine only The length of bowel involved amounted to three feet six inches The proximal gut was materially distended An unsuccessful attempt was made to reduce the invagination and enterectomy was decided upon Whilst lifting the involved gut out of the abdomen the distal end tore like a piece of wet blotting paper close to the end of the intussusception and it was noticed that this part of the bowel was much inflamed The intestinal contents were expressed at either end and Lane's intestinal clamps were applied on healthy bowel The bowel was divided first at the upper end and the mesentery was cut through parallel to the intestine, the vessels being clamped as they were cut The intestine was divided at the lower end and the two ends were united with a Murphy's button A few Lembert sutures were put in in addition and the cut edges of the mesentery were sewn together with silk sutures, the vessels being ligatured with silk also Some hæmorrhage found its way between the layers of the mesentery The parietal wound was closed by one row of separate fishing-gut sutures The operation lasted for one hour The patient stood it very well and her pulse was 120 at the end One pint of beef tea was given by the rectum There was practically no shock from the operation

The patient was nourished by rectal enemata only for two days , on the third day small quantities of plasmon and thick barley water were given by the mouth and on this day the bowels acted twice the motions being well formed The food by the mouth was gradually increased and the rectal feeding was discontinued, the stitches were removed on the eighth day, and everything went very well indeed until May 15th (three weeks after the operation) when the patient had an attack of pain similar to those she had previously suffered from paroxysmal colic with intervals free from pain Chloroform was administered and on palpating the abdomen I could feel the button in what I thought was the descending *colon It was quite easily pushed down into the* pelvis but it could not be reached by the rectum No button was passed and the pains continued. On May 18th the button was seen by the x rays to lie on the outer side of the right rectus two inches above the inlet of the pelvis On the 19th I reopened the abdomen and found the button about four inches above the ileo cæcal valve , it could not be passed on into the colon so I removed the button through a longitudinal incision which was sewn up transversely From this second operation the patient made a perfect recovery and left the hospital quite well on June 10th I saw her recently and she was in the best of health

The following is the pathologist's description of the specimen 'No 1223 Enteric intussusception in adult 42 inches of small gut *excised* A portion of small intestine, 67 centimetres (26½ inches) of which forms the outer coat (intussuscipiens) of an intussusception which has been greatly reduced, a double layer 18 centimetres (seven and a quarter inches) now remaining invaginated. The apex of the intussusceptum shows considerable reddening and is thickened from inflammation and œdema. The returning sheath is greatly thickened. The indrawing of the mesentery sheath is well shown. The outer coat is considerably dilated and somewhat irregularly thickened. Here and there congested vessels may be seen. Eight centimetres (three inches) from the lower end is an oval opening two centimetres in diameter which seems to have been torn as its edges are irregular; microscopically the gut near the orifice is in parts quite healthy, in others swollen and infiltrated with round cells."

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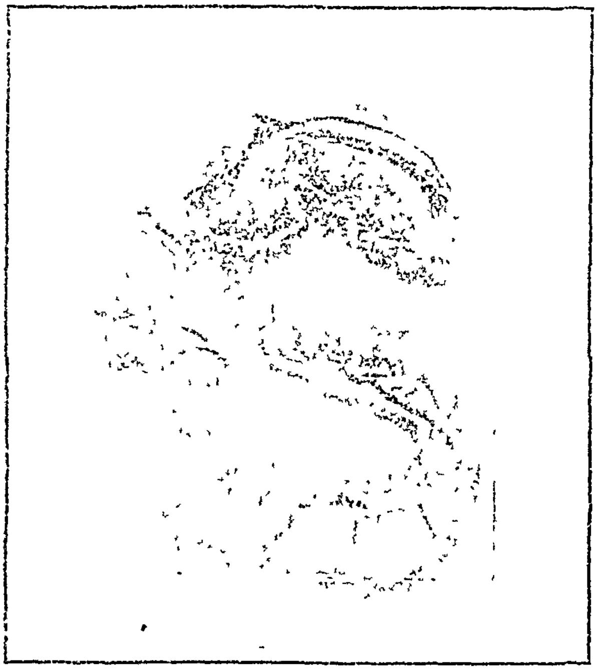
[2] The Lancet June 4th (p 1223) 11th (p 1287) and 18th (p. 1354) 1892

[1] A paper read before the Clinical Society of London on Nov 27th 1903



Intussuscepted portion of gut removed.

When the intussusception was first exposed and before the mesentary was divided the apex of the intussuscepted part was close up to the inflamed part of intestine which tore apart when the intestine was lifted out of the abdomen—but after removing the intestine the intussusception slid back to its present position, although when *in situ* it was quite impossible to reduce it in the slightest degree.

The *contretemps* with the Murphy's button was unfortunate It is the only time that I have ever had any trouble and I have used these buttons now in a large number of cases. It was due to the fact that I put in a button somewhat larger than the size generally used for small intestine. My reason for doing so was that the proximal end of the intestine was considerably distended and the slightly larger button made approximation easier. It did not occur to me at the time that there would be any difficulty in the passing of the button and ordinarily speaking I do not think that there would be any difficulty in its passage. In an urgent operation of this magnitude time was of the greatest consequence and I do not know any other means by which the two ends of the intestine could be so rapidly and securely brought together. The main part of the time taken (one hour) was spent in cleaning the skin of the abdomen, removing the intestine, tying a large number of vessels, and uniting the widely separated ends of the mesentery. The sewing in and clamping of the two ends of the button did not take more than five minutes.

Why the gut should have torn in the way it did was a matter of some speculation and a microscopical examination of the torn edge showed only inflammatory infiltration. I believe the softening of the intestine here was due to interference in the blood-supply and there is no doubt that perforation would have occurred at this spot very soon.

As to the cause of the intussusception there is nothing to show that it was due to anything but an irregular action in the muscular wall of the intestine. Cases of chronic intussusception are not uncommon but one such as this is, I think, worth recording. The points of interest are: (1) the length of time (over two years) which it lasted; (2) the excellent health of the woman between the attacks and, I am glad to say, since the operation; (3) the large amount of small intestine involved (most cases of chronic intussusception have to do with the large intestine); (4) the fact that no tumour was felt with any certainty until the patient was anæsthetised; and (5) there was no exciting cause such as growth, tumour, or ulceration which is commonly the starting point in cases of chronic intussusception.

Harley-street, W.

ADAPTATION AND COMPENSATION.[1]

BY G. A. GIBSON, M.D., D.SC., F.R.C.P. EDIN.,

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THE title which has been chosen for this communication may savour of diffuseness and it might have been better to qualify it in some way so as to denote its meaning more definitely. My intention is primarily to bring before the society some illustrations of adaptation and compensation and although certain generalisations will be inevitable, yet in so far as possible it will be my aim to avoid them. The choice of the subject has been somewhat fortuitous. When making a fresh study last winter of acromegaly and gigantism some very interesting appearances, only to be explained by compensatory processes, forced themselves upon my attention and turned my thoughts strongly in this direction—a direction in which a great deal of my previous work has lain. When looking about for some theme that might prove interesting to the society it therefore naturally occurred to me that the subject might not unprofitably occupy us during part of this evening.

Let me, by way of preface, bring out very shortly one or two points in regard to the adaptations which may be seen in acromegaly. The accompanying illustrations demonstrate in the most graphic fashion the enormous increase which occurs in the lower part of the face, and more particularly in the inferior maxilla. This is shown in the photographs taken from life, but the most interesting points are to be ascertained from the skulls of such patients after death. In the beautiful photographs reproduced in Figs. 1 and 2, kindly furnished by Professor D. J. Cunningham of Edinburgh, the enormous preponderance of the lower maxilla is clearly shown and a photograph of the vertex of the skull (Fig. 3) shows that the temporal ridge has risen greatly towards the vertex. Similarly, in Figs. 4 and 5, for which my thanks are due to Professor A. F. Dixon of Dublin, the huge size of the lower jaw is well shown, and in Fig. 6 the temporal ridge is even more distinctly brought out than in the other skull as vastly increased. Now there is only one possible explanation for these appearances. In consequence of the increased weight of the jaw the temporal muscle has more work to perform and it has therefore undergone hypertrophy. That this is the truth may easily be ascertained by comparing the head of a young child with that of acromegaly and it is still further proved when such a skull is contrasted even with the highest of the anthropoid apes, in which there is a direct ratio between the heavy jaw and the large temporal muscle.

In another direction most marvellous adaptations are to be found when we study congenital affections of the heart. The consideration of the changes which occur at the period of birth would prepare us for wonderful possibilities of adaptation. Let me, by way of example, cite one interesting fact which has been emphasised by Gérard.[2] Up to the moment of birth the diameter of the ductus arteriosus exceeds that of the pulmonary arteries, the difference, according to him, varying by one, two, or even five millimetres. By the eighth day the arterial duct is practically closed and the pulmonary arteries have rapidly increased to a diameter much exceeding that of the closed or closing duct. In the case of cardiac malformations we have a most fertile field for the investigation of possibilities of modification and it is found that the adaptation is such as will compensate for defect without surpassing it. This has been very vividly brought before me recently in a most interesting example of congenital affection of the heart which occurred in the wards of my colleague, Dr. A. James, to whose kindness I am indebted for permission to refer to the subject and to show a picture of the heart (Fig. 7). It was an instance of one of the rarer malformations. The undefended space between the two ventricles was patent; the pulmonary artery was represented by a narrow band of fibrous tissue and the aorta supplied the right and left pulmonary arteries as well as its own proper branches. Notwithstanding these defects the patient, a boy, had lived to the age of 16 years. The heart showed a most beautiful retention of embryonic conditions as regards the musculature of the ventricles. They were as nearly as possible of equal thickness, the right, however, being slightly in excess of the left. The exact measurements were as follows: left ventricle, 17 millimetres; right ventricle, 19 millimetres; or respectively $\frac{11}{16}$ths and $\frac{12}{16}$ths of an inch. The reason for this is very obvious. Both ventricles had to overcome the same pressure and their thickness was therefore approximately identical. In well-marked contrast to this let me mention that in cases of permanency of the ductus arteriosus, where the channel of communication is, as it usually is, small, there is but little increase in the thickness of the right ventricle. The rise of pressure in the pulmonary artery being but slight there is little cause for any hypertrophy of the right ventricle. Assuredly this is an exquisite example of adaptation. Reference has been made to embryonic conditions. During ante-natal existence, when, in consequence of the arrangements then existing, both ventricles are exposed to almost similar pressure, the thickness of the ventricles is found to be practically equal. This is a subject which some years ago engaged my attention [3] and it may be well, by way of clinching the argument,

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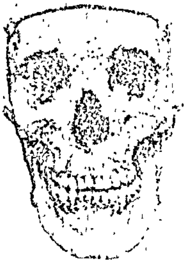
[1] A paper read before the Medical Society of London on Oct. 12th, 1903.

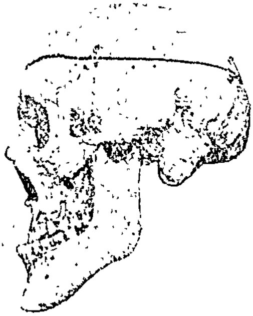
[2] Gazette des Hôpitaux, Paris, 1899, année lxxii., p. 178.

FIG. 1.



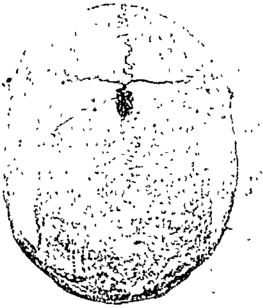
From a case of acromegaly.

FIG. 2.



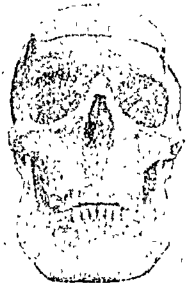
From a case of acromegaly.

FIG. 3.



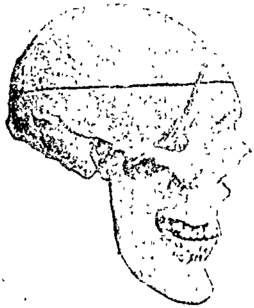
From a case of acromegaly.

FIG. 4.



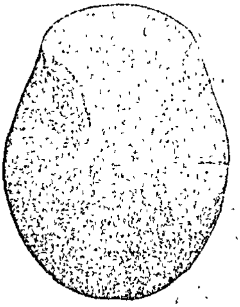
From a case of acromegaly.

FIG. 5.



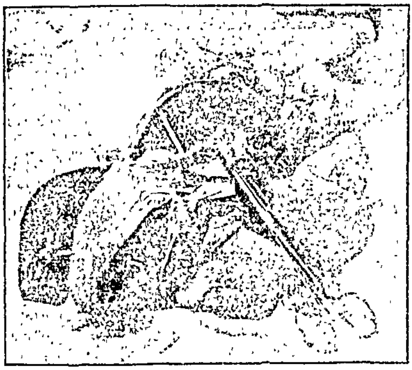
From a case of acromegaly.

FIG. 6.



From a case of acromegaly.

FIG. 7.



A case of congenital heart disease with patency of the interventricular septum, absence of the pulmonary artery, and great hypertrophy of the right ventricle.

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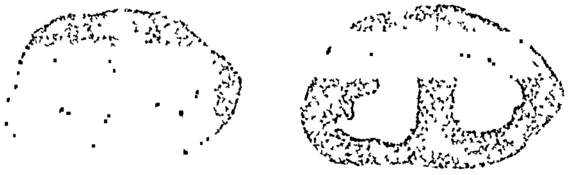
[3] Verhandlungen des X. Internationalen Medicinischen Congresses.

to show some sections of these fœtal hearts, two of which are reproduced in Fig. 8 In these the ventricular walls are of almost the same thickness. Such are a few outstanding subjects which have led my thoughts of late to run in the direction indicated by the title of this paper; they are only given by way of preface. My real object is to bring before the society certain modifications in the constituents of the blood, in the structure of the arteries, and in the condition of the heart which can only, it seems to me, be explained upon similar grounds.

FIG. 8.



Two sections of a fœtal heart in the fifth month, showing almost equal thickness of the two ventricles.

In requesting your attention for a few minutes to some changes in the blood let me begin my observations with the remark that in what follows no special reference will be made to any alterations in the white blood corpuscles. Firmly believing in the great doctrine of phagocytosis as one of the most important explanations of immunity, and accustomed to seek and to find its appearances in numerous cases of disease, it is nevertheless no part of my intention this evening to deal with it in any of its bearings. The complexity and uncertainty still hovering around the leucocytes must necessarily render any attempt to summarise their functions at present extremely difficult.

When we turn from the leucocytes to the erythrocytes we are on more certain ground. A considerable amount of accurate information is now available as regards the life history of the red blood corpuscles, and this is more particularly the case in respect of the duration of their existence and their final destiny. The investigations of Quincke[4] and Hunter[5] have cleared up many points of uncertainty on such subjects and it would be most interesting to refer to them if time permitted. We must, however, proceed to our more immediate subject. An increase in the number of the erythrocytes beyond their normal is exceedingly common in many disturbances of the circulatory and respiratory apparatus. In fact, it may be stated that any interference with the oxygenating function is followed by more or less cyanosis, usually along with hyperglobulism. The amount of increase in the erythrocytes bears a more or less definite ratio to the extent of the disturbance of oxygenation. In cases of cyanosis from many causes such changes have engaged my attention To summarise the conditions let me shortly state that in cyanosis the blood is of high specific gravity, often reaching 1075. The amount of hæmoglobin is considerably increased, commonly reaching such a figure as 120 per cent. The erythrocytes are often above 7,500,000, and the leucocytes, although not so commonly altered in number, not infrequently exceed 12,000. It is interesting to observe that the hæmoglobin index is almost invariably reduced. Let me here show you some photographs of the blood counts in such diverse conditions as pernicious anæmia (Fig. 9), perfect health (Fig. 10), and considerable cyanosis (Fig. 11), all in equal dilution—1 in 200. Many of these facts have been known for the last 20 years, since their first observation by Toeniessen.[6] Some years ago, frequent observation of these phenomena led me to suggest that the increase in the red corpuscles, as well as in the hæmoglobin, may be regarded as compensatory[7] As such a conception can hardly be regarded in itself as explanatory, the consideration of the subject induced me to propose the hypothesis that from insufficient oxygenation the erythrocytes are not called upon to perform such active functions as in health and that, their functions being lessened, or, in other words, their tear and wear being reduced, the duration of their individual existence is increased. The number of the corpuscles may be expected in this way to be augmented until an equilibrium is produced between their production and destruction. In some later remarks upon this subject[8] it was candidly allowed that this hypothesis could only be seriously considered if the increase in the blood elements were proved to exist throughout the different divisions of the circulatory mechanism, arteries, capillaries, and veins.

Since the date of these earlier investigations abundant opportunity has been afforded me of further observations upon the subject and on several occasions it has been in my power to compare the condition of the blood in cyanosis as it occurs in arteries, capillaries, and veins. A number of the results were recently published[9] and from them you will allow me to choose one of the most striking instances.

A boy, aged 16 years, was lately under treatment in my wards for a group of symptoms which could only be explained by the diagnosis of mediastinal pericarditis. On admission in September, 1902, the boy was deeply cyanosed. His heart was but slightly enlarged and had no abnormal sounds. The pulse was of low pressure and manifested in the most distinct manner the features of the pulsus paradoxus. The patient had enormous enlargement of the liver and considerable increase in the size of the spleen, along with hydrothorax, ascites, anasarca, and albuminuria. The subcutaneous blood was frequently and regularly examined and showed an amount of hæmoglobin varying between 80 and 100 per cent., while the number of red corpuscles fluctuated between 8 000,000 and 8 800.000 per cubic millimetre and the number of white corpuscles oscillated between 5000 and 8500 per cubic millimetre. On Oct. 20th a drop of blood was obtained from a small twig of the temporal artery and another from a small tributary of the temporal vein in order to compare with the blood in the capillaries; the following results were obtained. Artery: hæmoglobin, 93 per cent.; erythrocytes, 7,000,000 per cubic millimetre; and leucocytes, 6875 per cubic millimetre Capillary: hæmoglobin, 93 per cent.; erythrocytes, 8,500,000 per cubic millimetre; and leucocytes, 8500 per cubic millimetre Vein: hæmoglobin, 115 per cent.; erythrocytes, 10,000,000; and leucocytes, 7400 per cubic millimetre.

In such a case as this it is extremely interesting to notice the general but not uniform increase, both in the number of erythrocytes and in the amount of hæmoglobin. It must be obvious that such an increase cannot be due to a simple blocking or backward pressure, as there would then be a very much greater difference between the numbers in the arteries and in the veins than at present exists. The difference, such as it is, may be accounted for by the transudation of fluid from the blood-vessels into the lymph vessels, which ought undoubtedly to exercise some influence in increasing the density of the blood returning in the venous system. The conclusion seems unavoidable that in such an instance as this there is an attempt on the part of nature to compensate for deficient aeration by an increase in the oxygen-carrying tissues. A consideration of the condition of the blood in pernicious anæmia strengthens me in this idea. Agreeing in the main with the theory of Hunter[10] as to the pathology of this disease my opinion coincides with the views of Laache[11] that in the increased amount of hæmoglobin in the individual erythrocytes nature is attempting to adapt herself to changed conditions and to compensate for the destruction of the blood corpuscles. These views have received the enthusiastic support of Hamilton and other pathologists. In a recent letter from Professor Hamilton[12] he writes as follows: "The efforts made at compensation in pernicious anæmia evidently point to a very delicate mechanism for keeping up the number of oxygen bearers."

The modifications in the amount of hæmoglobin and in the number of corpuscles at high altitudes are undoubtedly compensatory. It has been shown by many observers and more particularly by Bard and Curtillet[13] Viault,[14] Grawitz,[15]

Berlin, 1890, Band ii., S 144; cf. Gibson and Gillespie, Edinburgh Medical Journal, 1893, vol xxxviii, p 429.

[4] Deutsches Archiv fur Klinische Medicin, Leipzig, 1880, Band xxv., S. 567; and 1880, Band xxvii. S 193.

[5] Pernicious Anæmia, London, 1901, p. 123.

[6] Ueber Blutkörperchenzählung bei gesunden und kranken Menschen, 1881, S. 29.

[7] THE LANCET, vol. i., 1895, p. 24.

[8] Diseases of the Heart and Aorta, Edinburgh and London, 1898, p. 211.

[9] Proceedings of the Royal Society of Edinburgh, 1903, vol. xxiv., p. 393.

[10] Op. cit., p. 185.

[11] Die Anämie, Christiania 1883 S. 224.

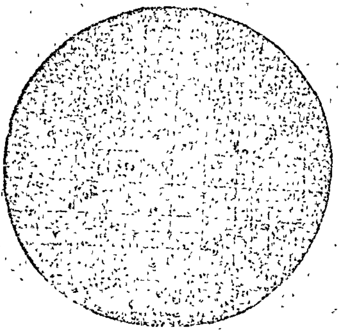
[12] Letter dated April 1st 1903

[13] Revue de Médecine, Paris, 1889, p. 993.

[14] Comptes Rendus de l'Académie des Sciences, Paris, 1890, tome cxi., p. 917.

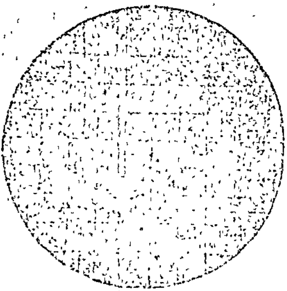
[15] Deutsches Archiv für Klinische Medicin, Leipzig, 1895, Band liv., S. 588.

FIG. 9.



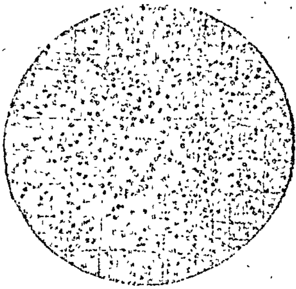
Blood count in a case of pernicious anæmia.

FIG. 10.



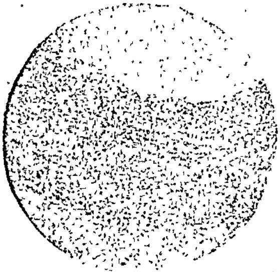
Blood count from a healthy man.

FIG. 11.



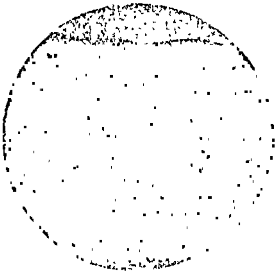
Blood count from a case of cyanosis.

FIG. 12.



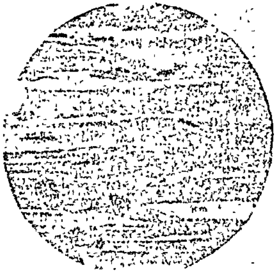
Great hypertrophy of the tunica media, with almost no change in the intima.

FIG. 13.



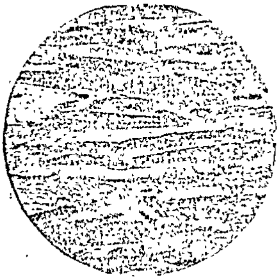
Great hypertrophy of the tunica media, with some thickening of the intima.

FIG. 14.



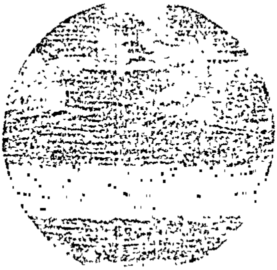
From a heart weighing 23 ounces.

FIG. 15.



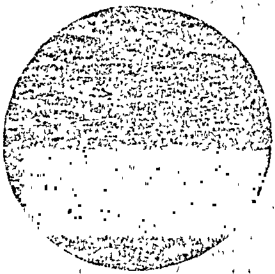
From a heart weighing 23 ounces.

FIG. 16.



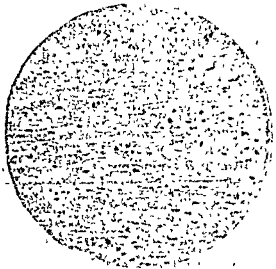
From a heart weighing 17 ounces.

FIG. 17.



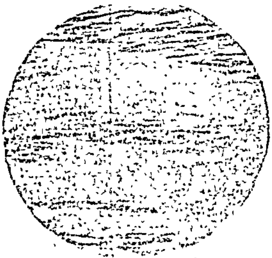
Right ventricle from a case of congenital heart disease.

FIG. 18.



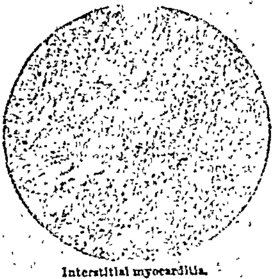
Left ventricle from a case of congenital heart disease.

FIG. 19.



Interstitial myocarditis.

FIG. 20.



Interstitial myocarditis.

Zuntz,[16] Vaquez,[17] and Mercier[18] that there is a distinct ratio between the number of the corpuscles and the height above the sea level at which the individual resides. The following table, given by Marie,[19] may be taken as a brief summary of the facts:—

—	Metres above sea.	Number of erythrocytes.
Christiania	0	4,970,000
Göttingen	148	5,225,000
Tubingen	314	5,322,000
Zurich	412	5,752,000
Görbersdorf	461	5,800,000
Reiboldsgrun	700	5,970,000
Arosa	1800	7,000,000
Cordilleras	4382	8,000,000

It has been generally considered that, with diminished atmospheric pressure, the interchange between the oxygen of the air and the blood corpuscles would be diminished and that in consequence the latter would adapt themselves to circumstances and increase in number by way of compensation. Quite recently, however, we have seen an instance of what Huxley[20] calls "the great tragedy of science—the slaying of a beautiful hypothesis by an ugly fact." In a paper lately published by Weinzirl[21] he has called in question these generally accepted statements and has asserted that the increase in the erythrocytes due to altitude is only temporary. Weinzirl has carried out some observations upon blood counts of rabbits at two different altitudes, one of 5000 and the other of 7000 feet above sea level, the general result of which is to show that while the rabbits after being kept in a warm atmosphere for some time underwent an increase in the red corpuscles on being transferred to a colder atmosphere at the same level, they lost a certain proportion of the erythrocytes on being moved up to the higher level. Such were the general results in six different animals, in only one of which was there an increase in the erythrocytes at a higher altitude. These results are at variance with all previous observations and they must be carefully repeated. That cold is an important factor in accounting for the blood changes at high altitudes cannot be doubted, and the comparative table of blood counts in summer and winter seasons which accompanies Weinzirl's paper strongly supports his contention as regards the influence of temperature.

Another set of phenomena, quite recently disclosed by the investigations of Vaquez,[22] Cabot,[23] McKeen,[24] Saundby and Russell,[25] and Osler,[26] must give us pause in our consideration of polycythæmia. These different observers have brought before us a series of cases of cyanosis which they assert to be of unknown origin. In every case the spleen was enlarged and in every case but that of Vaquez there was albuminuria. In most of the cases it is specifically stated that there was no cardiac affection, but in the case described by Saundby and Russell there was found to be a hypertrophy of the left ventricle on post-mortem examination, while in the case under the care of Dr. Stockton of Buffalo, which is given by Osler, it is mentioned that the full report of the post-mortem examination is not yet available, but that Dr. Lyon states the heart to have been about normal. The first thing which strikes the candid reader about these cases is that they were all of middle age, the youngest being 35 years and the oldest 53 years. All the rest were between 40 and 50 years of age. In the next place, every patient had albuminuria, with one possible exception, and a considerable proportion of the patients had noteworthy changes in blood pressure. It is not to be overlooked that we have no record of any microscopic examination of the heart muscle such as would be required before we can accept the statement that the hearts in these patients were normal. Careful consideration of the records of these cases has led me to the conclusion that it is highly probable they were instances of myocardial weakness. Many patients with symptoms closely resembling those described have been under my care, but in every one of them the conclusion was forced upon me that the cyanosis, enlarged spleen, and other appearances were secondary to the myocardial weakness, and in some of them the diagnosis was verified after death. Until further light has been thrown on the complex of symptoms described by the observers just mentioned we must suspend our judgment, but it seems to me that the blood changes are probably compensatory, the result of cardiac debility. This belief, indeed, appears to be somewhat similar to that held by Cabot[27] who writes as follows: "I do not believe that we are here dealing with a genuine plethora but with a venous congestion, the cause of which, however, remains a mystery."

Let us now turn, in the next place, to some illustrations of our theme as manifested by the vessels. It appears to be the general belief that the changes in the arteries are very largely to be summed up in a change of structure commonly known as sclerosis. That this is not the whole truth has, however, been often suspected and even Thoma, who may be regarded as the high priest of the cult, admits that there are other changes than a mere increase of fibrous tissue. He states, for example[28]: "Bei Zunahme der Wandspannung der Arterien nimmt, wie bereits früher berührt wurde und wie ich an einem anderen Orte genauer nachwies, die Tunica media an Dicke zu." All the vessels throughout the body are, in virtue of their contractile structure, endowed with the faculty of adapting themselves to their contents. Such changes are not merely to be observed in the arteries but also in the veins. In Raynaud's disease certain very interesting phenomena of this kind are to be observed. Barlow[29] has mentioned a moniliform or beaded appearance in the superficial veins in this disease and in one most interesting example, a young man who was in my own wards during the present year, the whole of the superficial veins of the body stood out like so many lengths of whipcord during the phase of spasm. That this takes place in the arteries is frankly admitted by everyone, and Russell[30] has called attention to the condition of exaggerated contraction, for which he has adopted the term "hypertonus." Of the existence of such frequent and prolonged increase of arterial spasm there can be no possible doubt. It may be produced by many different conditions, such as nervous influences and toxic states, into which it is impossible for me at present to enter.

The main point for us to consider is whether, in consequence of the altered lumen brought about by the hypertonic condition, there is any alteration in structure—such is the question which we must answer. Now, Savill some years ago brought before the British Medical Association some most interesting observations[31] upon this subject. He described the great increase in the thickness of the tunica media for which he introduced the term "arterial hypermyotrophy." His investigations have, since the appearance of that earlier paper, been much extended and have thrown much light on a difficult and obscure subject.[32] He is undoubtedly justified in regarding such facts as affording a beautiful illustration of adaptation and compensation. Russell is certainly right in his statement that a condition of excessive contraction may occur in arteries which are perfectly healthy, as well as in those which are apparently in a state of sclerosis. Admitting that *this does* take place, his further contention must be allowed that the idea of muscular degeneration and consequent inability on the part of the vessels to contract in adequate response to nerve or blood influences must be materially modified. The effect of such repeated and persistent contraction of the blood-vessels ought certainly to be an increase in the muscular coat of the arteries and this is what *does* occur. In the illustrations now brought before you this hypertrophy may be seen. Fig. 12 shows great increase in the tunica media, with little change in the intima; Fig. 13 has more thickening of the latter. In asserting that such conditions of hypertrophy of the tunica media do take place, it is far from my intention to hold that it is the only vascular change. A truly sclerotic condition is extremely common, and this, too, in several different varieties. Such a change in the blood-vessels is undoubtedly produced by an increased growth of fibrous tissue. As stated by Thoma,[33] the alterations are as follows: diminution of elasticity, dilatation of vessel, and retardation of current, which last is the cause of a new formation of fibrous tissue in the intima.

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[16] Berliner Klinische Wochenschrift, 1895, S. 748.

[17] Comptes Rendus de la Société de Biologie, Paris, 1895, Série 10, tome ii., p. 142.

[18] Archives de Physiologie, Paris, 1894, Série 5, tome vi., p. 769.

[19] Leçons de Clinique Médicale, Paris, 1896, p. 237.

[20] Presidential address at the Liverpool meeting of the British Association. Report of the Fiftieth Meeting of the British Association, London, 1871, p. 79.

[21] American Journal of the Medical Sciences, Philadelphia and New York, 1903, vol. cxxvi., p. 299.

[22] Bulletin Médical, Paris, 1892, tome vi., p. 849.

[23] Boston Medical and Surgical Journal, 1899, vol. cxli., p. 574, and 1900, vol. cxlii., p. 275.

[24] *Ibid., 1901, vol. cxliv., p. 610.*

[25] THE LANCET, vol. i., 1902, p. 515.

[26] American Journal of the Medical Sciences, Philadelphia and New York, 1903, vol. cxxvi., p. 187.

[27] Boston Medical and Surgical Journal, 1900, vol. cxliii., p. 176.

[28] Lehrbuch der Pathologischen Anatomie, I. Theil, S. 543. Stuttgart, 1894.

[29] A System of Medicine, London, 1899, vol. vi., p. 582.

[30] Transactions of the *Medico-Chirurgical Society* of Edinburgh, 1901, vol. xx., New Series, p. 132.

[31] Brit. Med. Jour., 1891, vol. ii., p. 324.

[32] Ibid., 1897, vol. i., p. 188.

An observer to whom we owe much as regards the investigation of these questions is Mott,[34] according to whom the vascular condition consists in "a local or general thickening of the arterial wall with loss of elasticity, occasioned mainly by fibrous overgrowth of the tunica intima, secondary and proportional to weakening of the muscular and elastic elements of the media." Into the points of relationship between a previous weakening of certain of the arterial coats and this compensatory overgrowth—the fibrous tissue—it is foreign to my purpose to enter, but it may not be out of place for me to express the view that while a hypertrophied condition of the media and a sclerotic condition of the intima may, and probably do, arise from intoxication, the nutrition in the former case must be better than in the latter and thus allow of the possibility of hypertrophy. Facts are not sufficient as yet to allow of any generalisations, but from many observations it seems to me that the vasa vasorum are in some way intimately connected with these two different processes. To this relationship between nutrition and fibrosis we must briefly advert when considering some of the changes in the heart now about to be referred to.

The last concrete examples to be brought before you belong to cardiac pathology. As is well known, when from any cause—and the factors universally recognised are legion—there is any necessity for increased exertion along with an adequate supply of nourishment the heart undergoes hypertrophy. The converse condition, atrophy, arises when from failing energy there is less demand for exertion and from waning nutrition there is less food for the heart. There are many questions still unanswered in regard to hypertrophy. The teaching of Cohnheim[35] that there is a primary or idiopathic hypertrophy is still sometimes echoed in the present time, but it is probable that there is no serious supporter of his views. In all the examples cited by Cohnheim there is, on careful investigation, found to be an increased amount of work, whether arising, as in exophthalmic goitre, from greater frequency of the heart, or, as in the instance of the beer-heart of South Germany, from an excessive quantity of fluid that has to be driven through the tissues as well as an augmented supply of food for the heart. It is certainly not going too far to assert that primary or idiopathic hypertrophy of the heart in the strict sense of the phrase is absolutely mythical.

Another point arising is connected with the mode of increase in the affected organ. Does it increase by an enlargement of the individual fibres or by an augmentation in the number of these fibres? Here the answer must be in the affirmative to both questions. And yet the absolute proof is somewhat difficult. The size of the different fibres in a healthy heart is exceedingly variable. This may be seen by comparison of Figs. 14 and 15, which are taken from two parts of the left ventricle of the same heart situated very near to one another. That there is an increase in the size of the individual fibres in hypertrophy is beyond doubt, and in Fig. 16 a fibre of great size is shown. On the other hand, a numerical increase, such as must occur in the gravid uterus, for instance, would certainly be expected in the hypertrophied heart, and the careful measurements of Zielonke[36] have rendered this to my mind absolutely unassailable. Yet it must be obvious that without the exercise of a patience as remarkable as rare this belief could hardly be affirmed to have reached the stage of proof. Is it possible that the different appearances observed vary according to the age of the individual in whom they occur and that we have here an illustration of the principle so clearly stated by Moore[37] in his recent paper on unsymmetrical kidney? According to his view the younger the individual the greater the increase in the number of the fibres—the older the individual the greater the increase in their size. Such is the meaning of his enunciation of "a general biological principle—viz., that a persistent demand for increased functional activity made on any structure during its developmental stage is met by a corresponding increase in the production of the functioning elements, whilst such happening after the cessation of development is met by an increase in the size of the individual elements." That this is not to be asserted without some reservation is, however, clear from a comparison of sections of the two ventricles in the case of congenital heart disease formerly referred to. In the right ventricle (Fig. 17) the fibres are decidedly larger than in the left (Fig. 18). Yet this hypertrophy must have commenced at an early period; we may indeed say that the embryonic condition persisted, with an equal growth of either ventricle.

It is very commonly held that when hypertrophy has reached a certain degree degeneration must infallibly follow. In this statement there is a certain amount of truth—just enough of truth to render it of dangerous plausibility. It has been asserted that when a certain stage is reached the hypertrophied heart is liable to fatty degeneration. This contention, which obtained the sanction of Cohnheim,[38] is, as Hamilton[39] observes, "a vast exaggeration." Abundant observation has convinced me that the assertion deserves to be condemned to the realms of oblivion. The hypertrophied heart is, as a rule, of healthy appearance, and on microscopical examination it does not show a trace of fatty degeneration. Only in hearts which have outlived their possibilities of nutrition and are undergoing dissolution is any fatty change to be seen.

While such are the facts as regards a supposed fatty metamorphosis in the hypertrophied heart it is far otherwise as regards the association of the process of hypertrophy with chronic interstitial myocarditis, or fibroid degeneration, as it is often called, of which several different stages were described and illustrated by me in a lecture delivered before the Medical Graduates' College.[40] When the supply of blood generally or locally is insufficient a chronic fibroid invasion takes place and this may or may not be an attendant on hypertrophy. This has been repeatedly shown by many authors and the fact, now thoroughly recognised, has again been lately investigated by Cowan.[41] The common appearances may be observed in Fig. 19, where a very great amount of increase of fibrous tissue is to be seen. But the new growth of fibrous tissue may greatly exceed such more ordinary appearances and in Fig. 20 an excessive degree of interstitial myocarditis may be observed. May we not in this see an example of the "law of parsimony"? While illustrating the "law of economy" in his eloquent address in the Physiological Section of the British Medical Association at the Oxford meeting of 1868 Rolleston[42] remarked: "Where by the employment, as in what is called 'histological substitution,' of a lowly organised or vitalised tissue, such as elastic tissue, she can spare herself the manufacture of such expensive structures as muscle, there nature adopts a line of practice which we call a law of parsimony." This principle, although primarily intended in elucidation of biological processes, is obviously of application to the r [illegible]

It seems to me that [illegible] be drawn between the arterial [illegible] ave been brought before you to-night. In one set of circumstances, with overwork but adequate nutrition, the arterial, like the cardiac, muscle fibres become enormously increased. In a different combination of conditions, in which increased work, along with indifferent nutrition or toxic states, takes place, the arterial walls, like the cardiac, undergo sclerosis. That this is preceded by dilatation of the lumen of the artery, as Thoma[43] believes, is as destitute of proof as would be the analogous statement that a dilatation of the heart is an invariable precursor of fibroid degeneration. Conversely, when less work is demanded of the heart it undergoes simple atrophy. Many such instances cross the path of the pathological observer in different states of lessened demand. When along with such diminution of work there is at the same time interference with nutrition the condition of pigmentary atrophy is the common result. To this latter it would be foreign to this paper to allude, but of the former illustrations are to be found in Figs. 19 and 20.

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[37] *Journal of Anatomy and Physiology*, London, 1903, vol. xxxviii, p. 99.

[38] Op cit., p. 47.

A few general remarks upon hypertrophy may fitly conclude these observations. It is held by some observers, and particularly by Thoma,[44] that a hypertrophy may take place which is not functional in its origin. He cites in proof of this the fact that if one ovary or testis is removed in extreme youth the other undergoes an increase in size. Inasmuch as certain of the great functions of these organs have not begun to manifest themselves at such an early period he seems to regard them as inactive. Surely this is an extremely narrow view of the matter. From what we know of the glands it seems clear that each one of them produces an internal secretion which is of specific importance as regards the well-being of the whole body. It is more than probable, nay, it is absolutely certain, that the ovary or testis is intimately concerned with the development of the sexual characteristics from the earliest period. Until comparatively recent times it used to be held that the sexual manifestations were not revealed until the time of puberty. This belief has now been shown to be erroneous, and the fact—now abundantly proved by the observations of Fehling,[45] Thomson,[46] and Merkel[47]—is that from an early period of fœtal life even the form of the pelvis is diverse in the two sexes.

Another important consideration strengthens me in the conception that hypertrophy of a non-functional origin is erroneous. Bradford[48] in his interesting Goulstonian lectures raised some important questions as to whether the remarkable results following excision of a portion of the kidney are due to compensatory growth or to other causes, and Murray[49] in the following series of lectures under the same foundation tried to answer the question with special reference to the thyroid gland. As his remarks are as succinct as they are lucid the best method of reference to them will be to quote them entirely. "If the compensating growth of the one lobe takes place simply in response to a call for more secretion to make good the loss of the other lobe no hypertrophy should take place if this want is fully supplied from other sources. This point may be tested by removing one lobe of the gland and giving thyroid secretion continuously for some time and then removing the other lobe for examination. If no changes indicating compensatory hypertrophy are found in the second lobe it goes far to show that the hypertrophy develops simply as the result of an insufficient amount of thyroid secretion being present in the blood. To test this point the right lobe and parathyroid were removed from a male bonnet monkey. For the next three weeks 12 minims of thyroid extract were given in the course of each week. Then as the animal became rather emaciated the quantity was reduced to half this amount for the next five weeks. Slight myxœdematous symptoms then appeared but they diminished on increasing the dose to 24 minims in the week; this was continued for two and a half weeks, when the animal died from dysentery. The left lobe was found to be pale in colour and only weighed 0·03 gramme. No parathyroid was found attached to it. Microscopical sections showed no signs of compensating hypertrophy even in its earliest stages. In another experiment the right lobe and parathyroid were removed and one minim per diem of thyroid extract was given by the mouth for 16 weeks and then the left lobe and parathyroid were removed. The right lobe with the parathyroid which was removed first weighed 0·3 gramme and was found to be abnormal in structure to start with, as it resembled a hypertrophied gland in structure. Similar appearances were found by Halsted in the thyroid gland of several healthy dogs. The occasional occurrence of such changes in apparently healthy animals is at present difficult to explain. The interesting point in this case is that after the prolonged interval of 16 weeks during which the extract was given the left lobe was found to be paler in colour and it weighed 0 25 gramme The microscopical structure was normal and showed no signs of commencing compensatory hypertrophy. If this lobe was originally in the same condition as the right the treatment seems to have restored it to a normal condition and if not it at any rate showed no signs of compensating hypertrophy. As far as they go these experiments tend to show that if the proper amount of secretion is supplied after the removal of one lobe compensating changes do not take place in the other."

One more instance before concluding. In the philosophic remarks by John Thomson on defective coördination in utero as a probable factor in the production of congenital malformations he gives his opinion[50] against the occurrence of primary hypertrophy. In this thoughtful paper he states: "There are only two conditions that I can think of under which muscular hypertrophy seems to occur without antecedent overwork—namely, (*a*) the extraordinary hypertrophy of the uterus which takes place during pregnancy; and (*b*) congenital giantism, local or general, such as occurs in congenital hemi-hypertrophy." These, however, are really not examples of hypertrophy without antecedent overwork: the walls of the uterus, assuredly, during pregnancy undergo an enormous amount of overwork in resisting the stress of embryonic development, and any hypertrophy of muscles in conditions of giantism is in direct ratio to the increase of the structures upon which the muscles exert their force. The consideration of all these interesting results confirms me in the belief that a supposed non-functional hypertrophy is a baseless figment of the imagination.

It is a pleasant duty to express my thanks to Dr. T. Shennan of Edinburgh and Dr. J. M. Cowan of Glasgow f[illegible] ready help in the preparation of this paper and also acknowledge my obligations to Mr. Richard Muir of [illegible] University pathological department and to Mr. W[illegible] Watson of the laboratory of the Royal College of [illegible] for constant assistance in photographing the [illegible] employed in the work.

Edinburgh.

A CASE OF INVASION OF THE CAUDA EQUINA BY TUMOUR WITH DEMARCATION OF ALL THE SENSORY ROOT AREAS OF THE LOWER LIMBS.

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THE case here recorded is one which as resident assistant physician at St. Thomas's Hospital I had under daily observation for a period of nearly eight months and I was able to make a complete series of charts illustrating the progressive affection of sensation in the lower limbs. By the courtesy of Dr. J. F. Payne and Dr. H. W. G. Mackenzie, in whose ward the patient lay, I am able to publish the full details of the case which appears to be of exceptional interest in that it affords distinct evidence of the arrangement of all the sensory root areas which belong to the cauda equina.

The patient, a lad, aged 13 years, was admitted to St. Thomas's Hospital on Dec. 29th, 1899 He was transferred to an infirmary on August 18th, 1900. where he died a few weeks later. No necropsy was obtained. The boy was one of a family of 13 children, all of whom were living His parents were healthy and there was neither history nor evidence of syphilis in the family. The paternal grandfather was alcoholic and died from phthisis. The patient had chicken pox and measles before he was three years old but since then had always been a healthy, active, and intelligent boy. He was in the sixth standard at school. His mother dated the commencement of his illness from a visit to the swimming baths two months before his admission to hospital. At all events shortly after this he began to complain of inability to sit or to lie comfortably on account of pain in the lower part of his back. This pain gradually increased and for ten days before admission he had been screaming night and day and absolutely unable to sleep. The intensity

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[44] Op. cit., S. 544

[45] Archiv fur Gynäkologie, Berlin, 1876 Band x S 1.

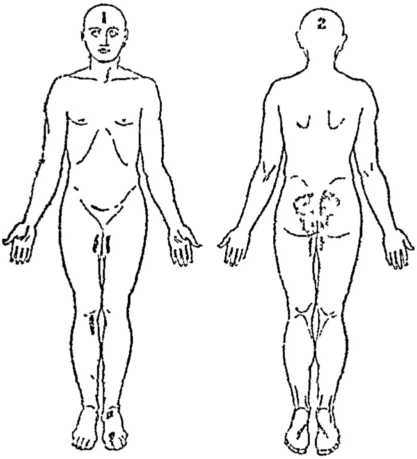
[46] Journal of Anatomy and Physiology, London 1899, vol xxxiii, p. 359.

[47] Anatomische Hefte, Wiesbaden, 1903, Band xx. S. 126.

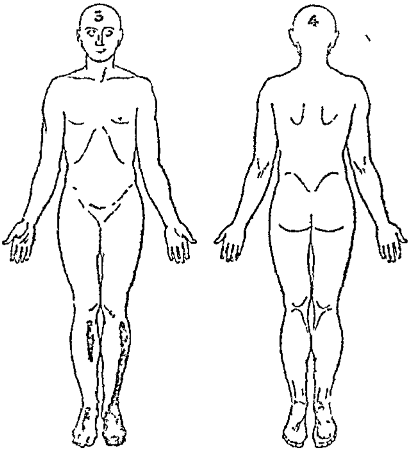
[48] THE LANCET vol i., 1898, pp. 765 843, and 916.

[49] THE LANCET, vol. i., 1899, pp. 667 and 747.

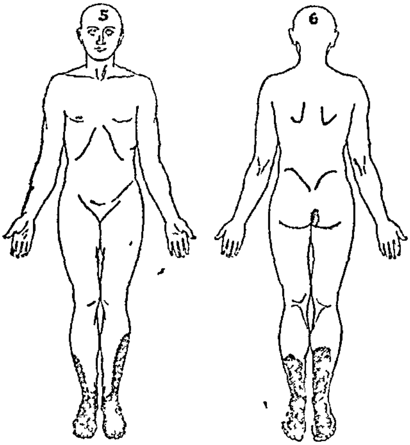
[50] Brit. Med. Jour., 1902, vol. ii., p. 678.



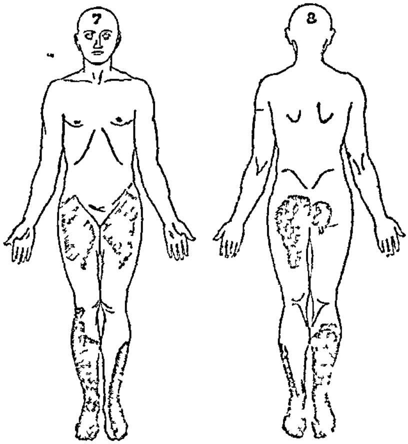
Jan. 2nd. The cremasteric reflexes were present 1 and 2 L * The knee-jerks were absent, 3 and 4 L The plantar reflexes were absent but common sensation was present in the soles, 1 and 2 S The muscles were wasting, especially the calves, 1 S.



Jan 9th The exact extent of the motor paralysis was doubtful There were no knee jerks and no plantar reflexes The right cremasteric reflex was absent 1 and 2 L Retention of the urine persisted for several days 11 and 12 D and 1 L *(detrusor vesicæ)* There was *occasional incontinence of* the fæces ? 4 S The sensory areas on the left side were 5 L and part of 1 S



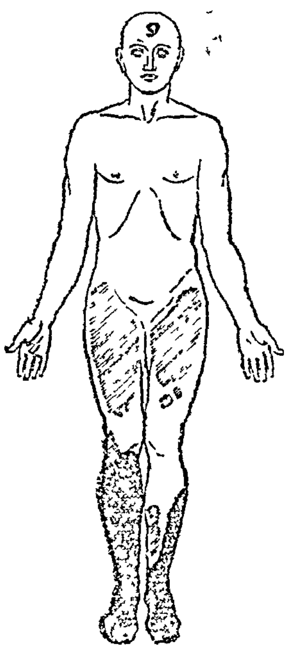
Jan 12th Motor paralysis, by faradism, from 3 L to 2 S *on the right and from 5 L to 2 S on the left The reflexes* were as before The sensory areas 5 L with indications of 1 S and 5 S



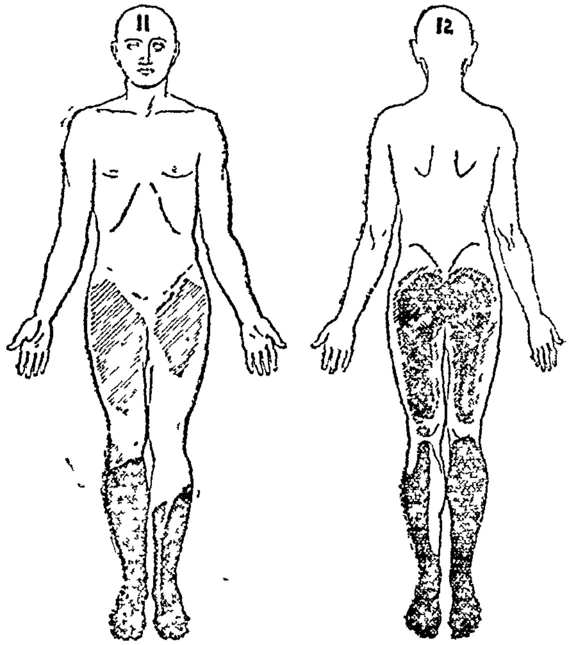
Jan 13th Motion and reflexes were as before. Sensory areas right side 4 and 5 L 1 and 5 S with indications of others, left side, 5 L, with 1, 5, and 4 S

* L = lumbar; D = dorsal, S = sacral

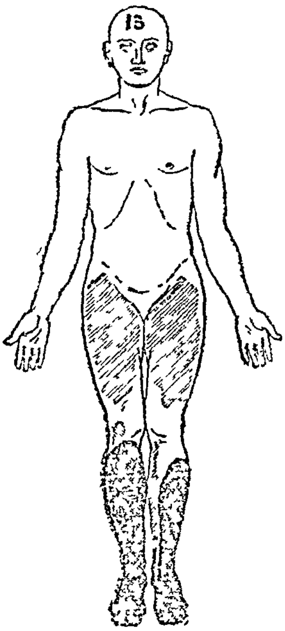
▨ Hyperæsthesia. ▩ Partial anæsthesia. ▦ Complete anæsthesia of his suffering at times appeared to render him delirious and he had threatened to destroy himself. The pain was soon referred to the thighs and the knee joints and had led to his being treated by liniments for rheumatism—in fact, the skin of his lower extremities was excoriated by the frictions and stimulations to which it had been subjected.



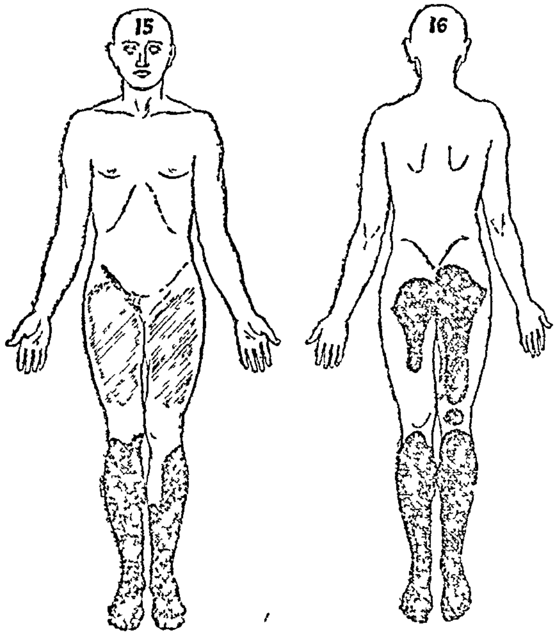
Jan. 15th. Motion and reflexes were as before. Sensation 5, 4, and part of 3 L., 1, 5, and 4 S.



Jan. 16th. Motor paralysis was present from 3 L. to 2 S on the right and from 5 L. to 2 S. on the left The reflexes were as before Sensation 5, 4 (incomplete on left), and lower part 3 L. (latter on right), 1, 5, 4, 3, and possibly part of 2 S.



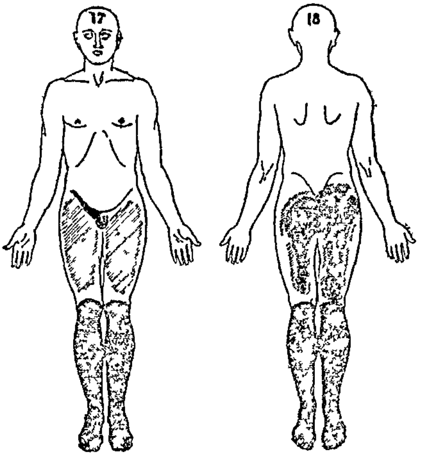
Jan. 17th. Similar to preceding.



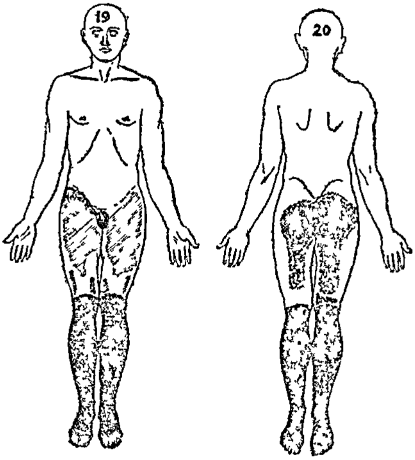
Jan 18th. There was complete loss of power in the legs from 3 L to 2 S The reflexes were as before Visceral paralysis was as before (detrusor vesicæ and possibly sphincter ani) Sensation 4 and 5 L on both sides 3 L on the right and commencing on the left. 2 and 1 L hyperæsthetic D 12 (L. 1 ?) on right only. 5 4, 3, part of 2 and all 1 S on the right, 5, 4, part of 3, and all 1 S. on left.

On admission the lad was tall for his age and of slender build. He was only comfortable when lying curled up with his back rounded and his chin flexed on his sternum. He complained that any extension of his head or any attempt to sit up without support caused acute pain in his legs. Notwithstanding this there was no tenderness, irregularity, or fixation of the spinal column, the whole being flexible and all the normal curves being easily reproduced. The lungs, the heart, the abdominal viscera, and the urine were quite normal. The ocular fundi were quite healthy and there was no evidence of any affection of the cranial nerves. The only abnormal signs discoverable were in connexion with the lower extremities. Although the legs did not appear to be wasted out of proportion to the rest of the body there was evident weakness both above and below the knees The boy complained of intense pain which he referred to the front and the sides of the thighs and to the knee joints The latter were not swollen. Tactile, thermal, and painful stimuli were everywhere discriminated and accurately localised. There was full control over the sphincters Of the reflexes the abdominal and cremasteric were present on both sides; the plantar were of normal flexor type, but the knee jerks were quite absent The temperature was 101° F on admission but fell in 24 hours to normal

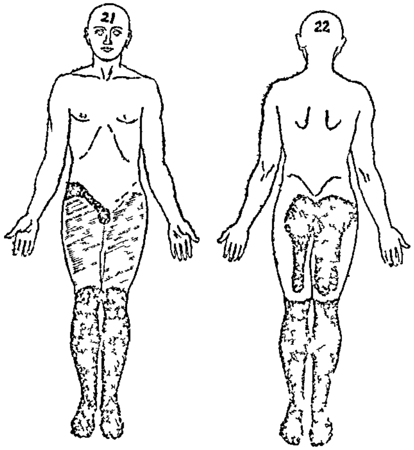
The patient continued to complain of the excruciating pain in his legs He could not sleep and was constantly shrieking and making attempts to get out of bed in the hope of finding some posture in which the pain might be less Areas of altered sensation soon became evident in the lower extremities and his subjective sensations of pain were found to be liable to paroxysmal exacerbations which were easily induced by movements of the thighs and legs or by pressure on the same parts



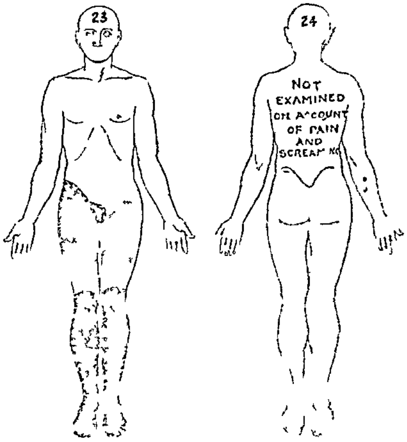
Jan 22nd Motion and reflexes were as before Sensation 3 L further defined also 12 D on the right (or is it 1 L ?) The scrotum was partly anæsthetic 3 S On the left 2 S probably almost complete



Jan 23rd The penis and the scrotum were quite anæsthetic, 3 S Motion and reflexes were as before



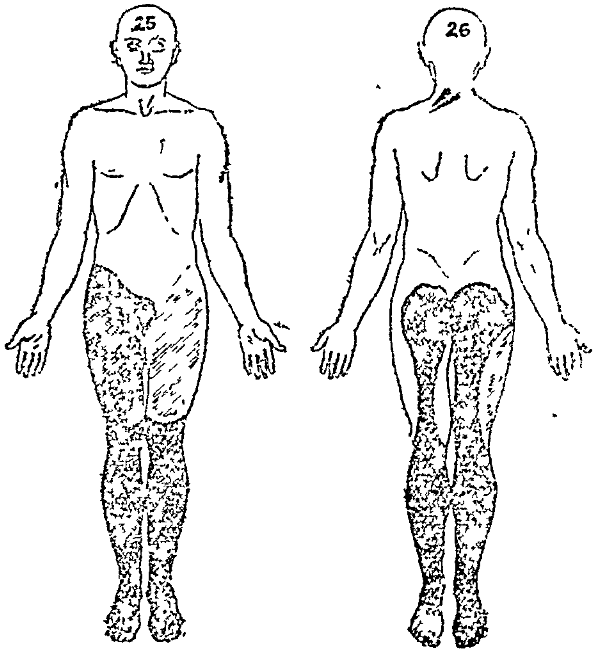
Jan 24th The additional field on the inner side of the back of the right thigh probably belongs to 2 L possibly to 3 S



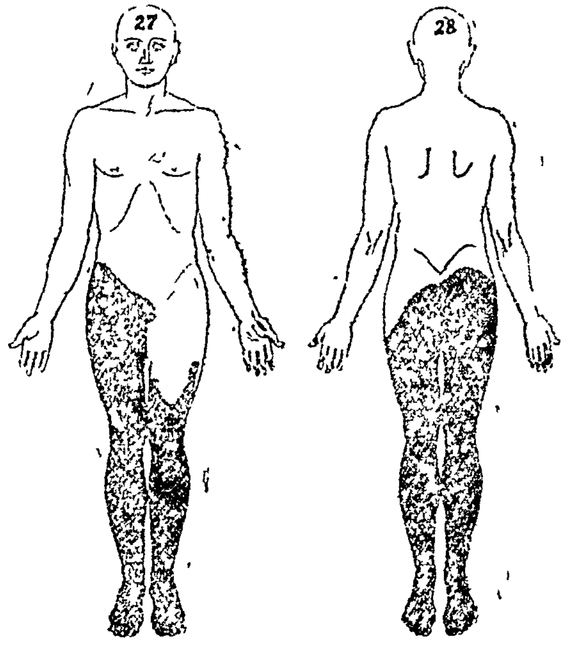
Jan 27th Motor paralysis by faradism was complete on both sides from 5 L to 2 S The left cremasteric reflex was not tested so it is doubtful if it were still present Sensory areas L 2 and 3 appearing on the right side

The distribution and the progressive march of the sensory abnormalities can better be appreciated by reference to the diagrams than by any verbal description In mapping out the areas there depicted the same procedure was always adopted, the tactile sense being tested with the feathered end of a quill pen and the painful sense with its point. At first attempts were made to test the temperature sense but these were soon abandoned, as the areas did not differ appreciably from those obtained by the other method If sensation were tested during the paroxysmal exacerbations of pain to which the boy was so subject anæsthesia was frequently found in areas where, in the intervals of freedom from pain, cutaneous sensation was present These areas of transitory anæsthesia were ignored in the diagrams, they corresponded fairly accurately with the areas marked as hyperæsthetic Zones of hyperæsthesia definitely surrounded the advancing sacral areas on the back of the thighs from the beginning

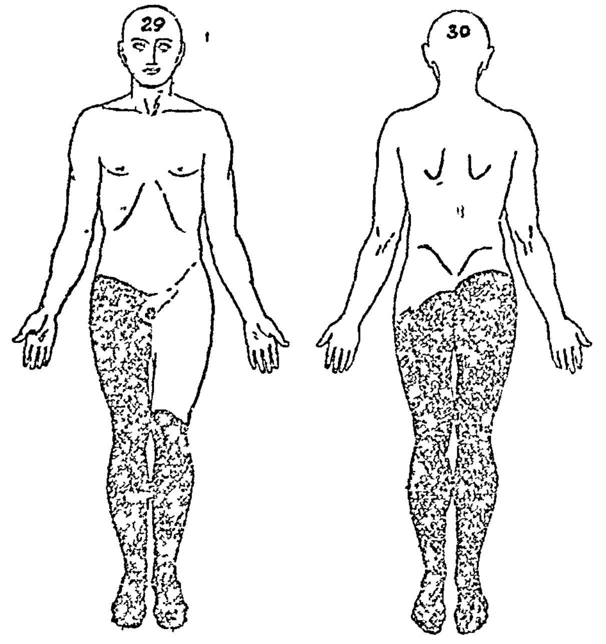
When the legs were first uncovered for testing sensation was always found to be more acute than after a few minutes' exposure to the cold. On some occasions after being tested intense itching was experienced in parts which had not yet become anæsthetic and on Jan. 23rd small red spots, not unlike the rose spots of typhoid fever, appeared at the points where the skin of the lowest part of the abdomen had been pricked. These spots persisted for several hours.



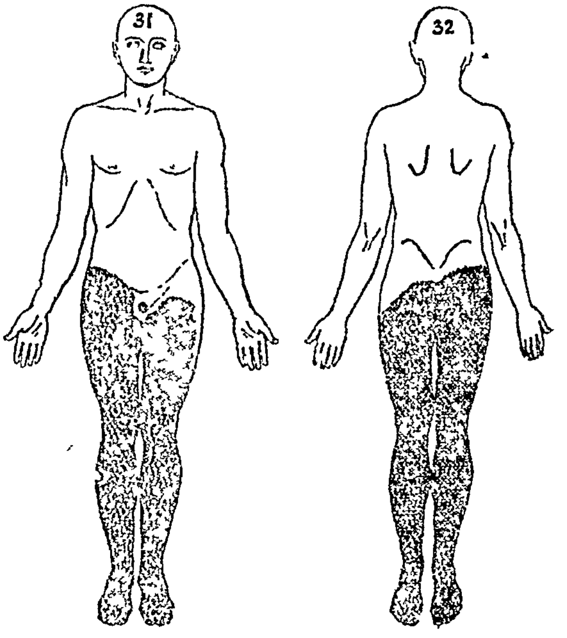
Jan 29th. The left cremasteric reflex had at last disappeared, 1 and 2 L. Posteriorly on the left side 4 and 5 L. and all sacral fields are shown. No note was taken as to the condition of the perineum.



Jan. 31st. The condition was as before the operation. The lower part of 2 L. now appearing on the left.

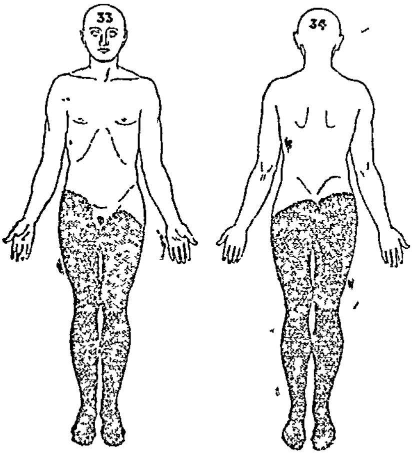


Feb. 15th (15 days after exploration). There was an improvement in the lumbar areas 2 and 3 on the left. Note sensation at the root of the scrotum.

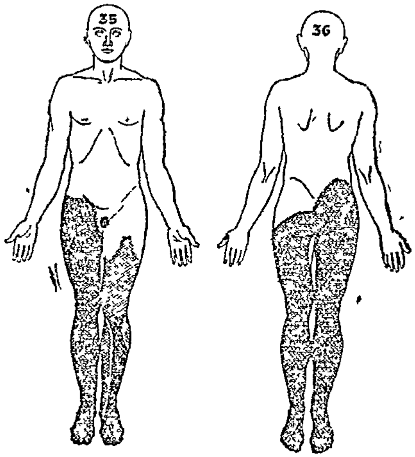


March 27th. There was some improvement in the muscles supplied by 3 and 4 L, but sensation in these areas was diminishing.

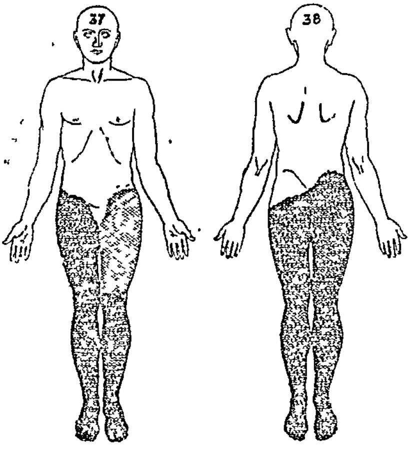
Five days after admission (Jan. 2nd) the plantar reflexes had both disappeared although the soles of the feet still retained common sensation. The loss of power in the lower limbs was progressive and the muscles were wasting rapidly. There was a loss of five eighths of an inch in the circumferential measurements of the calves between Jan. 1st and 3rd. Occasional incontinence of fæces became apparent on Jan. 5th. Later the bowels became constipated but control was still deficient and the loss became very evident after the use of aperients. By the 8th the right cremasteric reflex had disappeared and it was found that for two or three days past the boy had been assisting the emptying of his bladder by making firm pressure on his hypogastrium, a trick which he had discovered by accident. On the next day, after the completion of voluntary micturition, a catheter was passed and a further considerable quantity of urine was obtained. After this the atheter was used regularly. The feet had now become œdematous. Electrical examination of the muscles of the lower limbs proved impossible before the 11th on account of hyperæsthesia and screaming. It was not considered so urgent as to call for the administration of an anæsthetic. On the date mentioned the faradic excitability was greatly diminished in all the muscles of the right leg, including the ilio-psoas. In the left leg the muscles below the knee and the hamstrings showed a similar reaction, but the muscles on the front of this thigh reacted normally. Loss of power in the legs was quite complete by the 18th, there being now no power to effect any movement at all. The œdema of the feet had quite subsided but a small sacral bedsore had developed and others were threatening on both heels, but the skin never actually broke in the latter situations. Later a small bedsore developed over the right great trochanter but this ultimately healed also. Pain still occurred in paroxysms in the thighs and the knees, being particularly severe in the outer side of the left thigh and in the knee of that side The penis and the scrotum were quite anæsthetic by the 23rd. The electrical reactions were again tested on the 26th, when in addition to the muscles before mentioned, those on the front of the left thigh were found to have lost their faradic contractility entirely with the solitary exception of the tensor fasciæ femoris. *This muscle still reacted* slightly on strong stimulation. About this date cystitis occurred and bladder washing was commenced; this was continued up *to the time of transfer to the infirmary.* The left cremasteric reflex, which had up to now persisted, finally disappeared between the 23rd and the 29th. The tenderness of the fronts of the thighs had increased to such an extent that the boy could not bear the weight of his dinner plate on them



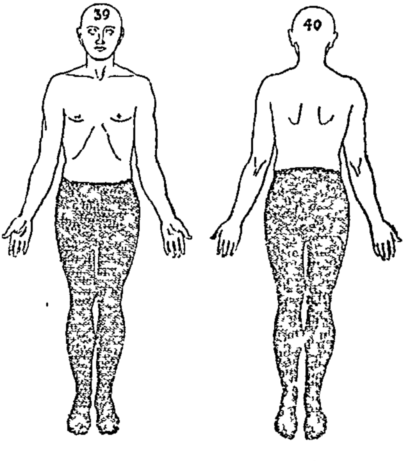
April 3rd. There was slight improvement in sensation below the left knee



April 24th. Indication of the division between the two areas on the front of the left thigh, 1 and 2 L



June 27th. Partial anæsthesia of 1 and 2 L. on the left.



A[illegible] ; in front up
[illegible] superior iliac
[illegible] Up to 11 D

On Jan. 31st laminectomy was performed by the late Mr. W. Anderson. The first, second, and third lumbar spines and arches were removed. The spinal theca was red, pulpy, and thickened. On opening the theca the cord itself presented a normal appearance The presence of a vascular new growth, involving the meninges, was suspected and a portion of the theca was removed for microscopical examination. What was thought to be a small bead of pus was observed outside the dura mater but this was doubtful and no further collection of pus could be found. Mr. S. G. Shattock reported that the microscopical examination of the piece of membrane removed revealed inflammatory changes with small areas of calcification. The operation was well borne and there was little or no shock. The wound soon soundly healed. Three weeks after the operation there was still no further control over the bladder and rectum. There was possibly a little power of voluntary movement of the muscles on the front of the left thigh, but with this exception the legs remained in a *condition of flaccid paralysis with loss of all reflexes. The* boy had been free from his pains for some days. Early in April some accession of power over the bladder and rectum was noted ; it was no longer necessary to draw off the urine by the catheter but the washing out of the bladder was continued.

A rounded prominence was beginning to appear in the neighbourhood of the laminectomy scar. This steadily developed into a firm rounded swelling extending rather more to the right than to the left of the mid-line and finally reaching from the spine of the tenth dorsal vertebra downwards for six and a half inches and measuring eight and a half inches across. This tumour was firm but not bony ; dilated veins coursed over its surface. Towards the end of June the boy began to complain of pain in his abdomen and examination revealed a smooth, fixed swelling of rounded outline deep in the right loin. This swelling was possibly the kidney pushed forwards by something behind it. The abdominal reflex was present on both sides and was very brisk. At this stage the control over the bladder and rectum was still partial and imperfect. Cystitis had almost disappeared. On August 17th, the day before transfer to the infirmary, anæsthesia to tactile, painful, and thermal stimuli was complete over both lower extremities. Its upper limit reached to the level of a line joining the two anterior superior iliac spines in front and extended a short distance above the iliac crests posteriorly.

During the whole period of observation the temperature varied but little from normal. *Usually the evening temperature* was slightly raised and on several occasions, at long intervals, it reached 101°.

As regards treatment, the pain was treated by opium, chloral, and hyoscyamus ; the cystitis by lavage, urotropine, and benzoates. Iodide of potassium was for a time exhibited in doses of ten grains thrice daily but with no appreciable effect.

Remarks.—This case illustrates in a remarkable way the subdivision of the surface of the lower limb into its nerve root territories. The areas on the whole correspond to those indicated in the classical contributions which Head has made to this subject. They differ in some respects from the areas according to Thorburn and the resemblance to the diagrams published by Kocher and by Starr is not very close, save in the mutual relation of the sacral areas of the back of the thigh as shown by the last-mentioned observer.

Unfortunately no precise indication for numbering these areas according to their roots of supply is afforded by this case. The boy's death did not come to my knowledge in time to render possible a post-mortem examination, and if one had been made it is extremely doubtful if much information in the direction desired could have been obtained, since the disease had progressed considerably and the legs had long been completely paralysed and anæsthetic. The sensory and the motor defects due to a progressive lesion of any one root do not necessarily appear simultaneously. The loss of sensation is often delayed until after the appearance of paralysis or loss of reflex. Consequently, by the time the anæsthesia does appear a fresh root or even more than one fresh root may be showing motor symptoms and so at first sight may appear to be associated with the cutaneous area properly belonging to the root first involved. It seems that something of this sort happened in the case now reported for the loss of reflex or the paralytic phenomena commonly attributed to the lesion of a particular root almost invariably antedated the loss of sensation in the skin area usually allotted to the root in question. Consequently neither the distribution of the motor paralysis nor the loss of a particular reflex can be taken as exact guides to the roots which supply the co-existing anæsthetic areas. I have therefore contented myself with indicating the condition of reflexes and as far as possible the extent of the paralysis at the times the different areas appeared and have not attempted to correlate the two. The lesion was presumably a new growth either of the meninges or of the bone and caused definite root symptoms as opposed to cord symptoms. The first definite objective symptom was absence of both knee-jerks (3 and 4 L.). This was followed by loss of the plantar reflexes (1 and 2 S.), marked wasting of the calf muscles (1 S.) and then anæsthesia of the dorsum of the foot and the outer side of the leg below the knee (5 L.). We may therefore conclude that the lesion commenced in the neighbourhood of the lowest lumbar and uppermost sacral roots and spread thence so as to involve roots in both the upward and downward *directions. Tracing the lumbar roots the indication seems* pretty clear that the fifth lumbar area on the outer side of the leg occupies its lower two-thirds only (Figs. 3, 5, 7, and 9). The indication that the fourth lumbar area on the inner side ceases at a corresponding level is not quite so clear; it possibly extends higher and may even come over to the outside above the fifth area (Figs. 7, 8, 15, and 35). Another area, traced from below, evidently stops a short distance above the patella, partly encircling the limb below this level. We have here the upper limit of the third lumbar area in all probability (Figs. 17 to 23 and 29 left side). The upper limit of the second lumbar area is indicated as crossing the thigh near the junction of the upper and middle thirds (Figs. 23 and 35). The first lumbar area is interposed between the preceding and the area in the groin (Figs. 17, 19, 21, and 23). The first lumbar area extends well round the outer face of the thigh. The area in the groin above mentioned will then be that of the twelfth dorsal root. It extends round the outer side of the limb to join the sacral areas on the buttock (Figs. 18, 20, and 22).

Turning now to the sacral root areas represented on the posterior aspect of the limb, and counting from above downwards, it appears that the areas represented in Figs. 6 and 8 on the right side are probably areas of the fifth sacral nerve, whilst on the left in Figs. 8, 10, and 16 the fourth sacral area is also represented. The third sacral area is added to these in Figs. 12, 14, and 18, whilst Fig. 17 shows the first involvement of the penis and the scrotum. The *anæsthesia of the penis and the* scrotum, although apparently developed in association with the anæsthetic area in the right groin, no doubt is properly associated with the long strip reaching nearly to the back of the knee-joint on the back of the thigh and attributed to the third sacral root. Figs. 29, 31, 33, and 35 show an area limited to the junction of the scrotum with the groin distinct from the penis and possibly belonging to one of the lower dorsal roots.

The area supplied by the second sacral root is obscure. It probably corresponds to an area at the back of the knee-joint, seen commencing in Figs. 12, 14, 16, and 20, and perhaps running up the thigh on each side of the third sacral root area (hyperæsthetic zone in Fig. 18). The first sacral area is taken as represented on the sole of the foot and partly on the back of the leg between the fourth and fifth lumbar root areas. All the sacral areas are evidently anæsthetic in Fig. 26.

Devonshire-place, W.

ON ALBUMINURIA AS AN ACCOMPANIMENT OF DIABETES MELLITUS.

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CONSULTING PHYSICIAN TO GUY'S HOSPITAL.

(Continued from p. 1498.)

I HAVE spoken of albumin making its appearance in the urine at various periods in the course of diabetes and it may now be stated that having appeared whilst unsatisfactory conditions existed it may disappear on the establishment of a more favourable state as regards the diabetes. The following cases may be cited in support of this assertion.

CASE 9.—The patient was a man who was 51 years of age at the time of coming under observation on Sept. 30th, 1895. He had then been suffering from diabetes for about one and a half years and was eating brown bread and drinking milk and soda-water a little freely. His symptoms were severe and his urine contained 55 5 per 1000 of sugar with a small quantity of albumin. Under treatment the sugar fell and by Oct 25th there was none. An irregular condition with respect to the albumin was noticed till Nov. 13th, which is the date on which its presence is recorded for the last time. The patient, it may be stated, afterwards continued under observation till November, 1900

CASE 10 —The patient was a man who was aged 44 years when first seen on Dec 16th, 1902 Diabetes had then existed about two years The patient was in a bad state and passed urine containing 45 per 1000 of sugar A trace of albumin was also present and hyaline casts were found in the centrifuged specimen A month later ' but with regard to albumin and before In June and in Augu coverable and at the latter date was no definite indication of albumin

CASE 11 —This patient was a woman My knowledge of her extends from February, 1902 She was then 70 years of age and had been the subject of diabetes for from 15 to 16 years Latterly she had grown worse and was taking a wrong kind of bread, supplied by a local baker Her urine contained 66 per 1000 of sugar A small amount of albumin and granular casts were also present The sugar soon fell to an insignificant quantity but the albumin and casts lingered The entry for August 8th, 1902 records the presence of a trace of sugar, a trace of albumin and granular casts The dates upon which the urine was afterwards examined were Oct. 16th, 1902, and April 18th, May 15th, and Oct 5th, 1903 Upon each occasion no albumin was found. No mention is made of microscopic examination till Oct 5th the date of the last interview, and then no casts were discoverable

CASE 12 —This patient, a woman, I first saw on Nov 8th, 1902 She was then 48 years of age and had been the subject of diabetes for two years Her urine contained 50 per 1000 of sugar and a trace of albumin On Nov 12th the sugar had fallen to 18 per 1000, with the albumin continuing as before The dates of the subsequent interviews were Nov 20th and 27th and Dec 4th and 16th, 1902, and Jan 4th, 1903 On all these dates there was an absence of albumin The sugar gradually fell and at the last interview it is recorded that there was none It will be observed that in this case it was only just at the beginning that albumin was present With the improvement that occurred in the diabetic condition it immediately disappeared Such a speedy disappearance is however exceptional and as has been shown by the cases previously cited the albumin may persist long after the sugar has been controlled

I take it that the cause of the consecutive albuminuria occurring in connexion with diabetes is a toxic influence of the sugar abnormally present in the blood upon the kidney The sugar that is eliminated has previously existed in the circulatory system and ought not to have been there With assimilation properly carried out sugar fails to show itself in the circulation as a result of the ingestion of carbohydrate food With faulty carbohydrate assimilative power, however, existing the carbohydrate of the food passes straight into the circulation in the form of free sugar and in this form subsequently runs off in an unutilised state with the urine There is thus an abnormal presence of sugar standing in proportion to the amount of carbohydrate food ingested in the contents of the circulation and everything conspires to show that it is to this sugar that all the ill effects of diabetes certainly of the "alimentary" form of it are attributable If the sugar be got rid of from the urine which may be read as meaning that the abnormality as regards sugar in the blood has disappeared, the whole of the symptoms of the disease vanish and remain absent as long as the state of the urine shows that things are being kept right Virtually such a person is in the position of a healthy one with the exception that carbohydrate food will cause sugar to escape with the urine in a manner that does not occur in the healthy subject Viewed in this way the sugar traversing the system in diabetes becomes an all important factor in connexion with the phenomena of the disease Not merely is it to be looked at as a food material which has failed in the proper place to have been put into a fit position to pass to utilisation, and is thence in transit through the system for escape but as an agent possessing the power of exerting toxic effects within the body It may be fittingly likened to alcohol in the position it holds in this respect and a close resemblance is traceable in many of the toxic effects produced Similarly its effects may be compared to those of a mineral poison, such as lead, arsenic, &c, obtaining slow entry into the system and producing a structural damage of the tissues Sugar, like these, tells hurtfully on the tissues, and if we give note to the nervous system closely concordant effects, in agreement also with those produced by alcohol, are found to be observable Peripheral neuritis may be pointed to as a very common issue from the play of all these toxic agencies

To the toxicity, then, of the sugar wrongly pervading the system I would ascribe the abnormality noticeable in connexion with the renal function That the kidney should yield to the toxic influence in operation more readily in some cases than it does in others is not surprising, looking at what occurs in connexion with other toxic agents—particularly may be mentioned alcohol Thus the variability which has been shown to present itself by the illustrative cases cited does not stand out of keeping with what is elsewhere noticeable

Stress upon the kidney through the extra amount of work thrown upon it is often spoken of as the source of the albuminuria that may be encountered In diabetes insipidus, however, it is not found that albuminuria becomes developed as it does in connexion with diabetes mellitus although an enormous elimination of urine may be occurring for a great length of time which we can hardly do otherwise than look upon as indicative of the existence of extensive strain upon the organ

In cases where diabetes mellitus has existed for some time the effect upon the kidney may be such as to lead to a certain amount of textural change being perceptible in the form of more or less interstitial overgrowth and abnormality implicating the epithelial cells of the secreting tubules Frerichs and Ehrlich comment upon the occurrence of a glycogenic degeneration of the epithelium of Henle's tubules as a result of diabetes and say that the cells may become packed with an accumulation of glycogen

As yet I have not referred to the special condition met with just prior to, and at the time of, the occurrence of diabetic coma It has been for some time known that with the advent of diabetic coma albuminuria attended with a profuse discharge of casts, becomes encountered as a concomitant phenomenon The discharge of casts may be such as to give rise to a light fluffy deposit forming a conspicuous settlement of sufficient amount to prevent escape from attention The deposit is virtually a sediment of casts possessing a somewhat characteristic microscopic appearance They are mostly short and wide and often at their ends look as if broken off They have a very distinct contour and are usually of a more or less highly granular structure The deposit is of diagnostic value foreshadowing as it does the supervention of the coma Whether casts have been discoverable or not previously, it is the sudden onset of an escape of casts sufficient to form a visible deposit which is predictive of danger Albumin does not stand in proportion to the casts Ordinarily the amount present is not large

With the condition of urine described the kidney gives strongly marked evidence of being the seat of morbid change. The acetone series of products which constitute the source of the coma evidently exert a pernicious action upon the organ It cannot be doubted that through the toxic influence of sugar alone the kidney may become damaged As has been shown, the presence of albumin in the urine may ordinarily be expected sooner or later to occur even in ' alimentary diabetes if the disease has not been kept satisfactorily under control When the disease has passed into the ' composite' type and the acetone series of products are associated with the sugar, experience shows that the proneness to the appearance of albumin is greatly increased a circumstance which is not to be wondered at seeing that there is now an additional toxic influence at work At the time of the onset of coma the accumulation of oxybutyric and diacetic acids is such as to suffice to throw the whole mechanism of the body out of working order and in these circumstances it is not surprising that the kidney should give evidence of being affected to the extent that is noticeable

The appearances that are found in the kidney where death has taken place from diabetic coma correspond with those that are produced by a renal irritant poison They are thus described in an article by Dr R Maguire on Albuminuria in Diabetes[1] He says "On microscopic examination I found the glomeruli intact but the epithelium of the convoluted tubes was greatly swollen in some parts hyaline, in others appearing as a confused granular mass which was very difficult to stain and which showed very few nuclei In many parts, too, the epithelium was detached from the walls of the tube " Ebstein had previously spoken of necrosis of the epithelium lining the convoluted tubes and the loops of Henle as an effect of the condition existing in diabetic coma.

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[1] Brit Med Jour, vol ii., 1886

From the facts before us it is evident that the kidney becomes distinctly and profoundly damaged as a concomitant phenomenon of the condition existing in connexion with diabetic coma. The following cases give a representation of the clinical features belonging to the urine associated with the supervention of the coma.

CASE 13.—The patient was a woman, aged 67 years, when she became the subject of diabetes in 1898. Her brother had suffered from the same complaint. The disease set in with a sharp onset but was afterwards easily kept under control by diet. It remained until just prior to death of the "alimentary" type, but a satisfactory condition was not always found to be maintained by the patient. In November, 1901, she took cold which developed into a rather severe bronchial attack with myalgia affecting the neck and shoulders and giving rise to great distress. Her urine, which had previously been free from albumin, now contained a trace, and afterwards diacetic acid and acetone were present with a considerable amount of sugar. On Dec. 9th the urine contained 45 per 1000 of sugar by the indication of copper reduction and 38 per 1000 by the polarimeter, which showed the presence of a certain amount of oxybutyric acid. The appropriate tests also showed that diacetic acid and acetone were present. A slight amount of albumin was discoverable and microscopic examination of the centrifuged urine revealed an immense number of granular casts with sharp boundaries and for the most part short and wide. Knowledge of the above-mentioned particulars had been obtained before visiting the patient and I was expecting to find that signs would be presented of the onset of coma. These in reality were very distinctly noticeable. The patient was in a moderately advanced stage of diabetic coma and died on the following day.

CASE 14—The patient was a man, aged 52 years. I first saw him on Oct. 3rd, 1900. His diabetes had only recently set in and his symptoms were of a severe character. He was taking brown bread and a large quantity of milk. His urine contained 71 per 1000 of sugar. In 12 days' time the urine became free from sugar and remained so till the following December, notwithstanding even that three ounces of ordinary wheaten bread per diem were being taken for a short time previously. An unfavourable change now pretty suddenly set in. The sugar returned and for a time went on increasing and the ferric chloride test showed that diacetic acid had become present which at no time before had been the case. Subsequently some reduction of the sugar occurred and a certain amount of general improvement was noticeable, but this was the most that was observed. On Feb. 28th, 1901, the sugar stood at 27 per 1000; there was, as throughout previously, no albumin and only a slight ferric chloride reaction was obtained. The patient was next seen on March 21st. He had now lost ground considerably in every way. His weight had dropped to the extent of from six to seven pounds. His urine contained 43 per 1000 of sugar and gave a traceable indication of the presence of albumin, together with a strong ferric chloride reaction. Microscopic examination revealed numerous fragments of granular and hyaline casts. No signs of diabetic coma had as yet appeared but coma speedily afterwards set in and death took place on the 23rd.

CASE 15.—This patient, a man, I saw in consultation with Dr. J. Lees of Brixton on June 12th, 1902. He was 52 years of age and had been the subject of diabetes for seven years. He had about a fortnight previously taken a chill upon which pleurisy followed. Whilst progressing satisfactorily he imprudently got up and exposed himself to conditions which threw him into a serious state. It was at this time that I saw him. There were signs of incipient coma attended with the "air hunger" character of breathing belonging to it. The urine passed just previously to my visit contained 41 per 1000 of sugar and reacted, but not very strongly, with the tests for diacetic acid and acetone. There was a slight amount of albumin and a quantity of fluffy deposit settled out which consisted almost entirely of granular and hyaline casts. The shedding of these casts by the kidney was a strikingly prominent feature and yet associated with it there was only a comparatively insignificant discharge of albumin. The patient died on the day after I saw him.

It remains for me to speak of the bearings of alcohol on the albuminuria occurring as an accompaniment of diabetes. I have already stated that the sugar traversing the system to become eliminated with the urine may be regarded, by virtue of its toxicity, as the source of the various ill effects encountered in the uncomplicated or "alimentary" form of diabetes. I have also alluded to the correspondence in certain respects noticeable in the character of the deleterious results produced within the organism by sugar and alcohol, and it is left for me to say that, under the excessive use of alcohol, the damage supervening in diabetes becomes greatly intensified. Experience shows that where the toxic influence of alcohol has play in association with diabetes the condition is much aggravated and if the situation lasts on the progress of the disease is greatly accelerated. Renal damage has been shown frequently to attend diabetes, but it may with much greater certainty be expected to occur if there should happen to be the contributing influence of alcohol likewise in operation Peripheral neuritis arises both from the effects of alcohol and of diabetes, and from the evidence before us its development in the diabetic is without doubt much promoted by the intemperate use of alcohol. In connexion with the point under consideration I will cite the following cases.

CASE 16.—The patient was a man, aged 48 years when first seen on Jan. 21st, 1890. He had then been suffering from diabetes for nine months and was upon nearly the fully restricted diet for the complaint. His urine contained 9 per 1000 of sugar and was free from albumin. On the fully restricted diet his urine became free from sugar in two days and during the succeeding months remained in this state. In June evidence was afforded of returning assimilative power by loss of weight and a general feeling of weakness and depression.

I may perhaps be permitted to comment on this point and to state that I am often coming across in these circumstances the complaint by the patient of feeling low, weak, and dejected, with an empty sinking sensation in the epigastrium—a sensation as of something wanting, which I take to arise from the existence of a real want within the system. As long as carbohydrate cannot be assimilated it cannot be wanted by the system, and whilst the exclusion of carbohydrate food is needed to keep the urine free from sugar—in other words, whilst carbohydrate food would fail to be assimilated—no loss of weight occurs and no epigastric uneasiness attributable to the existence of a want in the system is experienced from the restricted diet. As soon, however, as carbohydrate assimilative power becomes restored carbohydrate food is proportionately wanted and if the system is not supplied with it the expression of want is manifested in the same manner as it is in the healthy person when food is cut off that is wanted. The precise mechanism in operation by which these phenomena are brought about cannot, it must be admitted, be explained, but everyone is acquainted with the results that are produced by cutting off food that the system can utilise and is therefore in need of. The fact of the phenomena referred to becoming observable in the diabetic shows a returning approach to the natural state and properly to meet the requirements an advance in the supply of carbohydrate should be made *pari passu* with the advancing return of assimilative power the signs of which are given by the information derivable from the weight and bodily feelings conjoined with a knowledge of the state of the urine.

Upon the strength of the signs of returning assimilative power that were presented, a little carbohydrate food in the form of ordinary bread was allowed. Two ounces per diem was the quantity in this case commenced with and upon it the urine remained in a sugar-free state and continued so after successive steps of increase till six ounces were reached, at which point the patient was advised to stop. This was in April, 1891, and throughout the remainder of the year and also when the urine was examined in 1892 there was an absence of sugar. In the early part of 1893, presumably as a result of dietetic deviation, some sugar reappeared and the allowance of bread had to be diminished and the ground to be retraced. A certain amount of irregularity, however, in the state of the urine was subsequently met with attributable to transgressions from time to time in diet. In this way matters proceeded till December, 1900, when a short time was passed in London in the society of friends whom he joined in a spell of alcoholic dissipation. His urine now contained a large amount of sugar conjoined with diacetic acid, which had not been noticed before, and a slight amount of albumin. In the following May the sugar was much reduced and there was a freedom from diacetic acid and albumin. The patient had learnt to realise the necessity of giving scrupulous attention to his mode of life and I note that at the last interview in June, 1903, his urine only contained traces of sugar and that it was otherwise in a perfectly normal state.

CASE 17.—In the case of this patient, a man, there was a strong family history of diabetes on the mother's side. I first saw him in April, 1893. He was then 39 years of age. Sugar had just been recognised in his urine through examination for life assurance. The case to begin with was a mild one and the sugar at first found disappeared under the strict diet accompanied with an allowance of six ounces of ordinary bread per diem. Till the early part of 1896 the urine kept free from sugar. In July, 1894, owing to a fall in weight having set in, the bread was raised to eight ounces which immediately stopped the fall and led to an increase. A further advance in the bread, with the allowance of some potato, was found to be tolerated and it was while the case was progressing in this way that the return of sugar occurred. There was evidence at this period that too much whisky was being taken and as time passed on the habit grew. Matters thus proceeded, the urine sometimes containing a certain amount of sugar and at other times none, till 1900, when a sort of climax was reached. The patient was now giving himself up to whisky-drinking to a highly pernicious extent. Previously his urine had been free from albumin and diacetic acid. In October, 1900 it contained both, with 34 per 1000 of sugar. In March, 1901, granular casts were in addition recognised, and in the following October, on account of the marked urobilin colour presented, attention was given to the liver and it was found that it extended down to from three to four inches below the margin line of the ribs. I should like for a moment to direct attention to the assistance derivable from the observance of this urobilin colour in connexion with alcoholism and the liver, and to say that it has often led me to examine the liver and, meeting with enlargement, to draw out information which probably would have escaped being spontaneously supplied by the patient. Through the summer of 1901 a little abatement of the unsatisfactory condition that had been noticed occurred, but at the interview on Oct. 9th a worse state than ever was met with The sugar stood higher and diacetic acid, albumin, and granular and hyaline casts were all found to have returned. The patient, who was feeling bodily ill and rapidly losing weight, now took alarm and resolved to pull in energetically both with respect to food and drink. The result was that on Nov. 27th the urine contained only a slight amount of sugar and gave only a traceable indication of the presence of diacetic acid and albumin. In the entry for Jan. 10th, 1902, an absence of sugar, diacetic acid, albumin, and casts is recorded. The general health had much improved and the liver was no longer to be felt. On March 7th and on May 9th the presence in the urine of a slight amount of sugar constituted the only abnormality observed, but the end of the turn of improvement that had occurred was now reached. The power to refrain from whisky no longer held out and at the next interview on July 4th sugar, diacetic acid, albumin, and casts had all returned in notable amount and the liver was again to be felt extending below the ribs. On afterwards substituting bitter ale for whisky a renewed start in the direction of improvement occurred. Diacetic acid was for a time lost and upon one occasion, May 7th, 1903, no albumin was to be found. Finally, however, the whisky temptation was too strong to be overcome. The patient averred that he had tried to do the right thing but could not tell me that he had succeeded. His associates drew him from his resolve to keep to the right course. His last visit to me was at the beginning of August and at the end of the month a letter reached me from his son stating that death had taken place somewhat suddenly and that the cause given in the certificate was acute bronchitis and heart failure.

The above cases suffice to illustrate the effect of the excessive use of alcohol in connexion with diabetes. There are no grounds for concluding that the temperate use of alcohol is prejudicial; indeed, my experience leads me to say that I consider it beneficial, but taken in excess there can be no doubt that it seriously aggravates the wrong state accompanying diabetes and in the damage inflicted throughout the system the kidney gives evidence of markedly participating.

It will be seen from what has been stated that the albuminuria which occurs in connexion with diabetes may exist for a long time without leading to the production of any symptomatic indication of its presence. The condition, therefore, is not to be looked upon as affording ground for apprehension in the same manner as when occurring under other circumstances. It is evident that albumin and casts have a very different signification according to the condition with which they are associated. Experience shows that even apart from diabetes they are with striking frequency come across in persons of advanced age presenting nothing to suggest the existence of renal mischief. They may, it is true, be the inceptive of something that may assume later on a more developed form, but, on the other hand, time may pass away and signs fail to appear of any further development. Caution under the circumstances is needed in framing an opinion regarding the future, and it is only by looking at the case in the broadest manner possible that a trustworthy conclusion can be arrived at.

Grosvenor-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF PERFORATED GASTRIC ULCER FOLLOWED BY HEPATIC ABSCESS.

BY H. HOLLIS, M.D. CANTAB.

THE patient, a female, aged 24 years, who had no important history of stomach trouble, fell from her bicycle and hurt her "chest" at the end of August, 1903. On Sept. 6th she ate her usual breakfast but only had French beans for dinner. In the evening, after walking for a quarter of a mile, she was sick and brought up a small quantity of blood, and was sick again after some brandy had been given. She was seen half an hour after the first attack of vomiting and being in a state of collapse was removed to the cottage hospital. There was great pain in the epigastrium, the face was blanched, breathing was thoracic, the pulse was 120, the abdomen was retracted and hard, and liver dulness was absent. Mr. W. E. Audland and Dr. W. I. Watson agreed with me that the patient probably had a perforation of the stomach. Four hours after the initial attack her abdomen was opened and a hole one-third of an inch in diameter was soon found in the centre of a roughly quadrilateral, greyish, sloughy-looking patch an inch long and three quarters of an inch broad situated on the anterior of the smaller curvature of the stomach. The patch was inverted, the stomach wall was sewn over it, and the abdomen, which contained a quantity of greenish fluid and several partly digested French beans, was thoroughly washed out. After the operation there was no sickness; the temperature was normal thirty hours after and it continued so for nine days. On Sept. 13th the wound was dressed and all the stitches were removed. On the 15th the temperature began to rise and the pulse-rate to quicken without any obvious cause or any discomfort. After a day or two there was thought to be increased dulness above the liver. The temperature now varied from 99° to 105° F. and on five days between Sept. 15th and Oct. 9th she had a rigor. On Sept. 23rd, 27th, and 30th a needle was put in the dull patch with negative result. On Oct 2nd there was some hardness in the abdomen below the ensiform cartilage, so the upper end of the operation incision was re-opened and an abscess in the liver was found, the contents of which were most offensive. A tube was put in and the wound was well packed with gauze. For two or three days the patient improved, then she gradually became worse and on Oct. 9th she died.

Post mortem the liver was found to be adherent to the upper part of the abdominal wound and to a small patch of the diaphragm. In the left lobe there was an abscess cavity and a small abscess as large as a Barcelona nut was found in the spleen. The wound in the stomach was quite healed and, indeed, was difficult to find. In the right lobe of the liver were two small dark patches at the site of the exploratory punctures. There was no peritonitis and all the other organs were healthy.

It seems difficult to account for the abscess as it does not appear to have been part of a general pyæmic condition and the late onset, nine days after operation, and the absence of peritonitis do not point to any connexion with the ulcer. As the patient had never had any vomiting or hæmatemesis can it be possible that the fall from the bicycle was the cause of both lesions?

Wellingborough.

FEVER, FOLIACEOUS DESQUAMATION, MORBILLIFORM ERUPTION, AND ALBUMINURIA FROM COPAIBA.

BY J. C. MCWALTER, M.A R U.I., M.D. BRUX., D.P H.

WHEN a patient presents himself with a copious rubelloid eruption, a temperature of 102° F., some congestion of the tonsils, and complains of being deadly sick, one naturally suspects scarlet fever. When, further, the patient is uncertain if he has ever had that disease, when he works in a large butter shop and lives in a lodging-house, and when his urine on being examined is found to contain albumin, the practitioner who decides that he is not dealing with a case of febris rubra undertakes a grave responsibility.

In the present instance, however, the whole phenomena were apparently due to the administration of copaiba in a case of acute gonorrhœa. The sufferer was a young man, aged 22 years, who had been taking 20 minim doses of copaiba whilst his affection was in the inflammatory stage. Although the rash which he exhibited was not unlike a copious copaiba eruption, the temperature of 102°, which had only abated to 101° by the next day after he had ceased to take the medicine and remained in bed, the general feeling of malaise, the throat conditions, and the fact that after three days a desquamation so considerable set in that foliaceous flakes of epithelium were shed off and regular casts of his fingers could be removed, led me to fear that I had been mistaken in attributing the eruption to the drug. This seemed to be the more likely as albumin was present in the urine in the earlier stage, though it quickly passed off Finally, I sent the patient to the fever hospital but the staff concurred in the view that the symptoms were due to the copaiba and the patient got all right after four or five days though the desquamation continued somewhat longer. Evidently the disease plus the drug had produced a transient acute nephritis.

It is complacently laid down in text-books that when one has doubts whether a febrile eruption be scarlet fever it is safer to treat it as such. But the problem is nowadays not so simple. If a case is declared to be scarlet fever and a working man is sent to hospital and loses his situation he will have a legal remedy against the practitioner if there be any doubt as to the diagnosis. Should he work in a dairy or a butter shop the proprietors will have something to say if they are wrongly tainted with the suspicion of employing a scarlatinous servant; and, on the other hand, if the man really has an infectious disease in such a situation the danger is appalling.

Dublin.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Procemium.

KING'S COLLEGE HOSPITAL.

A CASE OF PNEUMOTHORAX OCCURRING THREE DAYS AFTER INJURY TO THE CHEST.

(Under the care of Mr. F. F. BURGHARD.)

FOR the notes of the case we are indebted to Mr. Neville Hart, acting house surgeon.

A boy, aged six years, was admitted into King's College Hospital at 11.45 P.M. on August 31st, 1903, having been run over by a hansom cab with three people in it. The wheel, both from the marks on his coat and abrasions on his body, appeared to have passed from about one inch above the right iliac crest to the neighbourhood of the left axilla. His lungs previously to the accident were probably healthy. When seen some ten minutes after the accident he was severely collapsed; he was pale, with blue lips and cold extremities, his temperature being in the rectum 95·7° F. and his pulse 154, small, irregular, and unequal. He was not unconscious but was in a restless and excited condition. His respirations were 40 and accompanied by an expiratory "grunt." His abdomen was full and moved only very slightly on respiration; it was very hard and tense but not particularly tender. The note all over the abdomen was decidedly tympanitic, the liver dulness being normal with the exception of a somewhat square patch below the ribs which was absolutely dull. His flanks were resonant; his spleen was unpalpable and its dulness was normal. On examining the chest the left side was seen to be immobile and flattened and several ribs on that side were broken. The epiphysis of the right clavicle was separated. On palpation the heart's apex beat was found in its normal place and the crepitus of the broken ribs was very marked. The percussion note was normal all over the chest and the cardiac dulness was unaltered. On auscultation a loud rasping sound was heard all over the left base which was probably due to the friction of the lung against a broken rib. In addition to this a loud "thumping" sound was heard even several feet away. With the stethoscope it appeared to be best heard over the epigastrium. Excessive tenderness was present all over the left side and this made examination difficult. There was no sign or history of blood being brought up nor did vomiting ever occur. The patient was at once put to bed in a partially recumbent position with hot-water bottles to his extremities, but he was very restless and there was a tendency to cyanosis. Oxygen was frequently administered and brandy was given diluted with hot water. At 1 30 A.M. his pulse was weaker and fluttering and strychnine was given hypodermically. Soon after this reaction took place and reached its height at 4 A M. The skin got warm, the face flushed, and the eyes brightened. His pulse rose to 184 and at 4 A.M. it was full and regular. His temperature rose steadily, being normal at 2 A.M., 100·2° at 3 A.M., and 100·8° at 4 A M. His general condition was much improved but the dyspnœa was accentuated and he sat straight up; whenever there were signs of cyanosis oxygen was administered. He was still given brandy, though in small quantities and less frequently. He now passed 14 ounces of urine which was quite normal and contained no blood. His respirations reached 48 and increased in rate till 2 P.M. on the next day when they were at 64.

On Sept. 1st at 10 A.M. the dyspnœa was still extreme. The dulness below the liver already referred to was not now found. The signs in the chest were unaltered in front; the back was not examined owing to the patient's critical state. His general condition varied enormously from time to time and his pulse was frequently very weak and irregular. He was ordered spiritus ammoniæ aromaticus and digitalis in a mixture, the benefit of the latter being apparent in the early hours of the next morning when his condition became very critical. Warm brandy and water were administered frequently throughout the day and he had nutrient enemata twice. The child took his milk greedily and without vomiting. On Sept. 2nd at 10 A.M. he was better, though his eyes were sunken and his dyspnœa was marked, but rather less so than on the 1st. There were a few râles at the left apex and weak breath sounds were heard there; at the base the breath sounds if present were still quite obscured by the rasping sounds already described. At the back of the thorax the breath sounds of the left lung extended rather farther down and there was a patch of absolute dulness at the left base. The sounds all over the right lung were louder and somewhat harsher than normal. The administration of oxygen was discontinued and though the patient still took the spiritus ammoniæ aromaticus the brandy was omitted. On Sept 3rd at 10 A.M the temperature was 101°, the pulse was 192, and the respirations were 84 The child, who had been beginning to take a lethargic interest in things in general, was cyanosed and again in great distress; he was irritable and restless and on examination the condition of his chest was found to be very different. The left side though flat was not so flat as before and was absolutely immobile. The heart's apex beat was seen in the sixth intercostal space just beyond the right border of the sternum. Vocal fremitus had gone completely from the left side, except over a small area at the left apex. The percussion note was high-pitched all over the left side and in parts almost dull, except at the apex which had its normal note. *Bruit d'airain* was not obtainable. No breath sounds could be heard over the left lung except at the apex and no vocal resonance could be made out. At 4 P.M., as the heart was still travelling to the right and its left margin was getting further and further from the sternum, it was *decided to aspirate. This was done shortly after, the needle* being inserted just below the angle of the left scapula, and ten ounces of blood were withdrawn, followed by a considerable quantity of "air." At first only two or three drops of blood were obtained through the large-sized needle, the remainder being very gradually removed with a Potain's aspirator. The heart returned very nearly to its normal place. At 7.30 P.M. the heart was found to be in its former *position and the physical signs* were as before aspirating with the exceptions that amphoric breathing was now heard in front and that the bell sound was obtained. The general condition, however, had wonderfully improved and was not at all critical. The pulse, temperature, and respiration came steadily down. His colour also improved and the expiratory "grunt" ceased. He again took an interest in his surroundings and that night, for the first time *since admission, slept comfortably. On Sept. 4th* the improvement was maintained. The left chest now moved slightly and the spaces of its lower part were seen to be sucked in with inspiration. The heart was in the same place. There was a loud flapping sound heard behind, its *maximum intensity being at the level of the angle of the* third left rib. The bowels were opened. On Sept. 5th the temperature touched normal and from this time onward the *patient's condition steadily improved, his heart gradually* returning to its normal position and the ordinary breath sounds reappearing from above downwards. He developed a slight cough on the 7th which soon passed off. On the 9th his condition was so good that an x-ray photograph of his chest was taken by Mr. Reid which showed that the ribs from the second to the seventh were fractured. A pneumothorax was sharply defined, extending from the sixth to the *tenth rib, the lower lobe of the left lung being imperfectly* seen collapsed near the spine. The upper lobe of the lung was apparently normal in appearance. The heart was pushed to the right side, the left border corresponding with the left side of the spinal column. A subsequent photograph taken eight days later showed that the left lower lobe had com*pletely expanded and that the heart had resumed its normal* situation The patient was discharged on Sept. 28th.

Remarks by Mr. BURGHARD.—The case has many points of interest: (1) though the injury to the chest was great and several ribs were broken the injury to the lung was probably small since no blood was at any time brought up or passed by the bowel, whereas these signs are commonly seen after such an accident; (2) the occurrence of pneumothorax some days after the accident, possibly due to the friction of the broken end of the rib; (3) the rapid improvement *after aspiration, the temperature coming steadily* down; and (4) the loud flapping sound heard chiefly behind —this was considered to be due to the lung as it expanded hitting the parietes.

LONDON TEMPERANCE HOSPITAL.

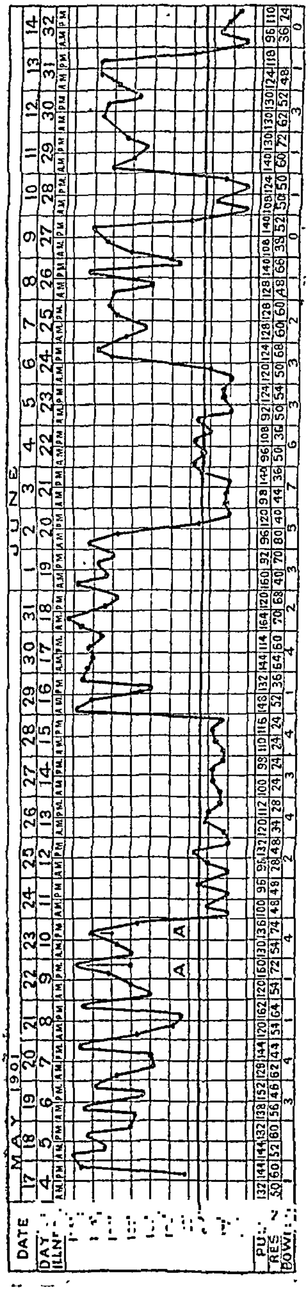
A CASE OF RECURRING BRONCHO-PNEUMONIA.

(Under the care of Dr. W. SOLTAU FENWICK.)

FOR the notes of the case we are indebted to Dr. Herbert Rhodes, senior resident medical officer.

The patient was a boy, aged two years, who was admitted into the London Temperance Hospital. The history showed that he had always been healthy, except for one attack of bronchitis, until May 13th, 1901, four days before admission, when he was sick, feverish, and short of breath. The breathing became easier during the next 12 hours but the child remained hot and restless. There was no family history of constitutional disease.

On admission the child was found to be well-nourished, the mucous membranes were pale, the face was flushed, the respiration was rapid, but there was not much cough. On examination of the chest no signs of disease were detected in the right lung. The left lung showed the usual evidence of pneumonic consolidation and pleurisy at the base of the upper lobe. The temperature fell to normal on the 24th and on the 26th signs of resolving pneumonia were found at the base of the upper lobe of the left lung. There was no general bronchitis. After a period of apyrexia lasting five



A, sponged. The vertical lines in these two columns indicate the reduction of temperature produced thereby.

days the temperature rose again on the 29th to 104 4° F. and there were now signs of consolidation at the apex of the right lung. On June 2nd the temperature again fell to normal and the signs of consolidation disappeared from the right apex, but on the fourth day—namely, on the 6th—the temperature again rose to nearly 104° and signs of pneumonia appeared at the apex of the left lung. Although the temperature fell on the 9th (the twenty-seventh day of the illness) for 24 hours, it rose again on the 11th and fell to normal finally on the 13th after a patch of dulness and bronchial breathing appeared at the left base. The child remained very anæmic and weakly for some time but made a perfectly satisfactory convalescence and was discharged cured on July 12th, 1901.

The interest of this case lies in the apparent infection of new areas of lung tissue on three occasions, there being but a very short period of apyrexia between each recurrence. The treatment consisted chiefly in the exhibition of such expectorants and stimulants as ipecacuanha wine, ammonia, and musk. During part of the patient's sojourn in hospital he took two-drop doses of guaiacol three times a day but this drug did not appear to have much influence on the course of the disease.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

A Contribution to the Pathology of the Thymus Gland.—Enlargement of the Prostate.—Unusual Tumour of the Skull.—Calcifying Chondro-sarcoma of the Breast.—An Unusual Form of Obstruction of the Colon.

A MEETING of this society was held on Dec. 1st, Mr. RICKMAN J. GODLEE, the President, being in the chair.

Mr. L. S. DUDGEON read a short abstract of some work which he had done in the Pathology of the Thymus Gland. He stated that his observations were based on an examination of 105 children of all ages. The thymus gland was also examined in a large number of adults, fœtuses, and various animals. He considered that the normal weight of the thymus in children was from seven to ten grammes. He collected 16 cases of "sudden death" and "children found dead." The average weight in these cases was 25 grammes. Thick yellow fluid was found in the interior of the gland in all large and enlarged gland and consisted almost entirely of lymphocytes and was not pus. It had nothing to do with congenital syphilis such as Dubois stated. In seven cases out of eight examined this fluid was found to be sterile. In one case the pneumococcus was found in pure culture and the fluid was found to be pathogenic to mice. All varieties of eosinophiles were the most characteristic cells in enlarged thymus glands. Hæmorrhages were found in the thymus in 95 per cent. of cases of deaths from broncho-pneumonia or lobar pneumonia. 15 cases of marasmus were examined. The average weight of the gland was two grammes, and atrophy of the lymphoid corpuscles and replacement by endothelial cells and connective tissue were the commonest histological changes. Similar changes, however, were often found in cases of secondary atrophy.—Dr. H. MORLEY FLETCHER asked if the structure of Hassall's corpuscles varied as they occurred in the thymus of the fœtus, in the thymus from cases of marasmus, and in the thymus of the adult.—Dr. C. R. BOX asked if there was any evidence to show that the marasmus occurring in children was due to the atrophy of the thymus. He also asked what was the cause of sudden death in these cases of enlarged thymus.—Dr. F. J. POYNTON said he did not think that the atrophy of the thymus was out of proportion to the general wasting in these cases of marasmus. He suggested that the fluid obtained from the gland should be centrifugalised and the clear fluid used for injection into animals in order to prove if it possessed any active substance.—Dr. J. H. THURSFIELD said that he had reported four cases of sudden death from enlarged thymus occurring in children. He did not think that asphyxia was the cause of death in these cases as the thymus, although large, was soft and pulpy and could hardly cause pressure on the trachea sufficient to cause death. The other view suggested was that death was due to some toxin produced by the thymus and circulating in the blood. He thought, however, that the cause of death was still uncertain.—Mr. W. G. SPENCER said that the swelling in the neck due to enlarged thymus was often easily felt and that the condition during life was very different from that found at post mortem examination. He stated that it had been shown by Wooldridge that the thymus gland possessed fibrinogen and the power of rapidly coagulating blood.—Mr. S. G. SHATTOCK said that he thought little reliance could be placed upon the staining reaction with van Giesson's stain, since the staining varied according to the manner in which it was used and the nature of the mixture.—Mr. DUDGEON, in reply, said that he thought the general marasmus and atrophy of the thymus went hand in hand. He did not believe that sudden death was due to coagulation of blood as he had never found thrombosis on post-mortem examination.

Mr. CUTHBERT S. WALLACE read an anatomical criticism of the procedure known as Total Prostatectomy. He first of all called attention to the following points in the structure of the normal prostate:—1. That there was no division into lobes. 2. That the circumferential portion of the gland was composed of fibro-muscular tissue and devoid of gland tissue. It was suggested that the term cortex, as proposed by Mr. Shattock, should be applied to this part of the organ. 3. That the part of the organ immediately in front of the urethra was also devoid of gland tissue and was the structure known as the anterior commissure. 4. That in a cross section at right angles to the axis of the urethra the fibro-muscular tissue was seen to radiate outwards and to join the circumferential portion of the organ. 5. That the gland tissue was most marked at the sides of, and behind, the urethra. 6. That outside the cortex lay the fibrous sheath derived from the recto-vesical fascia and in this was imbedded the venous plexus. This sheath was not a definite structure, such as the fascia lata of the leg, but consisted of a number of areolar planes in which fluid could extravasate. This structure would form the boundaries of the cavity left if the prostate was removed entirely. A specimen typical of the parts removed in the so called total prostatectomy was next shown. Special reference was made to the so called capsule seen on the surface of the tumour. A cross section showed a central glandular portion containing the urethra, the whole surrounded by an apparently fibrous capsule. Specimens of bladders with enlarged prostates removed after death were next considered. The first had been studied by means of cross sections at right angles to the axis of the urethra. The enlargement was seen to consist of a central glandular portion containing the urethra and a circumferential envelope. This was a dense laminated structure which admitted of cleavage in many planes. It contained gland tissue and was therefore derived from more than the outer non-glandular cortex. It was next shown that the central portion could be shelled out from the envelope and that the amount of envelope left on the central portion would depend on the depth to which the finger penetrated into the envelope. In the second specimen the front of the bladder and of the enlarged prostate had been removed by a coronal section. Adenomatous masses had been shelled out from both lateral parts of the organ. A median ridge representing the posterior wall of the urethra was left behind; the lateral walls of the canal had come away on the surfaces of the adenomata. The wall of the bilocular cavity thus left was a very definite structure and was found capable of further division, which division resulted in the removal of a bilocular envelope. After removal of the envelope there was still left behind a very definite wall bounding an unilocular cavity. This wall was shown to contain gland tissue and must have therefore been derived from the glandular part of the organ. Outside this wall lay the prostatic plexus of veins. If the two adenomatous masses were replaced in their envelope it was seen that the mass resembled the parts removed in the so-called total prostatectomy. The formation of the adenomata and of their envelope was then traced and it was shown how the growth of the adenomata stretched the prostatic tissue over themselves and forced the fibres to take up a circumferential direction and to form the definite envelope seen in the previous post-mortem specimens. The size of the organ had no definite relation to the progress of the adenomatous change. One specimen removed during life and weighing 150 grammes was identical in appearance with another also removed from a living patient which weighed only 20 grammes. The type of enlargement depended on the point at which the adenomata developed. If they grew in the lateral lobes then two adenomata might be removed either singly or encompassed by an envelope If the growth increased at the same rate throughout the glandular area of the organ then the parts removed would consist of an adenomatous mass practically surrounding the urethra. The so called median lobe was always continuous with one or both of the lateral lobes It was then pointed out that the glandular masses surrounded by the inner *most part of the envelope enucleated from the parts removed* after death corresponded accurately to those removed by the so called operation of total prostatectomy in the living subject It must be concluded therefore that the parts left behind in these two procedures corresponded Now in the case of the parts removed after death after an enucleation such as had been described there was left behind a definite envelope This envelope had been shown to contain gland tissue and therefore to represent more than the non glandular cortex External to this envelope the prostatic venous plexus had been shown to lie It therefore followed that after the so called total extirpation of the pro tate an envelope formed of expanded prostatic tissue was doubtless left behind and bounded the cavity formed by the removal of the tumour From the facts detailed above the following conclusions were drawn (1) that the usual form of prostatic enlargement was an adenomatous one, (2) that the adenomatous masses might surround the urethra or form masses in the lateral lobes, (3) that the parts removed might consist of adenomata from the lateral lobes or of an adenomatous mass surrounding the urethra, (4) that there was always left behind a definite laminated envelope containing gland matter, (5) that the amount of envelope left on the surface of the tumour depended on the point at which the enucleating finger entered the envelope, (6) that the recto vesical fascia was not opened and therefore the prostatic plexus veins were not injured, and (7) that though it was pos ible to remove small adenomata from the central part of the lateral mass of the prostate without extensively injuring the urethra yet this canal was removed *in toto* when the adenomatous growth surrounded the urethra and the lateral walls were removed on the adenomata when these were of any size *It was suggested that the name* 'surgical capsule should be applied to this envelope formed by the expansion of the adenomata, it was a pathological product and represented more than the cortex To its presence was due the small amount of hæmorrhage and the absence of urinary extravasation The enucleating finger never passed outside the limits of the prostate, it could not therefore enter the recto vesical fascia or tear the prostatic venous plexus — Mr G H. MAKINS said that these observations showed that the recto vesical fascia was not opened up in the operation *known as total prostatectomy and hence the danger of* extravasation of urine into the tissue and the danger of hæmorrhage were avoided —Mr E M CORNER said that if the bed from which the prostate had been enucleated was examined by the finger it was found to have an even surface and quite different from the loose tissue of the recto vesical fascia and this accounted for the rarity of extravasation of urine and of hæmorrhage after removal of the prostate — Mr SHATTOCK said that the specimen showed that the entire prostate was not removed but there was always left behind a layer of glandular and fibrous tissue

Dr H A LEDIARD read an account of a case of Thyroid Malignancy The specimens shown were from a woman aged 42 years who was treated in the Cumberland Infirmary during March, 1903 A goitre had existed for years and was succeeded by a growth in the frontal region of 12 months' visible appearance The removal of the secondary tumour was imperative and the frontal bone was found to be penetrated by a growth resembling goitrous tissue The size of the perforation was over two inches in diameter The brain was not involved The thyroid gland was cirrhotic and showed fibrous and calcareous changes together with an adenoma of small size growing actively the tubules of which were invading the thyroid tissue The secondary growth in the skull showed spaces filled with colloid material similar to ordinary goitre This metastasis was associated with goitres of long standing and the cranial bones were selected by preference Three similar cases were recorded in the Transactions The paper was illustrated by micro photographs slides and lantern views *Dr Lediard claimed to have traced the secondary growth in the skull to the adenoma growing in an old goitre and* suggested that thyroid malignancy hitherto obscure was now satisfactorily explained

Mr O A MORTON showed a Calcifying Chondro-Sarcoma of the Breast removed from a woman, aged 64 years, which was very hard and heavy It was round with a diameter of one and three quarter inches, harder than scirrhus but not glistening, and contained many areas of calcification Secondary growths of the same nature appeared in the gluteal region 15 months later Microscopical sections showed a mixture of sarcoma cells and cartilage In some areas the cartilage had a hyaline matrix, but in others large numbers of cells like cartilage cells were crowded together without any matrix Tumours of the breast containing cartilage were in the great majority of cases sarcoma Four other cases of the kind were recorded in the Transactions of the society

Mr MORTON also showed an Unusual Form of Obstruction of the Colon A portion of the transverse colon six inches in length formed the obstruction The wall was very greatly hypertrophied and the mucous membrane was thickened, honeycombed and extensively separated from the muscle coat beneath but not as a slough This very extensive separation of the mucous membrane without necrosis was the most striking feature of the specimen It seemed likely that the honeycombed appearance was due to old ulceration The almost detached mucous membrane formed a sort of network within the bowel composed of fine spiral rods the whole mass resembling somewhat a collection of fine white worms Symptoms of chronic obstruction had been present for a long time and a history of syphilis suggested that as the possible origin of the ulceration

CLINICAL SOCIETY OF LONDON

Chronic Intussusception treated by Intestinal Resection — Cases of Lymphocythæmia —Post operative Hernia treated by the Introduction of Silver wire Filigree

A MEETING of this society was held on Nov 27th, Dr FREDERICK TAYLOR the President being in the chair

Mr F C WALLIS gave an account of a case of Chronic Intussusception treated by Intestinal Resection (illustrated by the epidiascope) which is published in full at p 1659 of our present issue —Mr A. E J BARKER remarked that it was not uncommon for the lower part of the bowel into which intussusception had taken place to slough It should always be very carefully examined at the time of operation He preferred simple suture to the use of Murphy s button in such cases —Mr W BRUCE CLARKE remarked on the importance of cutting through absolutely healthy bowel He concurred with the previous speaker in preferring end to end suture rather than Murphy s button —Mr WALLIS replied

The PRESIDENT read a paper on two cases of Lymphocythæmia (Lymphatic Leukæmia) The first case was that of a boy aged ten years who first complained of pains in the legs thirst and yawning Six weeks later he was found to have enlargement of the left parotid gland, dulness over the upper part of the sternum a deep seated tumour in the left flank but no obvious enlargement of the lymphatic glands Two weeks later he was admitted into Guy's Hospital with enlargement of both parotid and submaxillary glands of the liver, and of the left kidney A blood count showed 15 000 leucocytes per cubic millimetre *of which 46 per cent were small lymphocytes* A few days later the parotid swellings had increased and some lymphatic glands close by had enlarged, but there was no general increase in the size of the cervical glands or of those in the axillæ or groins Each lacrymal gland was felt as a hard mass between the orbital ridge and the eyeball The leucocytes increased to 50 000 and a differential blood count gave small lymphocytes 94 large lymphocytes 3 polymorphonuclears *2 5 and eosinophile 0 5 per cent Hæmorrhages from the* mucous membranes appeared and he died a month after admission The post mortem examination showed enlargement of the above mentioned glands also of the thymus spleen and kidneys Microscopically the enlarged organs were densely packed with lymphocytes The second case was that of a girl, aged 14 years who was seen on Jan 14th Six weeks previously she had had pains in the limbs with malaise The mammæ had been noticed to be enlarging Her eyes became prominent and two days after the feet swelled She was pale dyspnœic and had œdema of the eyelids The salivary glands were enlarged the mammæ were enlarged, hard and nodulated The liver reached one inch below the umbilicus. The edge of the spleen could just be felt The lymphatic glands in the axillæ and groins were not specially enlarged. A blood film showed an extraordinary excess of leucocytes, of which 95·8 were small lymphocytes. She died on Feb. 21st, after the onset of ascites, epistaxis, and uterine hæmorrhage. The rapid course of both these cases and the enlargement of the mammæ and the thymus were unusual features. The relatively small size of the lymphatic glands suggested that these organs were not primarily at fault.—Dr. H. BATTY SHAW asked what was the condition of the marrow in these cases. The enormous enlargement of the kidney must be regarded as accidental, like the red deposits which might occur subcutaneously and in various other positions. Some believed that such deposits were produced by the changes in the marrow but others regarded the change in the lymphatic glands as the originating factor of the disease, those in the marrow being secondary. The fœtor of the gums was not an invariable feature.—Dr. F. PARKES WEBER suggested that the bone marrow was in all probability the chief source of the disease. In every case in which the marrow had been examined it was found to be changed. Cases had been recorded in which the bone marrow was the only leucocyte-forming organ at fault, the lymphatic glands being healthy. Lymphocytes should, in his view, be regarded as an undifferentiated or fœtal variety of myelocytes.—Dr. A. G. PHEAR remarked on the small size of the lymphocytes in these cases. He believed that the large and small lymphocytes had a separate origin. The bone marrow could not be regarded as a source of the large lymphocytes.

Mr. LAWRIE H MCGAVIN narrated a case of Post-Operative Hernia of the Abdominal Wall treated by the Introduction of a prepared Silver Wire Filigree. The patient, a woman, aged 47 years, had undergone an operation 15 years previously for the removal of a uterine fibroid and had developed a ventral hernia at the site of the old operation of such dimensions that the chances of obtaining a permanent cure by the usual surgical procedure were of the slightest. At the time of operation (on Oct. 1st, 1903) it was clear that so much tissue would have to be sacrificed that great difficulty would be experienced in closing the abdomen. A silver wire filigree was therefore made after the method suggested and practised by Willard Bartlett, measuring five inches by two and a half inches, and this was inserted between the muscles and the peritoneum, the former being approximated by the introduction of a special form of removeable deep suture. The skin incision was then closed by interrupted silkworm gut sutures and a firm abdominal binder was applied. Both superficial and deep sutures were removed by the tenth day and the patient left the hospital at the end of three weeks. Since the operation she had been well and comfortable in every respect and was performing her ordinary duties without the use of an abdominal support of any sort The site of operation was sound, a firm and somewhat depressed area marking the position of the filigree. The whole of the symptoms previously complained of by the patient—viz., griping pain, nausea, frequency of micturition, and constipation—had entirely disappeared.—Mr. BRUCE CLARKE inquired as to the exact method of fixing the wire filigree —Mr. BARKER remarked that the interlacing of sutures at the time of the operation took longer but in his belief gave very good, if not better, results. Such cases wanted following up for several years.—Mr. MCGAVIN replied and described the method of making and fixing the filigree or lattice-work of wire.

OPHTHALMOLOGICAL SOCIETY.

Indirect Gunshot Injury of the Eye: Microscopical Examination.—An Easy Operation for Ectropion.—Average Visual Acuteness.—The Judgment of the Size of Distant Objects — Exhibition of Cases and Specimens.

AN ordinary meeting of this society was held on Nov. 19th, Mr. JOHN TWEEDY, the President, being in the chair.

Mr. E NETTLESHIP read a paper on a case of Indirect Gunshot Injury of the Eye with Microscopical Examination The patient was a youth, aged 19 years, who in July, 1897, held a pistol to each temple and fired. He was taken to the hospital bleeding from a wound in the right temple. The skin was singed and the bullet wound passed through the orbit into the ethmoid. In the left temple was a bullet wound into which a probe could be passed two or three inches. There was perception of light in the right eye but not in the left. Nine days later the right fundus showed hæmorrhages in various parts of the fundus. In the left no details were visible. 29 days later the right disc was very pale and there were several ruptures of the choroid. The left was not so well seen. 31 days after the accident he was examined with the x rays, this being in their very early days. It was thought that two bullets were seen in the skull but this was found afterwards to be an error. On the thirty-sixth day after the injury convulsions developed and the patient died comatose. Post-mortem examination showed that there was no bullet in the skull. There was meningitis of the base and vertex. Only the pistol fired on the left side took effect, the right having probably had a blank charge in it. The back part of the eyes were removed for examination and Mr. Nettleship gave a lantern demonstration and showed photographs of the condition found on microscopical examination. The point of interest was that although the bullet had caused so much injury to the choroid yet this was only indirect as it had not passed near enough to the eye to touch it and there was no rupture or perforating injury of the sclerotic.—The PRESIDENT mentioned a somewhat similar case that had come under his own observation.

Dr. A. FREELAND FERGUS described an easy Operation for Ectropion which he had found very useful for ectropion following certain cases of blepharitis. He considered that the usual methods with caustics were unsatisfactory. The operation he described consisted of dissecting the conjunctiva well away from the underlying tissue and removing the hypertrophied tissue thoroughly; on this latter point depended the success of the operation. He considered that Snellen's sutures produced but little effect if they were kept aseptic.

Dr. FERGUS also read a paper on Average Visual Acuteness He seriously called in question whether the $\frac{6}{6}$ of Snellen's types was the average vision of the majority of people. He thought that the average was nothing like so high if patients were taken without the correction of their refractive error, and that for medico-legal questions the average without correction should be taken. He requested that a committee should be formed to investigate this. It might at the same time investigate the question of colour vision, as he considered that colour blindness was not in any way dangerous to navigators or seamen if their light sense were normal. —Mr. C. DEVEREUX MARSHALL said that he was surprised that colour blindness should be considered of so little importance to those engaged in navigation, and if there were any who doubted the extreme inadvisability of allowing colour blind men to take responsible positions on board ship a committee should certainly be formed to settle the matter —The PRESIDENT said that although he quite agreed as to the importance of the light sense being perfect, yet he by no means thought that colour-blind people should be allowed to take charge of ships —Mr. H. SECKER WALKER and Mr. W. G. ROLL discussed the operation, and Dr. FERGUS, in reply, said that he considered colour blindness of no disadvantage to seamen, for if their light sense was perfect they would never confuse the side lights. He thought it entailed much hardship on men who were perhaps refused the extra master certificate for colour blindness when they may have served many years at sea without any accident having occurred in consequence of their defect.

Mr N BISHOP HARMAN, in a paper on the Judgment of the Size of Distant Objects, referred to a note in the *British Medical Journal* of Sept. 12th, 1903, wherein a writer drew attention to an experiment in which, by an illusion, the experimenter was led to believe objects seen were smaller and more distant than they were known to be; this had been attributed to the influence of accommodation. Mr. Harman pointed out that these facts were true and well known. He showed by several simple experiments with prisms and stereoscopic views that objects could be made to appear either small or large at will and that this illusion was due to the state of balance of the extra-ocular muscles. The unconscious cerebration led the observer to suppose that objects of a given size appeared, when seen under unnatural conditions of convergence, smaller and more distant, but that when seen under unnatural divergence they seemed larger and nearer than they were known to be. Mr. Harman showed that in the progression of the vertebrates increase of visual acuity was coincident with the moving of the eyes from a primitive lateral position in the head to a forward position in which the visual axes could approximate a normal parallelism; the change was complete in man and with him special perception was probably most perfect. Coincident with these changes was a specialisation of the superior oblique muscle. Mr. Harman pointed out that in the plaice almost the whole of this slow progression had been anticipated at a bound. This fish elected to live a life resting on one side and it appeared to depend above all other fish on the acuity of its eyes, both of which were turned upwards on the exposed uppermost side and were, he thought, capable of some degree of parallelism of visual axes. In this fish he had found the same special features of the superior oblique muscles which characterised the higher vertebrates; they were not found in any other than flat-fish and not even in the embryo forms of these. He believed that the steady progression of the vertebrates towards binocular vision indicated the pre-eminent importance of extra-ocular muscle balance in the factors which went to form their judgment of size and space.

The following cases and card specimens were shown:—

MR. ROLL: A case presenting a raised area of Choroidal Degeneration.

MR. R. W. DOYNE: (1) A case of ill-developed Cornea; and (2) Sclerosis of the Retinal Arteries.

MR. G. H. POOLEY: Thrombosis of a Retinal Vein (?).

MR. E. E. HENDERSON: Sections showing Subconjunctival Dislocation of the Lens.

MR. W. H. H. JESSOP: A case of Sarcoma of the Limbus.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

Election of Officers.—Treasurer's Report.

AT the annual general meeting, held on Nov. 23rd at St. Mary's Hospital, Mr. C. B. LOCKWOOD, President, in the chair, the following officers were elected for the ensuing year:—President: Dr. J. Symington. Vice-Presidents: Dr. A. Thomson, Dr. A. M. Paterson, and Dr. J. Yule Mackay. Treasurer: Mr. F. G. Parsons. Secretaries: Dr. Peter Thompson (England), Dr. R. J. A. Berry (Scotland), and Dr. R. A Stoney (Ireland). Council: Dr. C. Addison, Dr. A. Birmingham, Dr. T. H. Bryce, Dr. D. J. Cunningham, Dr. A. F. Dixon, Dr. E. Fawcett, Dr. R. J. Gladstone, Dr. T. Wardrop Griffith, Professor G. B. Howes, Dr. A. Keith, Mr. C. B. Lockwood, Dr. A. Macalister, Dr. J. Musgrove, Dr. C. J. Patten, Mr. W. G. Ridewood, Professor A. Robinson, Mr. G. D. Thane, Mr. H. J. Waring, Dr. B. C. A. Windle, and Dr. A. H. Young.

DR. A. KEITH (in the absence of Professor G. B. Howes) presented the treasurer's report for the year. The accounts showed a balance of £55 14*s.* 2*d.*, which, in view of the increased expenditure in illustrations and printing for the society's Proceedings during the last session, must be considered as very satisfactory.—The PRESIDENT, in moving the adoption of the report, referred to the long years of service which Professor Howes had devoted to the society as its treasurer and he *proposed "that the best thanks of the* society be accorded to Professor G. B. Howes for the long and valued services which he has rendered in the capacity of honorary treasurer."—This was carried unanimously.

The following gentlemen were then elected members of the society:—*Dr Waterson, Mr. W. Thorburn, Mr F. H.* Westmacott, Dr. C. W. S. Saberton, Dr. W. Harris, Mr. H. S. Clogg, Dr. E. J. Evatt, and Mr. Scott.

The following papers were afterwards brought before the meeting:—

MR. PARSONS: (1) On the Nature of Certain Epiphyses; (2) On the Fascial Expansions of the Gracilis and Semitendinosus.

DR. W. KIDD: Notes on the Eyebrows of Man.

DR. KEITH: A note on the Nature and Functional Meaning of the Ileo-cæcal Valve.

DR. W. HARRIS: The True Form of the Brachial Plexus.

DR. J. CAMERON (communicated by Dr. Peter Thompson): On the Presence and Significance of the Superior Commissure *throughout the Vertebrate Series.*

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held at Sheffield on Nov. 20th, Dr. J. E. Gemmell, the President, being in the chair.—Dr. T. B. Grimsdale read notes of a case of Sloughing Submucous Fibroid of the Uterus projecting through the Cervix treated by abdominal hysterectomy. The specimen was also shown.—The President Dr. W. Walter, Dr. D. Lloyd Roberts, and Dr. E. C. Croft discussed the case. —Dr. R Favell read notes of a case in which a vesicular mole was passed the day after admission to hospital by a married woman, aged 21 years, in her third pregnancy. Two small purplish growths of the size of raspberries were excised from the anterior vaginal wall. Exploration of the uterus showed that the mole was of the destructive variety. The patient made a good recovery. He also read notes of a case of Submucous Fibroid removed from a married woman, aged 33 years, who had no children and who suffered from a watery discharge and menorrhagia.—The President and Dr. Lloyd Roberts suggested that the second case seemed to be a favourable one for performing "Cæsarean section" of the fibroid, the latter holding that this was perfectly justifiable in a woman in the child-bearing age, but in a woman of 50 years it did not appear necessary. —*Dr.* Walter said that when it was possible he always removed fibroids by enucleation or by a sort of Cæsarean section. Although his experience in nearly every case was that the uterus was so bruised by this that it became a question whether it was worth while preserving, yet the operation should always be begun with the hope of saving it. —The President read notes of a case of Complete Occlusion of the Os Uteri Externum at Full Term. The patient was a *primipara who had been 12 hours in labour. There had been* some hæmorrhage which proceeded from a vaginal laceration on the left side; there was no trace of an os but a cystic swelling bulged into the roof of the vagina and in this the fœtal head was felt. The patient was admitted into the Lying in Hospital in a collapsed condition. On examination a white spot of the size of a pin's head was found on the left of the swelling and a crucial incision was made through it. The child was delivered with forceps, incision of the perineum being necessary. Subsequently the temperature rose and local examination proving negative, antistreptococcic serum was given. After slow convalescence the patient left the hospital. It was pointed out that such an occlusion was not always the trivial matter which it was generally *regarded as being. Mattei, in a collection of cases, showed* 36 operations out of 42 cases, with three maternal deaths.—Dr. Lloyd Roberts mentioned two cases which had occurred in his experience.—Dr. Croft read a paper on three cases of Urinary Calculus in the Female. In the first case a stone weighing five grains was passed spontaneously per urethram. The second calculus weighed 232 grains and was removed by vaginal cystotomy from a woman, aged 62 years. The same treatment resulted in the third case in the removal of a stone 510 grains in weight from a woman, aged 20 years. Dr. Croft thought that in all three cases the calculi had their origin in the *kidney and he emphasised the necessity* for removing stones of such size by a vaginal incision in [illegible] or perform- [illegible] it he thought [illegible] he preferred to place a tube in it and to drain for a week before allowing spontaneous closure to take place In a small vagina this saved trouble.—Dr. Walter said that he agreed with Dr. Croft's remarks as to the route adopted and considered that even exploration of the bladder per urethram by means of the finger was unsafe.—Various pathological specimens were shown by Dr. John W. Martin and Dr. Walter.

ABERDEEN UNIVERSITY MEDICAL SOCIETY.—A meeting of this society was held on Nov. 27th, Professor J. T. Cash being in the chair.—Dr. D. Lawson of the Sanatorium, Banchory, delivered an address on the Sanatorial Treatment of Pulmonary Tuberculosis, commencing his remarks with a reference to the historical side of the subject. He said that in 1840 Mr. *George Bodington of Sutton Coldfield published* an essay on the Cure of Pulmonary Consumption on Principles Rational and Successful and established a sanatorium which was eventually converted into an asylum for the insane. In 1855 Dr. Henry MacCormac of Belfast published his work and was afterwards censured for wasting the time of his colleagues. Hermann Brehmer in 1856 wrote a thesis entitled "Tuberculosis in its First Stage is always Curable" and in 1859 he opened the Goerbersdorf Sanatorium. Among those who were authorities on the subject of present-day sanatoriums there were three clearly defined schools—the Falkenstein, the Nordrach, and the British school. At the Falkenstein Sanatorium there was one central building with wings *forming* an obtuse angle with it and a prominent feature of the treatment was the rest in the open air which was enforced amongst the patients. With regard to food patients were allowed considerable liberty and, generally speaking, ease, comfort, and luxury prevailed. The Nordrach Sanatorium consisted of a colony of detached buildings. Regulated exercise was largely employed in the treatment of patients and forced feeding to a certain extent formed part of the system. The *régime* was of the Spartan kind and in contrast with the one at Falkenstein Sanatorium; there were no billiard or smoking rooms in connexion with the Nordrach establishment. Both Falkenstein and Nordrach sanatoriums were defective in regard to the scientific side of the treatment and neither of them was provided with a sufficient nursing staff according to the ideas which prevailed in this country. The British school aimed at combining the recognised good points of both these establishments and at providing a fully qualified nursing staff, first-class equipment upon the scientific side, a relatively large medical staff, and individual treatment. The Banchory Sanatorium followed the precedent of Falkenstein to the extent that it was one central building and that it provided facilities for the patients lying out in the open air. Although there were some differences of opinion in the British school with regard to architectural arrangements, practically all were at one in dispensing with billiard rooms, smoking rooms, and conversation rooms, and in this respect they resembled Nordrach. At the Banchory Sanatorium considerable attention was given to the scientific side of the question and there were research laboratories and various kinds of scientific appliances, including x-ray apparatus. Dr. Lawson then described the system of treatment which was followed. With regard to walking exercise he said that at first the distance was probably not more than 100 or 200 yards, but it was gradually increased until by the time the patient was discharged he might be walking about 30 miles a day. There were no set rules as to exercise; that had to be regulated by various things such as the temperature of the patient. The advantages of hill-climbing in connexion with the treatment were very great owing to the tendency to deep breathing which was promoted.

Sheffield Medico-Chirurgical Society.—A meeting of this society was held on Nov. 19th, Mr. G. H. West Jones, the President, being in the chair.—Dr. A. J. Hall showed four cases, one of which was an example of Thrombosis of the Portal Vein in a man, aged 48 years.—Dr. W. T. Cocking showed a man, aged 36 years, the subject of Progressive Myositis Ossificans. The disease, which was very advanced, commenced at the age of eight years and during the last few years the patient had been an inmate of many London and provincial hospitals. The case is reported by Dr. H. D. Rolleston in the Transactions of the Clinical Society, vol. xxxiv., and in The Lancet of Sept. 28th, 1901, p 849, by Mr. A. Ll. Vaughan.—Mr. G. Wilkinson showed a man, aged 37 years, from whom he had removed a retroperitoneal lipoma weighing 13 pounds 12 ounces six weeks previously. The growth had to be separated from the bladder and the right ureter was found running through the mass and was dissected out for about eight inches of its course. The patient suffered from shock for 24 hours after which he made a speedy and uneventful recovery. The tumour measured 19 inches in length by 12 inches in breadth and about six inches in thickness.—Other cases were shown by Mr. Edward Skinner, Dr. F. H. Waddy, and Dr. A Cuff.—Dr. A. Lewis Husband read a paper on Agoraphobia and some allied conditions. After defining the three conditions known as agoraphobia, claustrophobia, and acrophobia, he related cases which he had met with during a period of seven years. In all some 40 cases had been collected. After discussing the probable etiology of the conditions from the optical, physiological, anatomical, and psychical standpoints he drew the following conclusions. 1. Agoraphobia, claustrophobia, and acrophobia are more or less allied conditions attributable to analogous causes. 2. Agoraphobia and claustrophobia are directly determined by errors in the visual apparatus, chiefly refractive. The former is usually associated with myopia and the latter with hypermetropia. Astigmatism and asthenopia may be associated with either. 3 Acrophobia is generally due either to lack of training and experience in the visual measurement of distance in the downward direction or to loss of acquired power sequential to some condition of lowered vitality, such as anæmia, neurasthenia, or senility. 4. Agoraphobia and claustrophobia, but not acrophobia, are most common in persons of neurotic temperament and tendencies. 5. Neurasthenia and similar affections do not necessarily cause any of these conditions, nor are the latter always characteristic of neurasthenia, but neurasthenia plus refractive errors usually causes either agoraphobia or claustrophobia. 6. All the conditions become much exaggerated under any low state of health.

Windsor and District Medical Society.—A clinical meeting of this society was held at the Guildhall, Windsor, on Nov. 25th, the President, Mr. W. B. Holderness, being in the chair. Various microscopical specimens were exhibited, and through the kindness of Dr. Butcher Mr. J. Startin was enabled to show to the members a specimen of Radium and mentioned its good effects in the treatment of rodent ulcer.—The President showed a case of extensive Lupus of the Face and Upper Extremities in places simulating psoriasis. The patient had undergone treatment in London by the Finsen light and had derived considerable benefit but was now unable to continue the sittings.—Mr. Startin exhibited a patient who had been under the care of Mr. A. C. Wigmore and himself. The patient, a young man, presented some scarring of the cheeks, where an extensive patch of lupus had been cured by the persistent application of the Roentgen rays.—Mr. J. H. Tomlinson showed a man, aged 45 years, the subject of Facial Paralysis and Choroiditis. He suffered from subjective visual sensations of an unusual nature.—Dr. G. E Hale showed a case of a Pulsating Expansile Tumour in an elderly woman. It was thought to be an aneurysm of the abdominal aorta or of the cœliac axis.—Dr. W. F. Lloyd showed (1) a case of Lupus of the Upper Lip in a young woman (treatment by the application of the x rays had been tried and so far there had been little result); and (2) a case of Leucoplakia of the Tongue in a woman aged 55 years.—Dr. F. E. Wood showed (1) a woman, aged 56 years suffering from Dilatation of the Capillary Vessels over the Chest, Abdomen, and Arms (there was hypertrophy of the heart, arterial fibrosis, and albuminuria); and (2) a boy, aged 12 years, with Two Systolic Murmurs, one of which was thought to be congenital.—Dr. C. R. Elgood showed (1) a woman, aged 50 years, the subject of Raynaud's Disease; and (2) a child with Unequal Pupils, the larger being insensible to light and to accommodation.—The cases were subsequently discussed *seriatim*.

Plaistow and Canning Town Medical Society.—A meeting of this society was held on Nov. 26th, Mr. Percy Rose being in the chair.—Dr. P. Horrocks, who was present by special invitation, read a paper on Puerperal Sepsis. He discussed the subject from the standpoints of causation, prevention, and treatment. Among the sources of infection he was of opinion that streptococcal contagion from other cases of septicæmia, from cases of erysipelas, and from decomposing animal matter such as was found in post-mortem rooms and butchers' shops, played the most important part As regards prevention he laid special stress on the careful sterilisation of the accoucheur's hands, the avoidance of frequent vaginal examinations, and the abstention from intra-uterine and vaginal douching except in cases already infected. In the treatment of puerperal sepsis intra uterine douching was certainly of value, particularly in cases of sapræmia. A more thorough method was curetting the whole of the uterus. He did not approve of hysterectomy in such cases. Antistreptococcic serum was sometimes of value but it frequently failed.—An interesting discussion followed the reading of the paper.

Æsculapian Society of London.—A meeting of this society was held on Nov. 27th, Dr. Leslie Durno, the President, being in the chair.—Dr. David Ross read a paper on Visceroptosis based on a case of dropped liver in a multipara, aged 37 years. She had for six months severe paroxysmal pain at the region of the liver that sometimes commenced in her sleep, lasted one or two hours, and then passed off. She was so fat that though the lump below the right ribs could be felt a diagnosis was uncertain. But as she became thinner the liver could be taken between the two hands above and below and a diagnosis made. A belt was worn which completely prevented symptoms. 40 ounces of urine were passed per diem; it had a specific gravity of 1012, no albumin was present, and it contained 0·4 per cent of glucose.—Mr. F. Hewitt Oliver reported a case of Fatal Carbolic Acid Absorption by a baby who was circumcised, the wound being dressed with 1 in 40 of carbolic acid for four days; in that time 15 ounces of a 2·5 per cent. solution were used. Then the child became collapsed and died shortly afterwards. Acute nephritis was found by a microscopic examination of a kidney.

Chelsea Clinical Society.—At a meeting of this society, held on Nov. 17th, Dr T. Vincent Dickinson, the President, being in the chair, Dr. C. O. Gibbes showed a series of cases illustrating the Effect of Overstrain on the Orifices and Walls of the Heart and Aorta.—Dr. Vinrace exhibited a Dermoid Cyst, consisting of sebaceous matter and hair, which was found unexpectedly during a post-mortem examination on a woman, aged 29 years.—Dr T. B. Hyslop read a paper entitled "The Examination of a Person Alleged to be Insane."—Dr. Eric Pritchard read a paper on the Inheritance of Acquired Characteristics. He contended that certain acquired characteristics must be inherited. The inheritable characteristics were those which were due to general changes of metabolism in the parent, such as immunity and susceptibility to disease. Inasmuch as the germ plasma is living it must have a metabolism and this can be altered by the factors in the environment. If habits of metabolism can be inherited, since structure is one of the expressions of metabolism, it is at least theoretically possible that acquired morphological structures may in certain cases also be inheritable.

Newport Medical Society.—A meeting of this society was held on Nov. 25th, Dr. J. Howard Jones, the President, being in the chair The following clinical cases and specimens were exhibited. Patients with Locomotor Ataxy, Tertiary Syphilitic Ulceration of the Nose and Lupus under Treatment by Roentgen Rays (four cases), and sections of Melanotic Carcinoma and of Adenoma.—The President delivered an address on Hygiene Ancient and Modern, in which he described the hygienic measures prescribed for the Jews in the Mosaic laws and the Talmud and compared them with our modern public health regulations.

Reviews and Notices of Books.

An Atlas of Human Anatomy for Students and Physicians. By CARL TOLDT, M.D., Professor of Anatomy in the University of Vienna; assisted by ALOIS DALLA ROSA, M.D. Translated from the third German edition and adapted to English and American and international terminology by M. EDEN PAUL, M.D. Brux., M R C.S. Eng., L.R.C.P. Lond. First Section: A. The Regions of the Human Body; B. Osteology. Figs. 1 to 377, and Index. London: Rebman, Limited. 1903 Pp. 160. Price 9s. net.

ENGLISH-speaking students of anatomy will not fail to appreciate the excellent translation of the first section of Toldt's Anatomy which has been prepared by Dr. Eden Paul. This atlas has advowedly been selected on account of its claims to be an accurate pictorial representation of all the data of human descriptive anatomy carefully drawn to scale from actual specimens. As the translator observes, it forms a definite and systematic application of the visual, or rather graphic, method to anatomical study. This claim is good and sound and the volume before us fully bears out all that is claimed for it.

It is, perhaps, hardly fair to call the work a mere translation; thanks to the care and industry of the translator it is more than this. It really affords a direct tabular comparison of the English and continental terminology. The translator very justly deplores the absence of a universal anatomical nomenclature which should be equally intelligible to students of all nationalities. Difficulties and defects in nomenclature have evidently formed the chief obstacle in translation and appear to have been admirably surmounted. The continental and English names are in all cases printed side by side on the illustrations in distinctive types. In selecting the appropriate English equivalent much discrimination has been exercised and Quain's and Macalister's works have been mainly adopted as standards. The translator points out that in some places the author's nomenclature actually conflicts with that in use in England as, for instance, in the case of the pterygo palatine canal, a term which is applied to what we know as the posterior palatine canal, whilst our pterygo-palatine canal becomes pharyngeal in his nomenclature.

The first section of the atlas is devoted to the names of regions of the body and to osteology. The former is naturally brief and calls for no detailed notice. The osteological section is very full and the majority of the illustrations are admirable and very faithful representations of the various bones. In the case of a few of the smaller bones of the face and carpus the illustrations leave something to be desired; if drawn on a larger scale they would probably have been more distinct and of greater educational value.

A very useful feature of the atlas is the attention which is given to the development of the various bones. This is fully illustrated with drawings from nature taken at various ages and forms to our mind one of the distinctive features of the atlas. By comparing these drawings with the statements given in the various text-books the reader gains some idea of the wide variations in the time of appearance of the individual centres of ossification. Care has been taken in every case to impress the fact that in continental nomenclature the term "month of fœtal life" indicates a period of four weeks and not a calendar month as with us. The atlas is of handy size (8½ × 11½ inches) and is not unduly heavy. It forms a useful supplement to any of the ordinary text-books of anatomy.

Handbook of Surgical Anatomy. By G. A. WRIGHT, M.A., M.B Oxon., F.R.C.S. Eng., Professor of Systematic Surgery in the Owens College; Surgeon to the Manchester Royal Infirmary, &c.; and C. H. PRESTON, M.D., B S Lond, F.R.C.S., L.D S Eng., Lecturer on Dental Anatomy in the Owens College; Assistant Dental Surgeon to the Victoria Dental Hospital of Manchester. London and Manchester: Sherratt and Hughes. 1903 Pp. 202. Price 4s. 6d net.

Dr. Wright and Dr. Preston have produced a concise and very readable little handbook of surgical applied anatomy. They are careful to disclaim any originality in the matter contained but have evidently made a careful selection of the more important anatomical facts having a direct bearing upon surgical practice. One section of the book, however, does appear to be a new departure in volumes of this sort: an instructive series of facts in dental anatomy is included. The reason given for this addition is the fact that medical and dental students receive much of their anatomical instruction together at the Manchester School. We should like to see a similar section in all books on applied anatomy; it would be profitable to all readers. The subject matter of the book is well arranged and the marginal notes in bold type facilitate reference to any desired point. The order adopted is upper extremity, neck, face, head, teeth, thorax, back, abdomen, perineum, pelvis, and lower extremity. All parts are as fully dealt with as could be expected in a book of this size. There are one or two obvious slips. The nerve-supply of the palmaris brevis is said to be from the median but this is not so serious a mis-statement as the information that the lowest six dorsal nerves arise between the fourth and first lumbar spines. Surely this should read "between the fourth and ninth dorsal spines." The name of Landrevt associated with the paraduodenal fossa is a misprint for Landzert. We have heard of Sylvia but not in connexion with a fissure of the cerebrum. The ascending parietal convolution is still credited with motor functions and the sigmoid flexure is described in the old and very misleading way. Reference is made to removal of the prostate but the anatomy of the process receives the scantiest attention, which is a pity. We should like to see some warning of the frequent variations of the brachial artery. On the whole, however, the book is trustworthy and well worth perusal.

Atlas der Deskriptiven Anatomie des Menschen. (Atlas of Human Descriptive Anatomy.) By Dr. J. SOBOTTA, Professor of Anatomy in the Anatomical Institute at Würzburg. First Section: Bones, Ligaments, Joints, and Muscles. With 34 Coloured Plates and 257 Coloured Illustrations by K HAJEK and A. SCHMITSON. Munich: J. F. Lehmann. 1904. Pp viii. + 229. Price 20 marks.

Grundriss der Deskriptiven Anatomie des Menschen. (Essentials of Descriptive Anatomy.) First Section: Bones, Ligaments, Joints, and Muscles. By the same author. Munich: J. F. Lehmann. 1904. Pp. 207. Price 4 marks.

THE atlas is the second volume of Lehmann's series of medical atlases. It fully maintains the high level of excellence attained by the first atlas which was devoted to topographical and applied anatomy. The present volume is the pioneer of a series of three illustrating descriptive anatomy and contains figures of the bones, the joints, the ligaments, and the muscles of man. The number of plates and illustrations is very large and they are all of a satisfactory size. A short description is attached to each figure in the atlas and in addition in the accompanying volume of Essentials of Descriptive Anatomy a more detailed and systematic account of the structures illustrated is to be found. The illustrations are all of great merit and many of them are very beautiful reproductions in colour; most are very true to nature and are exceedingly useful in reviving a visual image of parts and their relations. We have no doubt that the Atlas and Essentials together will be found very useful by those desirous of revising their knowledge or of refreshing their memories of the more salient anatomical facts. Naturally, in such a work as the Essentials the author does not profess to go into minute details but deals with the broad facts of descriptive anatomy only. This object he very successfully achieves; therefore it is for revision and for revision only that we recommend the work. The artists are to be cordially congratulated on the result of their labours and the publisher on having the enterprise in issuing so fine an atlas at a moderate price.

LIBRARY TABLE.

The Refraction of the Eye: A Manual for Students. By GUSTAVUS HARTRIDGE, F.R.C.S.Eng. Twelfth edition. With 105 Illustrations. London: J. and A. Churchill. 1903 Pp. 266. Price 6s.—Mr. Hartridge's modest treatise is rapidly becoming a portly volume and certainly now contains all that the ordinary practitioner and even the specialist need know in this department, unless he is desirous of following out the subject of refraction into details which demand a thorough knowledge of mathematics. As it was one of the first in the field and has run through 11 editions, Mr. Hartridge has been able to correct the trifling defects that were present in the first edition, to weed out unimportant statements, and to expand those that his more mature experience has taught him are often misunderstood by students. The chapter on retinoscopy is written in a particularly clear and intelligible style and gives many examples which, if comprehended, will guide the practitioner to the appropriate treatment of analogous cases.

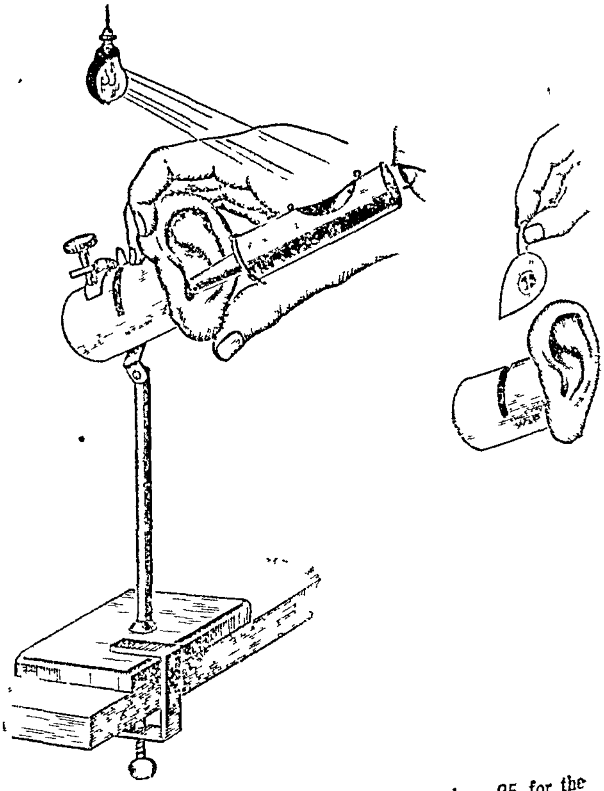
The Practical Details of Cataract Extraction. By H. HERBERT, F.R.C.S.Eng., Major I.M.S. Second edition. London: Baillière, Tindall, and Cox. 1903 Pp. 114. Price 4s. net.—We have so recently had occasion to call attention to Major Herbert's work which gives the results of his large Indian experience that it is unnecessary to say more than to congratulate him upon so speedy a demand for a second edition. The number of operations from which he draws his conclusions is far in excess of that which falls to the lot of most European surgeons, for in the short space of one year and seven months Major Herbert performed 1374 extractions (linear operations excluded). Amongst all these chloroform was only employed twice. The details of the method adopted with extraordinary success by such an operator must needs be worthy of careful study.

Christmas and New Year Greeting Cards.—A varied assortment of these souvenir cards has reached us from Messrs. Raphael Tuck and Sons, of Moorfields, London, E.C. Their productions this season comprise some 1600 new varieties all of which are beautiful in design and appropriately worded. The demand for cards of friendly greetings has increased year by year largely in consequence of the artistic effects now to be obtained by the developments of the photographer's and colour printer's technics, and Messrs. Raphael Tuck and Sons have been quick to use these developments in their manufactures.

New Inventions.

A NEW MODEL EAR FOR THE STUDY AND PRACTICE OF OTOSCOPY.

THE accompanying illustration shows the form of a new model ear constructed by Mr. F. Davidson 140, Great Portland-street, W. It is made of a composition which lends itself to the necessary manipulation. A slit is cut in the wall of the meatus, so that the discs on which the lithographic reproductions of the drawings of different conditions of the drum membrane are mounted can be readily inserted. The series of illustrations comprises 25 for the right and 25 for the left and are of perforations, retraction, inflammatory and other conditions. The brass stand, which is hinged to allow of the model ear being tilted to any desired angle, is fixed by a clamp to a table and examination can be made exactly as with the human ear. The drawings have all been done by Mrs. Davidson.



J. B. BALL, M.D.,
Physician to the Ear and Throat Department of the West London Hospital.

THE LANCET.

LONDON: SATURDAY, DECEMBER 5, 1903.

The General Medical Council and the Royal Colleges of Physicians of London and Surgeons of England.

IN the interest of peace it is, perhaps, a source of congratulation to all concerned that after the most prolonged discussion of the General Medical Council's recent session no definite conclusion was reached. The subject of consideration was the lamentable difficulty that has arisen between the General Medical Council on the one hand and the Conjoint Board of Examination, representing the Royal College of Physicians of London and the Royal College of Surgeons of England, on the other hand, and the point at issue is the power of the General Medical Council to control in any true sense the regulations which those Colleges may make for the courses of study and the examinations which are conducted by them. The matter has been repeatedly brought before our readers during the last few years and it will be remembered that the dispute turns upon the regulations and examinations in chemistry, physics, and biology, the subjects which were intended wholly, or in large part, to occupy the first year of the medical curriculum. The complaint of the General Medical Council is twofold. In the first place, it is urged that by the recognition of schools as places of study only a small amount of time is really occupied with scientific studies and that these are often pursued in circumstances which do not entitle them to respectful consideration, and secondly, that the examinations do not suffice to exclude those who only possess "an empirical knowledge of a few facts crammed up from a book or a teacher" and who have "no understanding of elementary principles." These strong comments are extracted from the report of the visitor and inspector appointed by the Council and they receive confirmation from further returns which have been supplied to the Council by the Secretary of the Conjoint Board. The conclusions inevitably forced upon the Council are that the regulations of the Colleges are injurious to the best interests of medical education in this country, and that by recognising the teaching of these scientific subjects in secondary schools, higher-grade Board schools, municipal technical schools, and polytechnic institutions as well as in the medical schools, the first year of medical study is practically wasted. This opinion has repeatedly been brought before the Colleges by the General Medical Council and in view of the inaction of these bodies Sir VICTOR HORSLEY gave notice last June of his intention to move that the insufficiency of the courses of study and examination should be represented to the Privy Council in accordance with the terms of the Medical Acts.

This motion was brought forward at a special meeting of the General Medical Council early in July last, but it was withdrawn in favour of the appointment of a committee of two members from each of the three Branch Councils to confer with representatives of the Colleges, should it appear that a conference on the questions raised thereon was desired. Doubtless this proposed committee was intended to afford the Colleges an opportunity of reaching some common ground of agreement, but all hopes in this direction were frustrated by the refusal of the Colleges to appoint representatives, which was equivalent to a politely expressed determination to manage their own affairs, while allowing that the opinions of the Council should receive respectful attention. Sir VICTOR HORSLEY accordingly proposed his motion to report to the Privy Council so as to bring about a decision as to who was the supreme authority in medical education. His speech was marked by a freedom of expression which doubtless alienated the sympathy of many. It was unfortunate that reference was made to the "authority of the Council," since this afforded Dr. NORMAN MOORE, the representative on the Council of the Royal College of Physicians of London, an opportunity to leave the question at issue—the examinations in biology, chemistry, and physics—and to direct attention to the charters and responsibilities of the two Colleges, under which he claimed that responsibility rested with the Colleges and the right of criticism with the Council. An amendment, which was couched in extremely friendly terms, suggested that the Council should defer taking further action pending the promised reconsideration of the whole subject by the Colleges and the re-inspection of their reconstructed examinations. This amendment was carried but on becoming a substantive motion it was met by a proposal that the motion be postponed and this was carried by one vote only. The present position, therefore, is that the Colleges are considering the subject, hoping to remedy all defects, so that there is some prospect of the formulation of new regulations before the Council's meeting in May. Meanwhile an open rupture has been averted and the Council has shown its determination to maintain the position which it has taken up.

Viewed from the outside the whole turmoil is much to be regretted. Neither the Council nor the Colleges can gain by futile discussions on authority or contumacy, responsibilities or charters. The common aim of all should be the elevation of medical education. The numbers of candidates presenting themselves for examination in chemistry and biology at the Conjoint Board have shown a very remarkable decrease during the last ten years, and during the last few years the numbers trained in science institutions (the term being used in contra-distinction to the medical schools) have shown a slight increase. Still, these last fall numerically far below those educated in the medical schools; for the ten years they do not amount to 7 per cent. These figures are important, since the present deadlock originated in a protest against the recognition by the Colleges of many teaching institutions which were not approved by the Council, and it is interesting to find that such "recognition" has not yet seriously influenced the medical schools. If, in spite of the fact that the numbers receiving their preliminary scientific education in institutions other than medical schools are very small, the examinations really merit the strong condemnation of the visitor and inspector appointed by the Council, it would appear to be fair to assume that *the teaching, which is guided* by the character of the examinations conducted by the Colleges, must be very defective. The Education Committee of the General Medical Council does not hesitate to blame the synopses of the examinations in chemistry, physics, and biology, which in the opinion of the committee do not afford adequate guidance to the teachers as to the course of study best suited to the needs of medical students. It is to be hoped that before next May amended synopses in these subjects will be prepared and that the Colleges will seriously consider whether it is wise to continue to recognise courses of study which are conducted synchronously with ordinary school work. Many of the London medical schools undoubtedly object to the necessity of maintaining teachers and laboratories for these subjects, and in some institutions want of space forms a serious obstacle to class and laboratory work; but although these arguments are cogent they should not be allowed to reduce the utility of the first year of medical studies. Still less should such considerations be permitted to account for the presentation to the medical profession and to the public of discussions which, whether termed quarrels, differences of opinion, or friction, are deeply to be deplored.

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The Employment of Children Act.

THE Employment of Children Act, 1903, which will come into operation on Jan. 1st, 1904, is a measure the scope and complexity of which are equalled by the importance to the nation of the subject with which it is concerned. Its general outline is simple as becomes its practical character. It provides that no child may be employed in work for wages under 11 years of age. Between the age of 11 and 14 years labour is allowed under regulations. The statutory working time must come within the hours of 6 A.M. and 9 P.M. No employment which is believed or proved to be injurious to the individual may be carried on. A significant feature in the Act is the large discretionary powers which it places not without deliberation in the hands of local authorities. They may vary working hours, grant or withhold licences to children, restrict or entirely prohibit street-trading by girls, prohibit labour in other trades by children under 14 years of age, regulate employment in theatres and music-halls up to the same age, and generally supervise and administer the whole conduct of child labour within the districts under their control. The necessity for the effective protection of juvenile workers is brought out in a report published by the inter-departmental committee on the employment of school children. According to this paper at least 200,000 children are being employed for profit in occupations not under Home Office inspection while attending school for the full time. Very many of these, probably 50,000, are earning wages during more than 20 hours a week in addition to 27½ hours at school. A considerable proportion of this number are employed for 30, 40, and even 50 hours a week and the effect of this work has proved in many cases to be injurious to their health, morals, and education, apart from the fact that it deprives them of that due amount of recreation without which the life of a child is no better than a term of unwholesome drudgery. The committee has, therefore, embodied its conclusions in a series of propositions to the Home Secretary and the new Act may be regarded as the outcome of its representations. Certain of its suggestions have been particularly brought by the Act under the notice of local authorities. These include the licensing of all children employed for profit, the prevention of work injurious to health, including the moving of heavy weights, the question whether systematic labour of any kind or street-trading should be permitted at all during the ordinary school age, and the inadvisability of allowing girls at any age, and especially under 16 years, to trade in the streets. All the witnesses who gave evidence before the committee spoke forcibly as to the mischievous effects on character which result from the employment of girls in this way. Some other occupations are, in the view of the committee, also undesirable for children on the evidence of witnesses examined by it. Among these are service in public-houses, in small laundries, and in the lower class barbers' shops. The committee further proposes that the employment of children in any calling should never exceed 20 hours a week, of which not more than eight are on Saturday, and that work before school, during the dinner hour, and after 8 P.M., as well as all Sunday work, should be disallowed. Whatever may be thought of the Act and of the suggestive corollaries by which it is accompanied it is sufficiently clear that they have not been scamped or hastily thrown together. They show throughout the signs of reflection founded on experience. They do not ignore the possible advantages which have led to the systematic employment of children in this and other countries. They do not ask that it should be done away with. All that they require is that the benefit should be real and that it should not be all on one side. It must not be of that spurious variety which consists of nothing more than making children temporarily profitable to their parents and employers without regard to their physical well-being, their education, and their moral character. Alike from the domestic and from the national point of view the years from six or seven up to 14 are not properly wage-getting years. They are years of development. In this period the man or woman is made if ever to be made. If those years are diverted from their natural purpose there can only be one result—a weakening in bodily health, in intelligence, and in the sense of moral obligation which gives tone and fibre to the conduct of life. For this reason we are unable to see how any but light work and comparatively little of that can be expected of children during the school period. Their proper work is to be trained and to train themselves. The statutory hours devoted to this purpose fill in the greater part of a day. Then there are meal-times, a reasonable interval for recreation, and, we must add—and this is very often forgotten—time for the preparation of school lessons at home. There can thus be little more than an hour or so per day for wage-earning save perhaps on Saturday and we should be sorry to see the whole of that day applied to money-making labour. We have no idea of proposing any cast-iron regulations but we do think it necessary that local authorities and all others concerned should regard this business of training as quite the most serious consideration during the period allotted to it. Not even parental necessities are entitled in the nature of things to find systematic relief at its expense. To use it for this purpose would be a suicidal policy, inasmuch as education, which is the future of the child and of the nation, may not be interfered with except at a loss which will fall on the next generation. We admit a lively sympathy with the recommendation that street-trading by girls should be restricted, if not prohibited. This is a form of employment for which little can be said. Its unsettled character and precarious remuneration are unfavourable features, while it implies in the case of girls obvious dangers and temptations. It has only one advantage—that it is carried on in the open air. If permitted there can be no question that it should be regulated with much greater care than has hitherto been the case.

The Rebuilding of St. Bartholomew's Hospital.

THE City of London, the very medulla of the greatest empire which the world has ever seen, has but one hospital. It was founded nearly 800 years ago by a pious citizen with the help of the donations of the charitable. It served the sick, the poor, and the maimed, whose interests were looked after by the Augustinian canons of the Priory of St. Bartholomew up to the time of the spoliation by Henry VIII., and after that time by the care and skill of laymen who gave their time and knowledge ungrudgingly. Generations have come and gone, buildings have decayed and have been restored, fire and pestilence have swept over London, and still St. Bartholomew's Hospital stands where it did as a memorial to all men of Rahere and of the charity which it is the special boast of Christendom to feel for the poorer brethren. But with increasing knowledge, increasing population, and increasing facilities for intercommunication there has come, as an inevitable sequel to the march of 800 years, the absolute necessity for expansion and for repair.

For years past the medical staff of the hospital has been impressing upon the governors the crying need that exists for new buildings and for more land upon which to erect them; and the present is a fitting opportunity for us to recapitulate what we have said upon previous occasions as to the position in which matters stand, especially as some of the communications made to the lay press and to our own columns have not helped in making the issues clear. The area of the existing site now occupied by St. Bartholomew's Hospital is about four and a half acres. When it was known that Christ's Hospital was going to be moved from the City it was hoped that a great part, if not all, of the site of that institution might be secured for its neighbour, but owing to lack of means the authorities of St. Bartholomew's Hospital considered that it was only possible to purchase a small portion of land—an area of between one and one-third and one and one-half of an acre. The sum paid for this, the amount being fixed by arbitration by Lord Balfour of Burleigh, was £238,781. St. Bartholomew's Hospital is therefore now in possession of some six acres of land upon which to erect new buildings and to renovate existing ones, so as to put in hand reforms which are not merely desirable but absolutely necessary. For this purpose the Mansion House Committee has decided to appeal to the public for a sum of £350,000. This amount, it is calculated, will provide new buildings and other adaptations which will suffice for the needs of the hospital—i.e., for the needs of the poor and necessitous whom it serves—for some 20 years to come. But the great and serious question remains:—Will such a tentative and partial scheme be satisfactory? In our opinion there can be but one answer to this, and that answer is No. We feel that it would be a wiser policy for those in whose hands lies the government of St. Bartholomew's Hospital to take a bold step forward, to acquiesce in the recommendation of the medical staff, and to make it their endeavour to purchase at least two more acres of land. Sir Trevor Lawrence, the treasurer of St. Bartholomew's Hospital, in response to much acrid and some ill-informed criticism, has replied in a letter, which appeared in the *Times* of Dec. 1st that the governors would be only too willing to purchase more land were it not financially impracticable. His view is that the governors "would be wholly without justification were they to ask the public to give them an additional £320,000 to buy a further two acres of Christ's Hospital site. Such a purchase would bring the cost of land and new buildings together to at least a million." We are certain, with the treasurer of St. Bartholomew's Hospital, that the governors would be willing to buy more land, for they must be quite as much impressed with the necessity of acquiring more land as we are ourselves. But where we join issue with him is in his assumption that such purchase is impracticable. The scheme of renovation as at present set out is a temporary one. It may provide for the present situation, it may even suffice for a quarter of a century; but then, in less than a generation, the trouble will recur. Although two generous donors—namely, Her Majesty the Queen and the Worshipful Company of Mercers—have already given £1000 respectively towards the building fund, while the Goldsmiths' Company has subscribed £2000, the great mass of the population, both rich and poor, have not yet been approached. Unless one or two millionaires seize this very favourable opportunity of linking their names with those of Rahere and Guy the money will be obtained from the ordinary hard-working citizen, and he is a very shrewd and practical person. Such a man will not give even £1 towards a scheme which can be justly described as imperfect and without finality. Let the governors and the Mansion House Committee be bold and appeal with confidence for £800 000 or even for £1,000,000. If the Wesleyan community could raise a like sum for the purchase of the site of the Westminster Aquarium and for erecting buildings on the same and elsewhere, surely the citizens of London, the people of the British Isles, to say nothing of those beyond the seas, could be at least asked to do the same. Patients come to St. Bartholomew's Hospital from all parts of this empire. The hospital has sent out its sons to battle with disease and death in every quarter of the globe. Surely before folding the hands and saying "it is impossible" an attempt might be made. If it should fail the hospital will be in no worse plight than it is at present and the governors would not be oppressed with the uneasy feeling that they might have succeeded had they made the attempt.

The Lord Mayor has promised to call a meeting of the citizens of London at the Mansion House on Jan. 26th, 1904, when the governors will lay before them the plans of the proposed renovations and the sum of money required. We can only reiterate our hope that the governors will propound a large scheme, as final in its effects as anything can be in this world, and one which will set upon a sure ground the ancient foundation of St. Bartholomew's Hospital. The hospital has played a noble part in solacing the sick and weary through many hundreds of years and for the furtherance of that merciful work is in sore need of money. The sum required is large; there are other charitable institutions which are in equal need of help; and St. Bartholomew's is a well-endowed charity. We know all this but we also know that a grave expenditure of money is necessary and that half measures will in the end prove an extravagance. We are sanguine that if it be only made plain that the renovation to be carried out will be thorough and lasting the money will be forthcoming from the largest and richest city in the world.

Annotations.

"Ne quid nimis."

THE FINAL REPORT OF THE ROYAL COMMISSION ON ARSENICAL POISONING.

The final report of the Royal Commission on Arsenical Poisoning now on the eve of publication contains many points of interest with which we shall deal in a subsequent issue. The report is a valuable, we may almost say exhaustive, document, so large an amount of ground does it cover. The first part comprises a discussion of the medical and public health aspects of the question of poisoning by small doses of arsenic introduced by way of food or drink, an examination of further facts regarding the epidemic of poisoning due to beer in 1900, and an account of the similar outbreak in Halifax in 1902. Another section is devoted to the question of tests for arsenic in food and in substances used in food preparations, while other sections deal in detail with the various ways in which articles of food and drink may be contaminated by arsenic in the absence of sufficient precautions. Information is also given with regard to the degrees of purity which are obtainable commercially. The commissioners conclude with a review of the unsatisfactory condition of the present law and its administration in respect of food and drugs and make a series of important recommendations to secure improvement. In this brief *résumé* we have said enough to show not only that the report is a thoroughly interesting and valuable one but that the medical profession will expect legislation upon the lines of the recommendations of the commissioners.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

It may be within the knowledge of our readers that two years ago King Edward's Hospital Fund felt constrained to refuse a grant to that excellent charity the Royal Westminster Ophthalmic Hospital because of the unfortunate environment in which its splendid scientific work was being done. The building was terribly out of date and out of repair. Those responsible for the hospital were perfectly aware of its plight and bravely set to work to face the situation. They constructed an entirely new out-patient department on modern lines, enlarged and improved the wards, and generally perfected their building for its great objects. The visitors in connexion with King Edward's Hospital Fund, having seen the improvements, made a *satisfactory report upon the hospital*, the result being the grant from the Fund of a substantial sum; but the work of repair has cost the hospital much money and the charity, it must be remembered, is a poor one, for only poverty had prevented the management from making the improvements before. We understand that a sum of £2500 is due to the bankers. The comparatively modest wants of the Royal Westminster Ophthalmic Hospital ought not to go without response; an admirable charity, with which some of the chief ophthalmic surgeons of the country have been connected, and which is doing, and for many years has done, most valuable work among the poor ought not to seek assistance from the public in vain.

RADIUM AND TRANSMUTATION.

Radium still occupies the premier position as regards research and attention by scientific men And no wonder need be expressed that such is the case considering that as its properties are studied fresh revelations of a most remarkable kind are made. These revelations will be received with joy by those who cherish the view that the elements, in spite of their diversities of character, are after all but transmutations of one stuff. The hypothesis is attractive and several important and modern lines of research have been directed towards raising it to the dignity of theory if not to ascertained fact. In this connexion Sir William Crookes's investigations on radiant matter rank first. By his brilliant researches he was at length able to say, "we have actually touched the borderland where matter and force seem to merge in one another." Then came the recognition of radiant matter as electrons. In the meantime that wonderful property of certain elements—radio-activity—was being very carefully investigated, until at last perseverance and skill were rewarded in the discovery of that mysterious element now known as radium. The discovery of the x rays was a great stimulus to this path of research. Apparently remote, however, from the study of radiant phenomena was the discovery of argon in the atmosphere which in its turn led to the discovery of helium. As a matter of fact the most remarkable property of radium would probably have escaped observation had not helium been discovered and its properties made known. The energy manifested by radium is not due to radium at all but to the radio-active emanation which it produces from itself and these emanations would appear to be inert gases, perhaps argon or members of the argon group. The fact that helium was found in minerals containing uranium suggested that helium might be connected in some way with radio-activity. Eventually Sir William Ramsay and Mr. Frederic Soddy showed that though the fresh emanations from radium did not exhibit the spectrum of helium, yet as the radio-activity dies down helium is produced in small but in ever-increasing quantities. Helium would thus appear to have been born so to speak out of the emanations. Are these emanations related closely to the primordial matter, out of which all the elements known to chemistry by process of ages have been elaborated? We are thus brought face to face with the old theory of transmutation and a fresh light is thrown upon the genesis of the elements. Nature would seem to abhor elements of high atomic weights and her tendency is to resolve them gradually into elements of lower atomic weights. Just in the same way complex molecules in the organic world tend to break up into simpler substances. The great life processes elaborate complex materials, but as soon as these processes cease there is a resolution into simpler products accompanied by a loss of energy. Is it a kindred process in the inorganic world and are the elements of high atomic weight slowly disintegrating in favour of elements of lower atomic weight? If so, the dream of the alchemist may after all be realised. Gold is possibly being slowly resolved into copper or metals of a lower atomic weight than itself by a process of natural decay but transformation of copper into gold is by natural agencies improbable. According to this view some explanation may be found of the existence in nature of the metals known as noble in limited quantities; unless a method is forthcoming, however, by which the reverse process becomes possible gold may for ever remain a standard of currency as its dissolution would be so slow. The native amount may diminish but not sensibly in a very great period of time. If by artificial means, however, what appears to be the natural tendency can be overcome and reversed copper or tin or lead may be resolved into gold. Theoretically, such an accomplishment may come to be no more wonderful than is the building up of sugar or alcohol from its elements at the present time. Apart from speculating it is a wonderful thing that radium has shown that there exist in nature minerals containing elements of high atomic weight which have a tendency to crumble, so to speak, into elements of a lower atomic value, in consequence of which possibly the distribution of elements of relatively low atomic value, such as hydrogen, sodium, silicon, and oxygen, is common. This view leads us, naturally, to wonder whether the noble elements exist at all in burnt-out worlds.

DISTRICT COUNCILS AND SANATORIUMS FOR CONSUMPTION.

A Local Government Board inquiry of considerable significance and importance as regards the future development of the sanatorium movement was held last week at Swindon. The occasion for the inquiry was an application on the part of the Cirencester and Highworth rural district councils for sanction to borrow £250 each in order to make a capital contribution to the funds of the Winsley Sanatorium which is at the present time in course of erection at Winsley, near Bath, for cases of pulmonary tuberculosis occurring in persons other than paupers who are resident in one of the three counties of Gloucestershire, Somersetshire, or Wiltshire, or in the city of Bristol. Special interest attaches to the inquiry in that it is the first of its kind which has ever been held and if the Local Government Board sees fit to sanction the loans in question a precedent will have been created which is likely to be somewhat widely followed. In each case the capital sum referred to will secure to the contributing authority a right to nominate a suitable patient to the sanatorium subject to an annual payment by the contributing authority of £65. Such contribution will also enable each of the rural district councils to nominate a trustee for the land and building and to appoint a member of the committee of management. Some discussion took place at the inquiry as to the period over which the repayment of the loan should be spread and it appears that both district councils were prepared to accept the suggestion of the Local Government Board that as the arrangement between the sanatorium authorities and the district councils could be terminated by the district councils at any time after the expiration of five years the borrowed money should be repaid within that period. Probably there would have been no objection to sanctioning a loan for a longer period than five years had the arrangement between the district councils and the sanatorium trustees been permanently binding. The capital sum proposed in this case is certainly moderate for a permanent stone structure such as is here in question and the annual payment of £65 is also eminently reasonable. Of course, if what is known as a "temporary" or wooden structure were being erected in this instance a charge of £250 would be excessive and it remains for the future to determine whether the elaborate stone building so common in Germany or the chalet system which is to be found in vogue in certain sanatoriums in this country is the more satisfactory or economical method of dealing in part with the problem of pulmonary tuberculosis. The Winsley Sanatorium is intended for the accommodation of 60 patients and already a considerable number of the beds have, it appears, been taken up by local authorities such as the Bristol, Bath, Gloucester, and Swindon town councils. In these cases, however, the capital contributions are presumably being paid out of the current rates and no application to borrow money has been made. The application here referred to was, we see in the local press, supported by, among other medical men, Dr. F. T. Bond, medical officer of health of the combined Gloucestershire districts; Dr. Lionel A. Weatherly, chairman of the executive committee of the sanatorium; and Mr. J. Tubb-Thomas, county medical officer of health of Wiltshire. Obviously the decision of the Local Government Board will be awaited with great interest and it seems to us that we have in these proposals a means whereby a small local authority with but little money to spare may make an important experiment with a minimum of expenditure and that in the future such experiments can either be terminated or indefinitely extended. So many exaggerated statements have been spread abroad as to the actual value of sanatorium treatment by those who do not grasp sufficiently the problem involved that it would be deplorable were small local authorities at once to embark upon elaborate and expensive schemes under the belief that they would by this means stamp out tuberculosis in their districts. In the past there has been much overstatement in other directions and unfortunately some of the chickens are now coming home to roost. It is for this reason that we are able cordially to support the scheme put forward by the Cirencester and Highworth rural district councils.

THE CASE OF DR. LACHLAN GRANT.

Another step in the dispute between the Ballachulish quarriers and the directors of the quarry company has been taken. On Nov. 16th a deputation of the quarriers had a meeting with three of the directors and with the secretary of the company. The directors submitted proposals to the men regarding the question of Dr. Lachlan Grant by which it was agreed that the men should be empowered to appoint their own medical man and that if they appointed Dr Grant the company would withdraw its interdict against him. To this the men agreed and as the labour questions had also been satisfactorily settled it appeared that the end of the long fight was close at hand. On Nov. 19th, however, the men's agents received word that the directors had met on the day previous and had withdrawn this offer. The men thereupon very pluckily refused all the terms offered, saying that they would stand by Dr. Grant, so that matters are still *in statu quo*. Of course, however, a great advantage has been gained by the men in that three at least of the directors have agreed to settle the medical question as the men wish and it is to be presumed that Colonel Malcolm, who seems to be the head and front of the pigheaded attitude taken up by the company, will before long find that he is not acting in the best interests of the shareholders, many of whom, it is stated, are beginning to feel disgusted at the manner in which their directors have acted. No praise can be too high for the honourable and faithful way in which the men have acted towards their medical man. We pointed out in our issue of Oct. 24th, p. 1180, that the company had conceded one point and we are certain that if the men hold out, and it seems certain that they will do so, the shareholders will insist on the matter being settled in the men's way with or without the coöperation of Colonel Malcolm.

THE CENTRAL MIDWIVES BOARD.

AT the last meeting of the Central Midwives Board letters were read from the clerk of the Worcestershire county council and the medical officer of health of the county borough of Croydon, inquiring whether illiterate women unable to sign their own names were eligible for enrolment under the Midwives Act. The secretary was instructed to reply that the Board had no option to refuse applications from illiterate women. A claim for enrolment on the ground of having been in *bonâ-fide* practice as midwife for the statutory period within the Commonwealth of Australia was also allowed, the Board deciding that there was nothing in the Act to limit the area of midwives' practice to the United Kingdom. The Board, on consideration of applications for certificates, passed the names of 213 women for entry on the official roll, 143 being admitted as having been in *bonâ-fide* practice as midwives for one year prior to July 31st, 1902. From the proceedings at the last meeting of the Midwives Board it looks to us as if the new and official midwives will include for some little time some of those persons whose undoubted failings supplied the arguments for legislation.

SUBPERITONEAL RUPTURE OF THE BLADDER WITH ANOMALOUS SYMPTOMS.

THE following case, published in the *Scottish Medical and Surgical Journal* for November by Dr. W. Stewart, is of interest on account of the great difficulty of diagnosis. A man, aged 40 years, who had been drinking heavily, was while walking seized with pain in the lower abdomen so severe that he fell. The pain continued and vomiting came on. On the fifth day he was admitted to hospital suffering from pain in the lower abdomen, most intense over McBurney's point. He had not retained food since the onset and the bowels had not acted but flatus was passed. He said that he had no difficulty in micturition. The pulse was 78 and the temperature was 96·8° F. There was a purpuric rash over the body. The lower abdomen was tender and distended. The distension evidently was due to a large swelling, resembling a six months gravid uterus displaced to the right, which extended from the pubes to the umbilicus and from the right iliac fossa to the left beyond the middle line. It was firm, dull, very tender, and distinctly margined. Rectal examination showed that it did not extend into the pelvis. He passed much urine without difficulty. A No. 10 rubber catheter was easily passed and about nine ounces of clear urine containing a few dark-brown granules were drawn off. The urine did not contain albumin or blood. An enema gave a good result. On the sixth day the pain was less, he still vomited, and there was occasional hiccough. Laparotomy was performed by an incision midway between the umbilicus and the anterior superior spine of the ilium and parallel to Poupart's ligament. On opening the peritoneum from two to three quarts of clear, yellow, inodorous fluid gushed out. There was no smell of urine. The incision exposed the edge of a dark, smooth swelling, about an inch in thickness, extending upwards to the umbilicus. A coil of congested small intestine was adherent to it by means of recent lymph. On incision the swelling showed only blood-stained tissue and extraperitoneal fat. No tear in the bladder could be discovered. The abdomen was washed out, drained, and closed. The patient recovered from the operation but became gradually weaker and died on the ninth day. The necropsy showed recent adhesions between the intestines and anterior abdominal wall. There was no fluid in the peritoneal cavity. In front of the peritoneum and behind the pubes to the right was an infiltration of the tissues with greenish-brown non-fœtid fluid. On incising the bladder an aperture of the size of a pea was found communicating with the retropubic infiltration. In this case ruptured bladder seemed to be excluded by the normal micturition and the withdrawal of a fair amount of urine by the catheter. The swelling was undoubtedly due to extravasated urine. Dr. Stewart thinks that it percolated by osmosis into the peritoneal cavity, which accounted for its loss of odour. He regards the case as a warning against delay, for if the swelling had been incised on admission the urine would have been drained off and would not have passed into the peritoneal cavity.

THE TREATMENT OF SURGICAL TUBERCULOSIS IN CHILDREN.

THE following resolutions have been passed by the Society for the Study of Disease in Children :—

1. The Society for the Study of Disease in Children desires to express the opinion that the conditions under which children suffering from surgical tuberculosis—that is to say, tuberculosis of bones, joints, glands, and skin—are treated at the present time are unsatisfactory in result and unscientific in plan.

2. The Society is convinced that the treatment of such cases in urban hospitals cannot be justified by the results, but is attended by much *unnecessary suffering* and by *many preventable deaths*. The present haphazard methods are not economical but lead to a wasteful expenditure of time and energy and of hospital funds.

3. The Society is of opinion that children suffering *from surgical tuberculosis* should not be treated in hospitals situated in cities or large towns, but in properly equipped institutions in the country or at the seaside, such hospitals to be devoted to the treatment *of such cases* only, in the same way as open-air sanatoria are devoted to the treatment of pulmonary tuberculosis.

4. The general principles upon which such a hospital should be conducted are as follows :—

   (*a*) *No child shall be considered too young* for admission into such a hospital and provision should therefore be made for the reception and care of infants.
   (*b*) A patient should *only* be *admitted* into such a hospital with the intention of treating the case to a termination—that is to say, that a patient should not be discharged from the institution *until, in the opinion of the surgeon*, the child has recovered or is proved to be incurable.
   (c) Special institutions should be provided for the segregation and care *of* cases pronounced *to be incurable.*

The Society for the Study of Disease in Children will find the members of the medical profession in agreement with its view. Who is going to pay for the erection and maintenance of these hospitals remains a question for discussion.

ANKYLOSTOMIASIS IN WESTPHALIA.

AN interesting report by Dr. J. S. Haldane upon ankylostomiasis in the Westphalian collieries has just been issued.[1] Ankylostomiasis is primarily a disease of tropical and subtropical countries but an outbreak at the Dalcoath mine, Cornwall, has recently been described by Dr. Haldane and Dr. A. E. Boycott,[2] and in Westphalia the disease has assumed considerable proportions during the last few years. Except for an isolated case reported in 1886 the first cases in this district were observed in 1892 and up to 1895 23 cases had been recorded. Last year, however, up to October no less than 1355 cases distributed among 69 collieries were met with. The German Government is now taking active steps to stamp out the disease. In every colliery at least 20 per cent. of the men employed underground are selected by a properly qualified medical inspector and their dejecta are examined by him on at least three occasions. Any man found to be infected is treated and is not allowed to resume work until he is free from the parasite If the mine should prove to be badly infected the whole of the men employed underground are examined and if necessary treated, every man who has been treated being re examined monthly for three months No new hands are allowed to be engaged unless first proved to be free from the disease In addition sanitary receptacles for the use of the men under ground have to be provided and are emptied and disinfected daily The sick men are treated in hospital and if they have dependents receive sick pay Rooms are provided at the colliery for the use of the inspector and three specimens from each sample of dejecta are examined microscopically The treatment usually adopted is as follows —The patient receives in the evening five grains of calomel and in the morning on an empty stomach from two to three drachms of extract of male fern, followed by another five grains of calomel in the afternoon On the third day a dose of calomel is given in the evening if required On the fourth day the dose of male fern is repeated in the morning and the calomel in the evening The fæces are then examined for ova on the next six days and if ova are not found the patient is discharged If ova be present the whole course of treatment is repeated Male fern seems to be preferred to thymol

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[1] Ankylostomiasis in Westphalian Collieries. Report to the Home Office, 1903.

[2] Journal of Hygiene, vol. iii., No. 1, 1903, p. 95.

EPSOM COLLEGE

THE governors of the Royal Medical Benevolent College unanimously decided at a large and representative general meeting held on Nov 26th, under the presidency of the Earl of Rosebery to change the name of the institution to "Epsom College' and to add the following sub-title to all documents issued from the office of the charitable side of the work in London "Established in 1855 as a Public School with a Royal Medical Foundation" It is a happy coincidence that the council should have selected the fiftieth anniversary of the laying of the foundation stone of the college at Epsom for proposing an alteration in the title which has for a long time appeared desirable to many governors intimately connected with the institution, and even those conservative supporters who have been disinclined to favour a change must grant that the council has given very careful thought to the matter before coming to a decision We have no hesitation in saying that to medical men "Epsom College" will always appeal as an institution quite as worthy of generous support as when it bore the now discarded title with the "superabundance of adjectives' as Lord Rosebery humorously described it a few years ago, and to the charitable public the objects of the benevolent side of the work will be perfectly clear in the sub title "Royal Medical Foundation" The new brief title is now linked with the foundation of the college by Mr Propert close upon 50 years ago, and prominence is given to the fact which has been stated in these columns time after time that the college is a public school able to hold its own amongst the great schools of the country, whether looked at from the point of view of educational results, of scientific equipment, or of successes in the playing fields It may be added that friends of the institution have hoped for years that in due course an adequate foundation will be established in order to make secure for all time the 50 pensionerships and the 50 foundation scholarships which have been maintained for many years, instead of leaving them dependent upon the precarious income derived from donations and annual subscriptions But the realisation of this hope rests almost entirely in the hands of members of the medical profession for whose benefit the institution was founded, and when making testamentary dispositions those of them who are well endowed with this world's goods should remember that their less fortunate brethren have a strong claim on their charity through the medium of this institution That the teaching and scientific equipment of the college are good is undoubted and we have frequently drawn attention of late to the educational successes As to the athletic work of the school, both the Prince of Wales, who recently paid a visit to the college, and the President, Lord Rosebery, who, as a neighbour, is often in the playing fields, have referred in warm terms to this important feature The college has certainly all that can be reasonably expected for the welfare of its scholars with its extensive playing fields, an excellent swimming bath which has recently been reconstructed at a cost of about £1000 a detached sanatorium, a well equipped laboratory enlarged only a year ago, a lecture theatre, a lower school capable of accommodating 100 junior boys, fives courts, a biological laboratory, a modern laundry, a carpenter's shop, and a system of drainage which has been carefully arranged under expert advice in recent years at great expense The fee charged for sons of those not members of the profession, 75 guineas, is a moderate one, sons of medical men obtain a reduction of 10 guineas, there are entrance scholarships of £30 a year, and there are "council exhibitions' for the sons of less fortunate members of the profession, which reduce the fee to 35 guineas We have already referred to the foundation scholarships for the necessitous sons of medical men, the holders of which are educated, clothed, and maintained free of cost Owing to the generosity of the hospital authorities there are numerous scholarships at the hospital schools in London ranging in value from 120 guineas to £150 and through the liberality of living and deceased friends of the college there are also a number of scholarships and exhibitions for science and classics from £30 to £60 in value for boys leaving to go to the universities With the foregoing advantages, with a college standing on high ground in its own estate of about 80 acres in a district renowned for the purity of its air, and with the removal of the "meaningless but distasteful word 'benevolent,'" as Lord Rosebery described it at the meeting, may we not safely echo the prophecy which his lordship uttered that the day of that meeting will mark a new era of prosperity in the history of Epsom College

KORSAKOFF'S DISEASE, OR PSYCHOSIS POLYNEURITICA, IN WOMEN

FIFTEEN years ago the late Professor Korsakoff of Moscow described an assemblage of symptoms met with most frequently among chronic alcoholic subjects which he termed "psychosis polyneuritica" The cardinal features of this affection, according to him, were peripheral neuritis, amnesia, and pseudo reminiscence (false memories of events which have not occurred in the patient's life) In the *Journal of Mental Science* for October Dr John Turner, assistant medical officer of Essex County Asylum, gives an account of 12 cases of psychosis polyneuritica occurring in women Recent observers who have studied the subject state that alcoholism is accountable for nearly three quarters of the cases of psychosis polyneuritica but that it also follows typhoid fever childbirth, pyæmia, and arsenical poisoning Oppenheim, however, states that he could find no cases with the characteristic psychic disturbances in other than alcoholic subjects The psychical disturbance present is a form of mental confusion of toxic origin Common features noted by many observers are the happy disposition and feeling of self satisfaction of the patient Soukhanoff and Boutenko,[1] analysing a total of 192 cases, personal and collected from literature, find that 112 were males and 80 were females. There was not much difference in the age of onset in either sex, the greater number of cases occurred in both sexes between the ages of 30 and 50 years All the cases in women and about 91 per cent. of the cases in men presented marked multiple neuritis. The 12 cases recorded by Dr. Turner all presented the cardinal features insisted on by Korsakoff and other writers—viz., amnesia, disturbances of the patient's notion as to his position in time and space (disorientation), false memories, and a tendency to invent fabulous explanations of real occurrences (confabulation). Probably in all the cases and certainly in ten, says Dr. Turner, peripheral neuritis was present. "Over-indulgence in alcohol was ascertained in ten and was highly probable in the other two." The speech was "thick" in two cases, "drowsy" in another, and normal in the rest. Jolly and Bonhoffer look upon Korsakoff's disease and delirium tremens as closely allied affections, for in addition to the mental confusion (delirium) there is often a condition of tremor and jactitation of the limbs and the patient seems to be suffering from visual hallucinations (of animals) and fright. Four of Dr. Turner's patients "partook largely at one period of their illness of symptoms of delirium tremens" with visual hallucinations. As regards prognosis two died after a month's and after four years' residence in the Essex County Asylum respectively, three of the cases remain unrecovered in the asylum, and seven out of the 12 cases were discharged but of these the memory remained seriously impaired in four, so that only three out of the 12 could be fairly regarded as recovered. Dr. Turner is inclined to agree with Jolly that the term "Korsakoff's disease" includes a definite group of morbid conditions fulfilling some of the conceptions of "a disease."

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[1] Journal of Mental Pathology, vol iv, 1902.

THE NATIONAL DENTAL HOSPITAL.

Mr. John Tweedy, President of the Royal College of Surgeons of England, presided at the annual dinner of the past and present students of the National Dental Hospital, which was held at the Trocadéro Restaurant, Piccadilly-circus, London, on Nov. 27th. Mr. Tweedy, in the course of proposing the toast of "The National Dental Hospital and College," said that dentistry in the present day had reached a high plane of excellence. In his opinion the spirit that animated the practitioners of dentistry was different from that which he had noticed in his youth. In those days, referring particularly to the country districts, the blacksmith was very often the only person who had any pretension to the practice of drawing teeth. The spirit in which the modern dentist worked was that of the man of science and the philosopher, for his endeavours were directed not only to the well-being of his patients but also to the common good of the whole of the community. Mr. Tweedy, continuing, said that it was recognised by all that the practitioners of dentistry were actuated by the highest and best of all motives and he rejoiced to observe how highly their skill and knowledge were appreciated. In regard to the history of dentistry Mr. Tweedy had something to say on the authority of Herodotus who wrote in the fifth century before Christ. Herodotus said that in ancient Egypt medicine was practised on a system of separation—that is to say, a physician treated one disease and no more. Amongst these specialists were those who treated diseases of the teeth. Recent researches in the rich archæology of Egypt were considered to have confirmed the statement of Herodotus in this matter as in others. It has been said that mummies had been found whose teeth had been stopped with gold. That had been a cherished belief of Mr. Tweedy for many years but when he came to that dinner he was informed by Mr. C. S. Tomes, who he was sorry to say had become imbued with the iconoclastic and critical spirit of the age, that after inquiring into the evidence in regard to the existence of teeth of mummies which had been stopped with gold he found it rested on no better testimony than that of a dealer in mummies who had a skull to sell with teeth treated in the manner described. Mr. Tweedy said that in spite of Mr. Tomes he was going to believe in Herodotus and whether teeth were stopped with gold in the days of Herodotus or not it was certain that from the fifth century before Christ to recent times there had been little progress in dentistry. Embryology, histology, and chemistry had all increased the power of the dentist when dealing with diseases of the teeth, not merely when disease had occurred, but also in the prevention of such affections. Among the other speakers were the Dean of the College, Mr. P. Sidney Spokes, Mr. Tomes, F.R.S., Mr. G. H. New, Mr. G. W. Geekie, Mr. K. W. Goadby, Mr. A. S. Underwood, and Mr. W. Rushton.

BRITISH MEDICAL ASSOCIATION: THE FORTHCOMING MEETING AT OXFORD.

CONSIDERABLE interest has already been awakened in the University of Oxford with regard to the approaching meeting of the British Medical Association which is to be held in Oxford in July, 1904. Preparations are actively progressing in all the sections and as regards the section of pathology special steps are being taken to insure the success of the meeting. It is hoped also to make the museum of this section of interest to all the sections and as it will be arranged in the dissecting room of the department of human anatomy in the University museum it will be easily accessible and will be in contiguity to the meeting places of the sections. The local committee has drawn up a letter, a copy of which will, it is hoped, shortly be in the hands of every member of the Association, but in case it should fail to reach anybody we are requested to give its main contents in our columns. The museum will be arranged under the following headings :—

1. Specimens and photographs illustrating the latest advances in Medicine, Surgery, and Pathology.
2. Instruments for X-ray Work and Skiagraphs.
3. Colour Photography as applied to Medical, Surgical, and Pathological Work.
4. Micro-photographs and instruments for Micro-photography.
5. Instruments for Clinical Diagnosis.
6. Surgical Anatomy.

Provision will also be made for specimens bearing on any of the discussions in the various sections.

The local committee desires the coöperation of members of the association and will be glad to hear if any member is desirous of contributing to the museum. The committee will be glad to hear if there is any subject not mentioned above in which members are specially interested. It is anxious to arrange demonstrations of apparatus and specimens during the meeting. Other information may be had from the secretary of the local committee, Dr. E. W. Ainley Walker, University College, Oxford.

THE METROPOLITAN ASYLUMS BOARD AND SANATORIUMS FOR CONSUMPTIVES.

IN THE LANCET of Nov. 21st we noticed in a leading article the question of the establishment of sanatoriums by the Metropolitan Asylums Board for the treatment of consumptive persons. The matter was again discussed at a meeting of the Board on Nov. 28th, being brought up in the form of a report from the General Purposes Committee with reference to the resolutions passed by the metropolitan branch of the Incorporated Society of Medical Officers of Health in favour of the establishment by the Board of sanatoriums for consumptives.[1] A communication was also read from the Local Government Board inclosing a copy of a letter on the same subject which that department had received from the Poplar board of guardians in which the Local Government Board sought for the observations of the managers of the Metropolitan Asylums Board. The committee stated that it had given careful consideration to the whole question and to the representations made in the several communications which had been addressed to it on the subject from time to time during the past two years and it had come to the conclusion that the question of the establishment of sanatoriums for consumptive patients was one which called for an authoritative expression of opinion on the part of the Local Government Board. It accordingly recommended:—

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[1] THE LANCET, Nov. 21st, 1903, p. 1444.

> question of the pro-
> ve patients and the
> rd and the various
> of health in regard
> thereto, are of opinion that the matter is one of such vital and far-reaching importance to the community at large and one which, if adopted by the managers, would entail so considerable an extension of their duties and responsibilities and so large an increase in their expenditure as to call for some authoritative expression of opinion by the chief health authority of the country—viz., the Local Government Board—before the managers are asked to take any definite action in the matter or to make any further inquiries in regard thereto; and that the Local Government Board, the several boards of guardians, the borough councils, and the medical officers of health be so informed.

The report and recommendations of the committee were adopted by the Metropolitan Asylums Board which now awaits, as we think very properly, the lead of the Government department which has charge of the health of the country.

HERTER LECTURES.

FOR a number of years Dr. C. A. Herter has given a course of lectures on pathological chemistry in the University and Bellevue Hospital Medical College, New York. On retirement from his work there, on receiving the appointment of professor of pharmacology at the Columbia University, he was desirous of perpetuating the course in his old college. To this end he has endowed a lectureship which, we understand, is to be offered annually to others who have made their names in this department of science. Professor W. D. Halliburton, of King's College, London, has been selected to give the lectures in the coming year and he has chosen as his subject the Bio chemistry of Muscle and Nerve. The lectures will commence on Jan. 4th, 1904.

A TESTIMONIAL, consisting of an illuminated address and a silver plate embossed with the arms of the Swiss cantons, was presented to Professor Arthur Gamgee on Nov. 23rd as a token of gratification on the part of his many friends, including his British colleagues in Montreux, on the occasion of his recently receiving the degree of LL D. from the University of Edinburgh. In the few appropriate words with which Professor Gamgee expressed his gratification at so warm an expression of kindly feeling he took occasion to remark on the good feeling which prevailed generally among members of the British medical profession, in which respect they compared favourably with their foreign colleagues.

AT a recent meeting of the subscribers to the proposed testimonial to Dr. T. Henry Green on the occasion of his promotion to the position of consulting physician to Charing Cross Hospital it was decided that it should take the form of a prize in clinical medicine. The contributions have already reached a handsome sum and the list will presently be closed, but those of Dr. Green's old pupils and other friends who may not have had an opportunity of contributing may still do so by communicating with Dr. C. J. Woollett, Ambleside, Streatham, London, S.W., the honorary treasurer of the fund.

AT the usual annual meeting of the Royal Society held on Nov. 30th (St. Andrew's Day) Sir Archibald Geikie was chosen as successor to Sir Michael Foster as joint secretary of the society. An influentially signed letter supporting the apointment of Professor W. D. Halliburton was published but Sir Archibald Geikie, the official candidate, was successful by a large majority. Professor Halliburton and Professor Rose Bradford were elected members of the council of the society.

A DEMONSTRATION has been arranged on Saturday, Dec. 5th, at 11 A.M. at the South-Western Polytechnic, Manresa-road, Chelsea, to illustrate the various systems of physical exercises at present in use in schools. Lessons of a quarter of an hour's duration will be given in the German system, Ling's Swedish system, English military drill, musical drill, and the model course. All who are interested in physical education are invited to attend.

THE medical officer of health of Cape Colony states that for the week ending Nov. 7th no case of bubonic plague was discovered throughout the colony. Plague-infected rats were found at Port Elizabeth, Knysna, and at Queenstown. As regards the Mauritius a telegram from the Acting Governor, received at the Colonial Office on Nov. 27th, states that for the week ending Nov. 26th there were 77 cases of plague and 41 deaths from the disease.

Dr. Louis Sambon, lecturer at the London School of Tropical Medicine, will read a paper on Sleeping Sickness before the Epidemiological Society of London on Friday, Dec. 11th, at 11, Chandos-street, Cavendish-square, W., at 8.30 P.M. Dr. Sambon is now in Paris studying the cases of sleeping sickness which have recently been brought over from Uganda and it is hoped that a good discussion will follow the reading of the paper.

THE committee of the Macedonian Relief Fund has received an anonymous offer to subscribe the sum of £1000 conditionally upon the total amount subscribed direct to the fund by Jan. 1st, 1904, reaching £20,000. Recent cables published by the Macedonian Relief Fund describe terrible distress in the regions south of Monastir.

THE annual dinner of the Otological Society of the United Kingdom will be held at the Trocadéro Restaurant, Piccadilly, London, W., on Monday next, Dec. 7th, at 7.30 P.M. The chair will be taken by the President of the society, Dr. Urban Pritchard, and a good attendance is anticipated.

MEMBERS of the medical profession should know that copies of the recent digest of the criticisms on the British Pharmacopœia, 1898, may be obtained from the publishers of the General Medical Council, Messrs. Spottiswoode and Co., 54, Gracechurch-street, London, E C., price 1*s*., or post free 1*s*. 1*d*.

IT is proposed to form a Masonic Lodge in connexion with the University of Durham, which will hold its meetings in London, and those who are interested in the project are requested to communicate with Dr. Frederick Spicer, 17, Wimpole street, London, W., as soon as possible.

Sir Patrick Manson is announced to deliver an address at the London School of Tropical Medicine at 3 P.M. on Monday next, Dec. 7th. The address will form a *résumé* of the past and present work of the school, with indications of what it is hoped the school will do in the future.

THE annual dinner of the Royal Free Hospital and London School of Medicine for Women will be held at the Hotel Cecil, Strand, London, W.C., on Tuesday, Dec. 15th, at 7.15 P.M.

THE King has appointed Dr. George Turner, medical officer of health, to be a Member of the Legislative Council of the Colony of the Transvaal.

Sir Hermann Weber delivered an interesting lecture on Thursday last at the Royal College of Physicians of London on the Prolongation of Life.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THURSDAY, NOV. 26TH.

THE third meeting of the session took place to-day, when Sir WILLIAM TURNER, K.C.B., again presided.

Dental Business.

The Executive Committee presented the following report on the dental business transacted since the last session of the Council, viz :—

> (1) The prescribed conditions having been duly fulfilled in each case, the names of the undermentioned persons have been restored to the Dentists Register from which they had been erased in conformity with the provisions of Section 12 of the Dentists Act, 1878: John J. Atwood, Alfred T. Broadlick, Joe E. Brook, David Cormack, George G. Forster, Albert E. Mallan, Leonard Mathison, Albert Miles, Arthur H. Smith, Irwin B. Street, Henry W. Watson, Frederick Wells, Charles W. Whiteley.
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> (2) The Committee received from the Foreign Office, through the Colonial Office, and entered on its minutes, information in regard to the position of qualified British dentists in the German Empire.
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> (3) The Committee considered an application from an unregistered dentist for the reconsideration of his application for registration as a dentist under Section 37 of the Dentists Act, which raises a point of law in regard to certain apprentices, and resolved: "That the application with accompanying documents be referred to the General Council for its consideration."
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> (4) An application from another unregistered dentist was also considered and it was resolved: "That the Executive Committee do not recommend the Council to accede to Mr. Spero's application."
>
> (5) The Committee received from the Privy Council Office copies of Royal decrees republishing sanitary laws in force in the Netherlands, which were entered on its minutes and which show, *inter alia*, the position of British dentists in the Netherlands.

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, the report was received and entered in the minutes.

The Council then dealt with the case referred to it by the Executive Committee—namely, the application from Mr. I. E. Bush of Melksham, Wilts, for the reconsideration of his application for registration as a dentist under Section 37 of the Dentists Act, 1878. This section deals with the case of dentists in practice prior to the passing of the Act and apprentices.

Mr. TOMES explained in detail the action of the Council in administering the section and the effect of the judgment of Mr. Justice Hawkins and Mr. Justice Wright in the Spero case. In the case of apprentices it was decided that the period of grace expired on August 1st, 1879, while the apprenticeship of Mr. Bush expired three weeks later than that date. The man to whom he was apprenticed did not register, but in a statutory declaration he described himself as a "pharmacist and dental practitioner" and said that he gave to Mr. Bush as efficient an education in dental practice as he then knew. Mr. Bush had practised as a chemist for all the period of the Dentists Act and so lately as 1889 he passed the minor examination of the Pharmaceutical Society and became registered as a chemist and druggist. In 1896 the Executive Committee recommended Mr. Bush for registration but the Council did not approve the recommendation.

The PRESIDENT: Have you any motion to move?

Mr. TOMES: I move that the application be not acceded to.

Dr. MACALISTER: I second it.

This motion was put from the chair and at once agreed to.

The Case of Mr. Allan Douglas Cameron.

The Council proceeded to the consideration of the case of Allan Douglas Cameron, registered as of Durban, Natal, with the triple qualification of Scotland, 1899, who had been summoned to appear before the Council to answer the following charge, as formulated by the Council's solicitor:—

> That you abused your position as a medical man by committing adultery with a patient—namely, Mrs. Tothill, a married woman whom you had been attending professionally, of which adultery you were found guilty by the decree of the Probate, Divorce, and Admiralty Division (Divorce) of the High Court of Justice, dated July 28th, 1903, in the case of Tothill *v.* Tothill and Cameron, in which you were the co-respondent.

The complainant was Mr. Charles Tothill.

Mr. Cameron did not attend, the PRESIDENT saying that he had been informed that he was at present in India.

Mr. LEWIS E. FAWCUS, solicitor, appeared on behalf of the complainant. He read a statutory declaration made by his client, stating among other things that Mr. Cameron attended his wife in Durban and also in this country and expressing his opinion that the case was a flagrant one of breach of professional confidence. Mr. Fawcus handed in a transcript of the shorthand notes of the proceedings in the Divorce Court.

Mr. JOHN TOTHILL, a brother of the complainant, gave evidence to the effect that Mr. Cameron was introduced to the family as the medical attendant of Mrs. Tothill.

The Council deliberated in private for a time and thereafter the PRESIDENT announced that the Council had judged Mr. Cameron to have been guilty of infamous conduct in a professional respect and had directed the Registrar to erase his name from the Medical Register.

The Case of Mr. Robert Fawcitt Granger.

The Council next proceeded with the case of Robert Fawcitt Granger, registered as of 85, Church-street, Whitby, with the triple qualification of Scotland, 1889, who had been summoned to appear in consequence of his conviction at Plymouth, on Sept. 16th last, of the offence of unlawfully and wilfully neglecting his three children.

Mr. WINTERBOTHAM, the Council's solicitor, explained that the trial lasted two days and it was shown that the offence had resulted from intemperance on the part of the parents and both Mr. Granger and his wife were sent to prison for two months each, the children meanwhile to remain in the workhouse.

Mr. GRANGER, at the request of the President, read a letter sent by him on Nov. 17th to the Council's solicitor. In this he declared that the statements which had been made by witnesses at the trial had been animated by strong feelings of dislike against him and his wife. The case had been greatly exaggerated. He had no means with which to procure drink and if there was a little neglect of the children, one of whom was unmanageable, it arose from thoughtlessness, not wilfulness. He trusted that the Council would take a lenient view of the case as it would be a serious matter for his wife and family if it did not.

In answer to questions Mr. GRANGER said that the district in which he lived was a very poor one and the children would play in the streets. They might thus now and again get dirty, but he did his best to keep the boys clean and his wife and he robbed themselves to give them food. He had been in Plymouth since August a year ago, but there was very little to be earned. In five weeks he had only made 1s. He was trying to do his best until most of his furniture was taken away under distraint. It was true that silk dresses had been seen in a bedroom, but his wife had got these five years ago or more; she had got none during the last three or four years and her jewellery and his and some of his books had to be sold to get food and to keep a home together. He had not tasted spirits this year and only had a glass or two of beer a day. He had been in practice at Whitby, Yorkshire, before going to Plymouth. He had left Whitby because of family troubles.

Mr. GEORGE FREDERICK WATTS, an officer of the Royal Society for the Prevention of Cruelty to Children, gave evidence that the statements on which that society prosecuted the Grangers were true. The report was that they drank but he did not see them drink.

Dr. MCVAIL wished to know what was the cause of the great decline in the social status of the Grangers in three or four years and was there any reasonable ground for believing that that cause was not likely to arise again?

The PRESIDENT: If Mr. Granger were to tell us that he has become a total abstainer.

Mr. GRANGER: I admit a glass or two of beer a day but I have not tasted spirits this year. If I can do without spirits I can do without malt liquor. If the beer is to be a drawback I will give it up as well.

After the Council had deliberated in private

The PRESIDENT announced the decision. Addressing Mr. Granger he said: The Council has had to summon you in connexion with a conviction and I think you know perfectly well what it is that led to your being convicted—that your habits were such as had reduced you to this state of absolute impecuniosity that has been described to us in the evidence. The Council has very carefully considered your case and they are willing to give you an opportunity to redeem yourself. Now, in order to do that I should say, speaking to you as an individual, that there is only one course open to you and that is to cease to take alcoholic drink of all kinds. Well, the

Council has resolved to give you an opportunity of redeeming yourself and you will have to appear here when the Council meets in May next and will have to produce satisfactory evidence in the way of certificates from persons upon whose word we can rely that you have ceased the bad habits you have been indulging in, and the Council will be prepared to say whether they will allow you to have your name retained on the Medical Register. We give you six months' probation.

In answer to Mr. GRANGER

The PRESIDENT said that of course in the interval he could go on practising.

Mr. GRANGER: Thank you.

The Case of Mr. David Barnett Bradlaw.

This was a case of consideration of the facts proved against David Barnett Bradlaw registered as of 4, Harrington-street, Dublin, Lic., Lic. Midwif. 1899, R. Coll. Phys. Irel., Lic., Lic. Midwif. 1899, R. Coll. Surg. Irel. Mr. Bradlaw was summoned to appear before the Council in May last to answer a charge formulated by the Council's solicitor as follows:—

> That you, being a registered m[illegible] yourself in dental practice with [illegible] t the dental practice carried on at [illegible] oresaid is extensively advertised by pamphlets and in newspapers and otherwise.

At the close of the hearing of this charge the Council found it proved but adjourned further consideration for six months in order to give Mr. Bradlaw the opportunity of remodelling his business conduct to its satisfaction.

On the case being called to-day Mr. D Barnett Bradlaw appeared for himself and Mr. R. W. Turner, instructed by Messrs. Bowman and Curtis-Hayward, solicitors, for the British Dental Association.

Mr. BRADLAW, in answer to the President, said that he had written to the Council's solicitor. The letter stated that his brother (Mr. H. J. Bradlaw) had ceased to practise at the address in Inverness-terrace and that he (Mr. D. B Bradlaw) had conducted his practice in accordance with the best traditions of the profession. He had nothing to add to that.

Mr. TURNER said that there was every reason to believe that since May last Mr. Bradlaw had conducted his practice in a proper manner and that the issue of the objectionable advertisements in connexion with the Inverness-terrace address had ceased.

The PRESIDENT, after the Council had deliberated in private, addressing Mr. Bradlaw said: The Council having given a further consideration to the facts proved against you do not judge you guilty of infamous conduct in a professional respect.

Mr BRADLAW: Thank you.

The Case of Mr. Louis Edward Delmege

The next case dealt with was that of Louis Edward Delmege, registered as of Fern Bank, Burton, Westmoreland, Lic. R. Coll. Surg. Irel. 1877, Lic. R Coll. Phys. Edin 1879, who had been summoned to appear before the Council in consequence of his conviction before an interim sheriff-substitute of Lanarkshire at Glasgow on Sept. 30th last of the offence of desertion of his wife and child, for which he was sentenced to imprisonment for 40 days.

Mr. Delmege appeared with his solicitor, Mr F. J. Shaw.

Mr. SHAW explained that Mr. Delmege had married a Creole lady in Jamaica but the marital life had turned out unsuccessful and he had not only had to give up his practice in the island in question but had lost upwards of £2000. After a visit to the West Coast of Africa he came to England but in March last the state of things came to be such that a separation was agreed to, Mr Delmege consenting to allow his wife £10 a month. She left their house but he had to go abroad. On his arrival at Madeira he communicated with his wife but finding that there was not much prospect of work at Madeira he returned to England. Meanwhile, [illegible] of the deed of separation were [illegible] it to Glasgow, where she had [illegible] and child on the parish." Mr. Delmege was arrested in London on Sept. 19th. At his trial he was unassisted. He had been advised to be represented by a legal practitioner, but he thought that with the correspondence in connexion with the separation the case was a safe one for him. He (Mr. Shaw) was told there was good reason to think that the conviction was faulty and that it could be quashed but that could be brought about only at an expense of about £250 which Mr. Delmege was reluctant to incur.

Mr. P. CARROLL, *clerk to Mr. Shaw, gave evidence* showing that Mrs. Delmege had agreed to everything proposed and all was done except the revision of the deed. She had consented to the withdrawal of all accusations made by her against her husband. Mr. Delmege had no knowledge of the warrant and he was arrested in Guildford-street, London, by two Scotch detectives and taken to Scotland by them. Witness could not tell how it was the warrant could be operative out of Scotland but it was used in London and the police paid the expense of conveying Mr. Delmege to Glasgow.

Sir JOHN BATTY TUKE said that it was the most extraordinary thing he had heard of if the Scotch police took the trouble and expense of sending two detectives from Glasgow to London without having the warrant backed by an English magistrate.

The PRESIDENT: I do not think that a warrant issued in London would have run in Glasgow.

After a brief deliberation of the Council in private,

The PRESIDENT said: Mr. Delmege, after hearing your case the Council has decided not to erase your name from the Medical Register.

The Council concluded the day's sitting *in camerâ.*

FRIDAY, NOV. 27TH.

The Council met again to-day, Sir WILLIAM TURNER presiding.

Primary Examinations: Special Committee Appointed.

Mr. BRYANT, chairman of the Examination Committee, presented to the Council three reports on the inspection of the primary examinations—one with reference to the Scottish Conjoint Board, another with reference to the Irish Conjoint Board, and the third "on the whole series of inspections of primary examinations." Each of the reports was formally received and ordered to be entered in the minutes.

R[illegible] ON THE REPORT BY THE [illegible] CHEMISTRY, PHYSICS, [illegible] BOARD IN SCOTLAND [illegible] AND SURGEONS OF [illegible] PHYSICIANS AND [illegible] TRIPLE BOARD [illegible] 4TH, 1903

[illegible] which was [illegible] al arrange- [illegible] and an oral [illegible] wers of the [illegible] presented [illegible] three classes.

Two examiners attended for each subject and the papers were divided between them. If the examiner who read any paper considered it to be worth 40 per cent or more, the other examiner did not read it But if a lower percentage was awarded by the reader of the paper then his brother examiner had also to read it and a joint mark was agreed upon. [illegible] 15 minutes at least was allowed to each [illegible]

The paper in elementary biology consisted of four questions and [illegible] of these had to be answered. The questions were well [illegible] ors, to ascertain the knowledge of [illegible] candidates. The marking was [illegible] the other written parts of the [illegible] opinion of the visitors, was not a [illegible] the paper is the least important [illegible] ion that the standard can well be [illegible] rt, and the easiest part, of the [illegible] s no more than 20 per cent in this part he must make 60 per cent. at the least in the oral in order to [illegible] ground which he has lost

The examination in physics is distinct from the examination in chemistry; it is conducted by different examiners with a separate paper. The value accorded to it is equal to the value assigned to the chemistry examination. The synopsis is ample and the details are well selected.

In the paper were four questions; three only were to be answered, of which the question on magnetism was one. The paper was considered by the visitors to be an easy one.

The oral examination lasted 15 minutes for each candidate and a variety of apparatus was on the table for use, out of which each candidate was shown a selection of three or four pieces. In each case he was asked what it was and how it acted. He was required to fit one part to another and to explain its working and to show how it was used and for what purposes it was practically employed and generally to explain the principles which underlie its action.

"The cross-examination brought out very clearly whether the candidate had an effective knowledge or whether he had merely a m[illegible] of book work."

[illegible] being too severe.

[illegible] sisted of a paper and an oral examination which lasted from 15 to 20 minutes, with a short practical examination occupying from five to ten minutes.

[illegible] red by the visitors to be sufficient for [illegible] mistry and to have been well drafted; but [illegible] of "the practical portion," which "consists of a single sentence, "does not indicate to the student the necessity of becoming acquainted with the way to perform any chemical operations or experimental work. This portion of the syllabus is totally inadequate."

The chemistry paper consisted of four questions, of which three were to be answered; the questions were considered by the visitors to be easy. The marking was fair in the higher numbers and very lenient in the lower numbers

The oral examination was searching and an abundant supply and variety of chemical substances were placed on the table. Each candidate was shown three or four specimens in succession and he was asked to say on their inspection what each was, what its formula was, how it was prepared, and what were its properties. Indeed, a kind of cross-examination was made and so conducted as to show whether the candidate had an effective and intelligent knowledge of the subject. This part of the examination is said by the visitors to have been admirably conducted.

The practical examination, which lasted about six or seven minutes, followed, "and, since the function of examinations is to secure efficient teaching and to ascertain whether the candidate has profited by the teaching," the visitors' decided opinion is "that the practical examination fails to perform this function and that the candidates were in many cases neither trained to understand experimental methods and chemical manipulations, nor to perform any chemical work which would be useful to them in after life or as an introduction to the study of physiological chemistry."

The visitors give a complete account of the examination of a single student to make the method of examination clear. It is interesting reading.

The committee of management of the Scotch triple qualification, in their reply to the visitors' report, recognise gladly the favourable opinion given upon the conduct of the examination by the visitors and that the examination was carried out to their satisfaction except in the department of practical chemistry. As regards that department the committee of management admit that it is not what they would desire. They recognise the fairness of the remarks made by the visitors and will give what effect they can to them.

The conclusions arrived at by the visitors are set forth in the following:—

"SUMMARY.

"1. The examination in systematic chemistry, like that in physics and biology, was carried out in an efficient, fair, and painstaking manner.

2. The oral examination, to which all candidates were subjected, was admirably carried out and is a most valuable feature of the examination.

3. The standard of the theoretical examination is a low one, but the percentage of marks in the oral examination is high for a pass and is a very satisfactory test of the candidates' knowledge.

4. The practical examination in chemistry is hardly worth the name, and even if it amounted to much more than it does it is of a kind that is of extremely little value, either as a training for the student's intellectual powers, or as a preliminary to the study of physiology, or as giving him something that will be useful to him in his future career."

These conclusions this Examination Committee now endorse and the committee regard the examination in practical chemistry as insufficient.

REPORT BY THE EXAMINATION COMMITTEE ON THE REPORT BY THE VISITORS OF THE EXAMINATIONS IN CHEMISTRY, PHYSICS, AND BIOLOGY OF THE CONJOINT EXAMINING BOARD IN IRELAND.

"Candidates are admitted to this examination who have studied at any recognised school of medicine and also if they have pursued their studies at any of the schools or other institutions recognised by the English Conjoint Board, whether such schools or other institutions have been approved by the General Medical Council or not."

The general arrangements for the conduct of the examination were by the visitors pronounced to have been excellent.

In each of the three subjects of biology, chemistry, and physics there was a paper, for the answering of which one hour and a half was allowed and an oral examination of 15 minutes; in chemistry there was also a practical examination.

A member of the committee of management attended each examination as a visitor, whose duty it was to report to the committee. Every candidate came under the notice of both examiners in each part of the examination.

"A 'cipher' agreed to by both examiners in any part—written, oral, or practical—of a subject involved rejection. Candidates who pass in all subjects at any examination and obtain 70 per cent. of the total marks are deemed to have passed with honours and receive a certificate to that effect on completing their final examination," a pass mark being 50 per cent.

At this examination nine out of the 76 candidates passed with honours.

"There was no meeting of examiners for the final adjustment of marks. Each pair of examiners having decided upon the marks to be given in their subject sent them to the secretary, who entered them on a list which was examined and signed by the visitor of the examination, before it was made public. It will be noticed," add our visitors, "that the absence of any examiners' meeting prevents the possibility of a candidate's marks being raised in one part of a division in order to enable him to pass and because he has done well in the other part."

The visitors endorse this plan of finally dealing with the marks.

ELEMENTARY BIOLOGY.

The syllabus was pronounced by our visitors to be a satisfactory one; they note that the physiological rather than the morphological aspect of biology was insisted upon. The visitors were "very much impressed with the amount of useful elementary knowledge of physiology possessed by quite a number of candidates."

The paper consisted of five questions, all of which were expected to be answered. Our visitors were satisfied with the questions and regarded the standard as satisfactory.

The oral examination was pronounced by our visitors to be of good character and in their opinion a very fair standard was exacted. There was a sufficient supply of specimens, many being fresh, to serve as pegs upon which physiological questions could be asked.

The examination as a whole was of a highly physiological character and to prove this the visitors append full notes of a single examination.

EXAMINATION IN PHYSICS.

This examination, like that at Edinburgh, is distinct from the examination in chemistry and is conducted by different examiners by means of a separate paper, and also an oral examination.

Our visitors pronounce the syllabus to be excellent and regard "a good detailed syllabus as necessary in this subject, because it is wide and complex, while only a comparatively small selection is needed by, and possible to, a medical student."

The paper consisted of five questions, all of which had to be attempted; it was an easy one and the knowledge displayed by the candidates who passed was satisfactory.

The oral examination lasted 15 minutes. A variety of apparatus was placed on the table and each candidate was examined upon a selection of these and asked to explain their construction and use. He was questioned about some of the mechanical and physical laws in such a way as to ascertain how far he understood the application of these laws to practical matters.

The questions given were practical and the marking was strict.

EXAMINATION IN CHEMISTRY.

This examination consisted of a paper of five questions, an oral examination of 15 minutes, and a practical examination for which three hours were allowed.

The syllabus is described as being of the usual description, although it failed to include certain elements which our visitors held that a medical man cannot afford to neglect.

Our visitors doubt whether a detailed syllabus is so good "as a simple statement that a candidate is required to be acquainted with the 'elements of chemistry, including typical examples of the principal classes of carbon compounds.' The detailed syllabus certainly facilitates cramming and encourages neglect of everything, however important, which does not happen to be named in it."

The paper of five questions, all of which had to be attempted and were well chosen, was an easy one. The knowledge of the candidates who obtained half marks was satisfactory but several of the weak papers were too highly marked.

The oral examination lasted 15 minutes. The questions were well selected but no specimens were provided to be identified on inspection by the candidate. Our visitors "think it would be an improvement if typical chemical substances were brought in and made use of as pegs on which to hang questions in this part of the examination."

THE PRACTICAL EXAMINATION.

This examination, our visitors report, was of the old-fashioned test-tubing kind, but it was well conducted and good

Our visitors hold, however, "that it is of very little service either in securing good training in practical chemistry or in ascertaining whether a medical student can perform experiments and draw conclusions from them."

During the three hours allowed three substances had to be examined and identified. Some of the candidates did their work well. The knowledge of others was empirical and therefore useless. "The examination compared very favourably with the absence of any substantial practical examination at the Edinburgh Board, but unfavourably with the examination at the London Conjoint Board."

Our visitors suggest "that teaching and examination alike would be improved without loss of time or hardship to anyone if for two-thirds of the examination there were substituted a mixture of two oxides or salts and the candidates were required to separate and identify the two metals or their oxides and prepare and show to the examiners a specimen of a characteristic compound of one of them."

The committee of management of t[illegible] venture to doubt "whether a knowledge of the [illegible] gnising the salts or other bodies used in [illegible] student than those of separating two metals or two oxides."

The following conclusions are given by way of summary to their report by our visitors upon the examinations in biology, physics, and chemistry.

SUMMARY AS TO BIOLOGY.

By way of summary to this part of the examination our visitors report that they "should much like to see a short practical test added to the examination in biology," to which the committee representing the body visited answer "that the absence of the practical examination at this stage of the student's course is more than compensated for by the practical examinations in dissecting and histology at the end of the second year."

SUMMARY AS TO PHYSICS AND CHEMISTRY.

1. The examination in physics was carried out in an efficient, fair, and painstaking manner and the arrangements were excellent.

2. The examination in theoretical chemistry was also carried out in an efficient, fair, and painstaking manner.

3. In both the oral examination was a valuable feature, while the written papers received full consideration in the ultimate decision.

4. The standard of the theoretical examination was a low one, but the marking was strict *except in the poorer papers*; and as a general rule the percentage of marks in the oral examination was high for a pass and was a satisfactory test of the candidate's knowledge.

the written papers all the questions had to be attempted and the examiner knew at a glance where the candidate's knowledge fell short.

5. The practical examination was very good of its kind, but it was a kind that is of little value, either as a training or as a preliminary to the study of physiology and it injuriously affects the kind of education which candidates receive.

6. The average work of the candidates [illegible]

REPORT BY THE EXAMINATION COMMITTEE ON THE WHOLE SERIES.

The final report of the visitors upon the conclusion of their visitation of the first medical examinations of the Conjoint Boards of England, Scotland, and Ireland, with the Apothecaries' Society of London, consists of a c [illegible] their personal c [illegible] three sciences [illegible] take; and it is [illegible] the members c [illegible] merits of the [illegible] taken place.

The visitors drew attention to the fact which should not be overlooked: "that the three sciences in question cover a vast field of knowledge and that the time which students can give to them is extremely limited." [At page 19 of their report they assure us that "they have made no attempt to indicate that one examination is better than another as a whole," and "that they have recognised in each some merit peculiar to itself and have pointed out in each some defect."]

BIOLOGICAL EXAMINATION.

[illegible] and [illegible] to [illegible] be [illegible] on [illegible] higher percentage in each subject than [illegible] ubject which may be [illegible] examinations there is [illegible] usively oral. At the [illegible] well as an oral test. [illegible] xaminations visited, [illegible] gy), a practical test [illegible] uation is to be real [illegible]

The practical test, which requires practice before proficiency is reached, is a guarantee against cram, for such "cannot teach a student how to stain and mount a microscopic specimen or to dissect out a given structure in a frog or rabbit."

The visitors regard the omission of a paper as a grave one, "since by virtue of the double requirement of paper and oral, it is possible to cover a larger amount of ground than can be covered where only an oral is resorted to."

The written test, the visitors point out, "requires a student to have [illegible] down his [illegible] another [illegible] ulum the [illegible] "If we were pressed for an opinion on this point we [illegible] overburdened as the student's curri [illegible] biology is the subject which could [illegible] much, perhaps all, that is valuable [illegible] atomical and physiological courses, [illegible] h on somewhat broad lines in a student's second year.

Should this plan not be followed, the system adopted by the Irish Board is one of which the visitors speak much in favour. According to the practice of that Board, if not according to its printed regulations, the examination is one mainly concerned with the principles of elementary physiology, the course of instruction being utilised as a *preparation in facts* and methods for the later course in physiology.

EXAMINATION IN PHYSICS.

[illegible] in physics and chemistry into [illegible] physics has a separate paper or [illegible] there is no separate paper in [illegible] the subject, one of which must be answered, are given in the conjoint paper on physics and chemistry.

The requirements of the Apothecaries Society are similar, with the addition of an oral examination in physics as part of the chemistry examination.

At the Scotch and Irish examinations there was a separate paper on physics by distinct examiners, and an oral examination, at which [illegible] subject."

The visitors condemn "the plan of permitting the principle of com- [illegible]

EXAMINATIONS IN CHEMISTRY.

The paragraphs on the subjects of the examinations in chemistry require careful reading, for the visitors report that "it has seemed [illegible] ordinary ele [illegible] carbon comp [illegible] "at none of [illegible] secure a slig [illegible] great and gr [illegible] the carbon compounds, this is a serious defect." They suggest, as [illegible] the different examinations [illegible] ch other, differing only in [illegible] he elements of chemistry is unnecessary.

On the other hand, a synopsis of the carbon compounds is unavoidable and the visitors kindly provide a new synopsis as follows:—

"SYNOPSIS INDICATING THE RANGE OF SUBJECTS OF EXAMINATION IN CHEMISTRY.

"The elements of chemistry, its principles and laws as illustrated [illegible] properties, and relations of examples of each of the principal classes. Cyanogen and its compounds; hydrocyanic acid; urea. Methane; ethane, ethylene, acetylene. *Chloroform. Iodoform* Methylic and ethylic alcohol; aldehyde, chloral, ether, acetone Formic and acetic acids; oxalic, lactic, tartaric, malic, citric, gallic and meconic acids, and their salts. [illegible] acid. Esters. C [illegible] series. Isomerism [illegible] acid, phenols, aniline. Alkaloids.

The paper on chemistry which the visitors would like to see set "would consist of, say, five questions on general chemistry, of which three at least must be answered, and four questions on carbon compounds, of which, say, two must be answered. This would make a total of five questions to be answered, a number not greater than is required at present by the Irish Board and which can be easily answered in two hours.

It is very important that the kind of question set should be such as will involve thought and reasoning on the part of the student and not merely the exercise of memory as to the properties and preparation of a small selection of chemical substances."

ORAL EXAMINATION IN CHEMISTRY.

In each of the four bodies visited there was an oral examination in chemistry.

At the English Conjoint Board all papers not much over or under 40 per cent. of the full value involved an oral examination. At the three other bodies all candidates were examined orally. In Scotland it was the main feature of the examination and was admirably conducted.

The visitors would like to see at the English Conjoint Board an extension of the oral examination to a larger proportion of the candidates than is the case at present, although those gaining a high value and those gaining a hopelessly low value for their papers might be exempt

On the other hand, they "approve the way in which the oral is used at the English Conjoint Board—namely, to check the paper marks, confirming or altering them according to the judgment of the examiner."

PRACTICAL CHEMISTRY.

The visitors assert that "the only one of the four examinations visited which makes an approach to a satisfactory examination in practical chemistry is that of the English Conjoint Board. One simple salt is to be identified by chemical tests one simple salt is to be prepared and shown up and an account of the work done is to be written [illegible] ed at this or at any of the [illegible] and the Conjoint Board in [illegible] *by chemical tests*, while at [illegible] candidate merely applies a few tests to a solution in a few minutes as part of the *viva voce* examination"

The visitors "would very strongly recommend that all examining bodies should follow the English Conjoint Board in requiring a preparation to be made and exhibited, and that in all the separation and identification of two metals from a mixture of their salts or oxides [illegible] e base and one acid by [illegible] king experiments, even [illegible] in view of the medical [illegible]

CONCLUSIONS OF THE EXAMINATION COMMITTEE.

[illegible] visitors' report as one of great value and [illegible] f the suggestions made by the [illegible] e question of retention of biology [illegible] ination, suggest that the Council should appoint a special committee to consider the questions raised in this report and report to the Council.

Sir VICTOR HORSLEY, seconded by Dr. FINLAY, moved the adoption of the report with reference to the Scottish Conjoint Board.

This motion was agreed to after some slight alterations had been made on the suggestion of Dr LINDSAY STEVEN.

On the motion of Sir VICTOR HORSLEY, second by Mr. JACKSON, the Council expressed the opinion that the examination in practical chemistry was insufficient.

The report on the examination of the Irish Conjoint Board was also adopted.

Dr. NORMAN MOORE thought the Council should speak of the examination as "satisfactory" rather than as "sufficient." He moved to this effect, but his motion failed to find a seconder and consequently dropped.

Mr. BRYANT then moved in connexion with the third report—

That a joint committee consisting of members of the Education and Examination Committees be appointed to consider the questions raised generally in the report of the Examination Committee on the primary examinations of the three Conjoint Boards and the Apothecaries' Society of London and to report to the next session of the Council.

Sir CHARLES BALL seconded the motion.

Mr. BROWN took exception to this special committee being confined in the manner proposed to members of the Education and Examination Committees.

Sir VICTOR HORSLEY moved as an amendment—

That the Council go into committee of the whole Council on the report of the Examination Committee.

He thought that with this report before them members of the Council were in a position to discuss this important question and to put into a definite form suggestions for changes in the curriculum.

Mr. TOMES seconded this amendment.

Sir WILLIAM THOMSON, supporting the motion, said that the proposals made to the Examination Committee were new to them and, of course, they were far-reaching and important and the committee felt that it was bound to seek assistance before dealing with them. There were the bodies themselves to consult before they decided to leave out biology as a definite subject on which lectures were to be given and he did not think it would be wise to decide the matter off hand.

Dr. WINDLE said that it was not proposed to leave biology out of the curriculum but merely to treat it by a different method.

Dr. MCVAIL supported the appointment of the special committee as the wisest course in all the circumstances.

Sir VICTOR HORSLEY said that he merely proposed that the Council should now discuss the opinions which had been placed before it in these reports and it could afterwards have a committee to draw up proposed changes.

On a vote being taken the amendment of Sir Victor Horsley was rejected by a large majority and the motion of Mr. Bryant was thereafter carried.

The following members were nominated to the special committee—viz., Mr. Bryant, Mr. Young, Dr. McVail, Sir Charles Ball, Sir John Batty Tuke, Dr. Norman Moore, Dr. Windle, Dr. MacAlister, and Sir William Turner.

The Case of Mr. Henry Jacob Bradlaw.

The Council next proceeded with consideration of the charges against Henry Jacob Bradlaw, in regard to whom the Dental Committee had found that the following facts were established by evidence, or admitted, at its meeting on Oct. 21st:—

(*a*) Henry Jacob Bradlaw was registered on July 21st, 1891, as in practice before July 22nd, 1878, and his address in the Dentists Register is 4, Harrington-street, Dublin. (*b*) Being a registered dentist he has sought to attract a practice by a system of advertisements in pamphlets and circulars distributed from house to house and in other ways and in newspapers containing his name, address, and qualifications and prices charged and eulogies of his dental work. The advertisements were circulated in Ireland and in London. By the Irish advertisements persons in need of dental aid were invited to consult Mr Bradlaw professionally at places in Dublin and Belfast, where he was stated to be in constant personal attendance, and in the London advertisements persons were invited to consult him at 146, Inverness-terrace, London, where he was stated to be in constant daily attendance. In the opinion of the committee the advertisements are of a nature discreditable to a professional man. In order to carry on the practice as advertised Mr. Bradlaw has associated himself in dental practice with his brother, David Barnett Bradlaw, a medical practitioner residing at 146, Inverness-terrace, and authorised and permitted David Barnett Bradlaw to carry on the advertised dental practice there in the name and on behalf of him (Mr. H. J. Bradlaw) and to personate him in so doing.

Mr. R. W. TURNER, who represented the complainants, the British Dental Association, said he understood that Mr. Bradlaw wished to make a statement to the Council. He did not know what that statement was to be but he should submit that the charges were proved, that they were even more extensive than those made against his brother (Mr. D. B. Bradlaw), inasmuch as they referred to advertisements not only in London but also in Ireland.

Mr. BRADLAW said that he was very sorry indeed for what had been done. He did not intend to transgress the rules in any shape or form and he trusted that in future his conduct would merit the approval of the Council.

The PRESIDENT: But the committee states that the advertisements are discreditable to a professional man.

Mr. BRADLAW: I have done simply what hundreds of others have done

The PRESIDENT: You express regret at having done this but are you going to stop it?

Mr. BRADLAW: I have stopped it to a certain extent. I have stopped anything that Mr. Turner pointed out was objectionable. I have stopped all advertising except my name and address and fees and attendance in the newspapers.

Questioned as to his registered address, which it was pointed out was that of the Irish-American Dental Surgeons, he explained that he left 4, Harrington-street, seven years ago, since when he had carried on business at 78, Harcourt-street.

In answer to Mr. TURNER, Mr. BRADLAW stated that the Irish-American Dental Surgeons' business had been turned into a limited liability concern a week or two ago. He held one £1 share in it but neither his wife nor his brother held a share. There were only seven shareholders, each having only a £1 interest. All of them were registered dentists and the practice was carried on by Mr. John James Blaikley, who had conducted it before the business was turned into a limited concern. It did not issue pamphlets and he did not know that it would do so.

The PRESIDENT: Were you the prime mover in the construction of this company?

Mr. BRADLAW: No, Mr. Blaikley was. I joined because I thought there was no harm, that it was a perfectly *bonâ fide* matter. Mr. Blaikley came to 4, Harrington-street this year.

By Sir CHRISTOPHER NIXON: So far as profits are concerned, I believe no arrangement has been made yet, but I suppose I shall participate in these equally with the other shareholders.

Mr. BRADLAW, answering other questions, explained that the dental practice had been carried on continuously at 4, Harrington-street from the time he left that address. When he was there his father was the tenant of the house but he did not know who the landlord was. He was aware that the Irish-American Dental Surgeons' advertisement followed his in an Irish newspaper but that might be because the newspaper had an alphabetical arrangement for business advertisements.

By Sir VICTOR HORSLEY: He did not allow his brother to personate him at 146, Inverness-terrace, Bayswater. When leaving for Ireland for a few days he asked him to see his patients. He was aware that his brother had been found guilty by the Council of personating him in London but he denied that he authorised his brother to personate him.

After the Council had deliberated in private

The PRESIDENT said: I have to announce the decision of the Council, which is to the following effect—that on the facts found in the report of the Dental Committee it has been proved that Henry Jacob Bradlaw has been guilty of conduct which is infamous or disgraceful in a professional respect and the Council directs the Registrar to erase from the Dentists Register the name of Henry Jacob Bradlaw.

The Case of Mr. William Herbert Ray.

Consideration was next given to the case of William Herbert Ray, in connexion with which the Dental Committee, at a meeting on Nov. 23rd, found that the following facts were established by the evidence:—

(*a*) William Herbert Ray was registered in the Dentists Register on December 31st, 1878, as in practice before July 22nd, 1878, and his address in the Dentists Register is 12, Cecil-square, Margate. (*b*) On the 16th day of January, 1903, the said William Herbert Ray was convicted at the quarter sessions for the borough of Margate of unlawfully and indecently assaulting and ill-treating a certain female named Grace Hennessy on 27th of July, 1902, and was ordered to be imprisoned with hard labour for six months. (*c*) The assault was committed at the house of the accused when he was attending her professionally. (*d*) The conviction was the result of a second trial before the same recorder (Mr. Bargrave Deane, K.C.), the jury having disagreed on the previous occasion. (*e*) The accused denied *in toto* the truth of the charge. (*f*) A petition to the Home Secretary extensively and influentially signed was presented asking for a mitigation of the sentence on the ground that, with the exception of evidence as to Mr. Ray' [illegible] a formal character [illegible] cution was that of give[illegible] l on oath, with a the [illegible] ation and [illegible] be [illegible] at [illegible] ins.' [illegible] g) [illegible] that she had reported the assault to [illegible] ladies whom she accidentally met in the street. [illegible] not produced as witnesses for the prosecution. The accused, in the course of his evidence at the trial, alleged that the ladies did not, in fact, exist, but he suggested that the prosecutrix had been got hold of by two men who were his enemies and who had induced her to bring this false charge against him in order to cause his ruin. Mr. Ray admitted to the committee that this suggestion had no foundation in fact and had been put forward by him at the last moment very unwisely and without the knowledge of his legal advisers.

Mr. RAY, in answer to the PRESIDENT, said that he had already said all he could say: he stood there an innocent man; he was innocent of the charge made against him. He was a married man. His wife was living and he had three children grown up. He had been in practice at Margate for 31 years and never before had any charge been made against him. The petition to the Home Secretary was signed by a brother of Sir Frederick Treves, the medical men of Margate with (he thought) two exceptions, Canon Fleming, the Bishop of Salisbury, several of the Margate magistrates, and others. Since resuming practice his patients had returned to him and he was getting more work than ever before.

In answer to a MEMBER,

The PRESIDENT explained that the girl connected with the case was a domestic servant, 19 years of age, and in the habit of going to Margate in the summer. She had put herself under the charge of Mr. Ray.

Mr. RAY stated that he saw her on four consecutive mornings and also on the Sunday evening when it was alleged the offence was committed. She should not have come that evening. She had been told not to come back unless she took a certain draught which she did not take.

The Council deliberated on the case. On the readmission of the public,

The PRESIDENT, addressing Mr. Ray, said: The Council has given much consideration to your case and the decision is as follows—that it will take no further action in the matter, therefore your name remains on the Register.

The Case of Mr. James Grant.

Another dental case followed. It was that of James Grant and in regard to it the Dental Committee at an inquiry on Oct. 21st found that the following facts were established by evidence:—

(a) James Grant was registered as in practice before July 22nd, 1878, and his address in the Dentists Register is 15 Chatham-place, London. (b) The West Central Dental Institute, Limited, is a limited joint stock company formed and registered by an unqualified, unregistered man named John Panhans for the object of carrying on the practice of dental surgery and the business and profession of dentists. The said John Panhans had before the formation of the company been convicted of the offence of practising as a dentist and the company was [illegible] n under the name of the company [illegible] id James Grant entered into the [illegible] of the person or persons who [illegible] to the company in order that he [illegible] alified man by whom the dental [illegible] ant's defence was that he did not know that he was doing wrong and that he left the service of the company at the end of the week which followed a second conviction of the said John Panhans for practising dentistry in the name of the company.

Mr. Grant was called but did not appear.

The PRESIDENT: Mr. Grant appeared before the Dental Committee but he is not here to-day to avail himself of the opportunity of making a statement.

Mr. R. W. TURNER, on behalf of the British Dental Association, said that the association regarded this as a singularly bad case because it was an attempt on the part of Mr. Grant to defeat the ends of justice. At the police-court it was opened for the defence by Mr. Arthur Newton that a conviction could not be sustained because there was a qualified man on the premises to do the work. Mr Grant was put into the witness-box to substantiate that statement, but he failed in cross-examination because it was clearly shown that Panhans did all the work. If Mr. Grant did not know that he was doing wrong under the Dentists Act he knew that he was being put forward by the defence in order to defeat the ends of justice. Therefore, as it was such a bad case of covering he asked the Council to inflict the extreme penalty.

The Council having deliberated for a few minutes

The PRESIDENT said: I have to announce that the Council has instructed the Registrar to erase from the Dentists Register the name of James Grant.

Restoration to Register.

Consideration *in camerâ* of an application for restoration to the Medical Register, adjourned from Nov. 28th, 1902, resulted in the announcement that the Council had directed the Registrar to restore to the Register the name of Mr. James Jerome Mackay, 190, Stockwell-road, S.E

The Council adjourned.

SATURDAY, NOV. 28TH.

The Council resumed work to-day, Sir WILLIAM TURNER being in the chair.

The Council and the Two English Royal Colleges.

Mr. ALLEN, Registrar, read the following communications from the Royal College of Physicians of London and the Royal College of Surgeons of England, viz.:—

Royal College of Physicians, London, S.W.,
Nov. 19th, 1903.

[illegible]

Sir William Turner, K.C.B.,
President of the General Medical Council.

"The delegates appointed by the Royal Colleges beg to report that having fully considered the letter of the President of the General Medical Council they recommend that the following reply be sent to the President:—

'The Royal Colleges thank the General Medical Council for the expression of their opinion respecting the courses of study and the [illegible]

Royal College of Surgeons of England, Lincoln's Inn Fields,
London, W.C., Nov. 20th, 1903.

[illegible] r has [illegible] the [illegible] l the [illegible] ions [illegible] cept [illegible] il to [illegible] neral [illegible] and [illegible] been [illegible] ttees [illegible]

I am, Sir, your obedient servant,
S. FORREST COWELL, Secretary.
Sir William Turner, K.C.B., President, General Medical Council.

Sir VICTOR HORSLEY moved:—

That the Council do represent to His Majesty's most honourable Privy Council that the courses of [illegible] physics and biology, to be gone [illegible] tions for registration from the I [illegible] Royal College of Physicians of [illegible] Surgeons of England, are not s [illegible] persons obtaining such qualification of the requisite knowledge and skill for the efficient practice of their profession.

He desired the Council to note that he was not raising the general question of preliminary scientific education; he was simply asking the Council to conclude one item of business. Neither was he asking the Council to institute any comparison between one examination and another or between one licensing body and another. He hoped that the Council would adopt his motion in order to put an end to a business which was really 13 years old. He might say that the profession outside this Council was watching this matter pretty closely and it expected that this would end in a determination as to who was the supreme authority in medical education. The profession recognised that the Council in this matter was merely endeavouring to carry out its statutory duties and that it had been trying to do so with every leniency and courtesy that could be exhibited. He had seen this leniency and courtesy exhibited for over five years and by every shift and method the two English Royal Colleges had tried to prevent the Council from discharging this statutory duty. The duty of this Council was to inquire into the courses of study and examination required by the examining bodies and if it found that these were insufficient then it was lawful for the Council to represent the same to the Privy Council. In this case the English Royal Colleges were, as it were, in a contumacious position, and the time therefore had come when the Council must ask the central government, the Privy Council, to decide between them. The Royal College of Physicians of London after having taken over six months to consider the facts laid before them by the Council sent a letter which was no answer to the Council. This Council asked for comments upon the remarks made by the visitors but received none. The Royal College of Surgeons of England replied very fully. It entered very fully upon the report of the visitors and it said that not only were the statements of the visitors inaccurate but the examination was sufficient. The College directly and contumaciously challenged the opinion of the Council. The refusal of an answer by the Royal College of Physicians of London aggravated, in his opinion, the refusal of the two bodies to meet in any way the Council at that stage of the negotiations. In July he moved a similar motion which the Council in its generosity refused. On that occasion the Council requested the President to furnish to the Colleges the reports which revealed the existing condition of affairs and an attempt was made to have a conference with the two bodies. The conference never met because the Colleges refused to confer and treated the Council with absolute contempt. They were therefore contumacious.

Dr. PYE-SMITH rising to a point of order asked whether it was permissible for a member to use the word "contumacious" in this connexion.

The PRESIDENT (to Sir Victor Horsley): In what sense do you use the word?

Sir VICTOR HORSLEY: In the ordinary sense.

Dr. PYE-SMITH: What do you mean?

Sir VICTOR HORSLEY: The ordinary meaning of contumacious is a person refusing to recognise someone placed in authority over him.

The PRESIDENT: You have used the word. Go on now.

Sir VICTOR HORSLEY: Do not use it again is, I suppose, what you mean. He thought, however, that the medical profession would understand the meaning of the word and it was the medical profession he represented and not the interests of a single body. There was a constitutional point to be decided here. The Council was statutorily recognised by the central government as the head authority in medical education. That position had been challenged by the English Royal Colleges and he submitted it was the duty of the Council to go to the central government and obtain from it a final judgment in the matter.

Dr. MACKAY, in seconding the motion, called attention to the words of the Act under which the Council was entitled to act. These words, he said, stated clearly that if it appeared to the Council that the course of study and examinations to be gone through in order to obtain any qualification were not such as to secure the possession by persons who obtained the qualification of the requisite knowledge and skill for the efficient practice of their profession it should be lawful for the Council to represent the same to the Privy Council. The English Royal Colleges insisted upon a course of study and examination and this Council had found that both were insufficient. He admitted that it might become the duty of the Council to examine into the circumstances of other bodies but at present it had before it a serious case and it was its duty to represent the matter to the Privy Council. The General Medical Council existed for the protection of the public and if it did not make a representation to the Privy Council it must have a very serious and important reason for not carrying out its duty. The Council had endeavoured to see whether the English Royal Colleges were prepared to carry out its wishes and they had refused even to enter into a conference on the subject. While he recognised the valuable services to medical education of these bodies he thought the Council did right in asking them to this conference It would have been of great value for the parties to meet together and to discuss the whole question of the relationship of examinations to courses of study. As to the existing regulations of these bodies they made it possible for a student to spend six months of an annus medicus in a grammar school or technical college. Now he did not think that the representatives of the two Colleges would care to defend such a regulation In all the circumstances he thought the Council must go to the Privy Council and have the matter settled. He did not anticipate the very serious results that some people did; he thought that the Privy Council would bring about that conference which the Council had failed to bring about and if that was the result he thought it would be most fortunate.

Mr BRYANT rose not to discuss the motion but to point out that the question of authority as between the General Medical Council and the Royal Colleges was not the issue that was before them at all and that the Royal Colleges having stated that the Council's opinions would receive the respectful consideration of both Colleges it was fairly well known that they meant that and the subject was under the fullest and closest consideration. In these circumstances he did not think the General Medical Council could say that the Colleges in any way were attempting not to follow out the suggestions which had been made. Where defects occurred they were anxious to remove them and so improve the education. He would not discuss the prudence or wisdom of the General Medical Council going to the Privy Council but if the Council went the Privy Council would say the Colleges were considering the subject and he, as the representative of the Royal College of Surgeons, would say here that his College was considering the subject and would continue to consider it until defects were removed.

Dr. NORMAN MOORE, in response to an appeal by Dr. Bruce, said that he had already spoken on this subject several times and there was the further difficulty of speaking at all on the point. He had, and every Fellow of the College of Physicians had, the greatest respect for the General Medical Council in the discharge of the functions committed to it by Act of Parliament, but when particular subjects had been in controversy for a considerable time there might be used phrases that would cause irritation and might seem disrespectful, though disrespect was not in the mind of the speaker. Sir Victor Horsley used the word "contumacious." They need not spend time discussing the etymology of that word. The dictionary gave the meaning of it as "swelling against, haughty, resisting legitimate authority"—that was what Sir Victor Horsley meant—and, in law, "wilfully disobedient to the orders of the court." That implied that there was a court which was vested by the law with certain powers and which had exercised these powers and then it was contumacious to disobey it. He would not go into the subject as to whether the General Medical Council was such a court or not. Let them suppose for a moment that the General Medical Council possessed all the powers that its most extreme advocates wished it to possess—let them suppose that it had all the power which Sir Victor Horsley would invest it with if he happened to become a dictator in this country—that it could advise all the licensing bodies to study such a subject for such a length of time, then what were its orders, what edict had it issued for the first year's subjects of study? Just before the Council met that afternoon members had been discussing how it should inform itself on this very subject. It had issued no edict. These Colleges were not contumacious, and why? Because they were responsible for their conduct. Under the terms of their charters and Acts of Parliament it was their duty to determine the courses of study and what should be the examinations in these. They could not transfer that duty to any other body. If the General Medical Council wished to have it transferred to other bodies let it issue an order. He thought the Royal Colleges were perfectly right in declining a conference. The only object of a conference was to secure a satisfactory conclusion. No satisfactory conclusion could have been arrived at in this instance by a conference. What were they to confer about? The delegates from the Colleges could only tell that the Colleges were considering. Sir Victor Horsley said something about the Colleges using every shift and method for delay. That was unjust. It was a kind of expression which never should have been used. In transactions with a man they always assumed that he was acting in a proper way and he said that it ought to be the same with universities and other bodies. There could be no other base. Sir Victor Horsley said there was the question as to which was the supreme authority as to medical education. He did not think there could be any question as to that. As to the public duties the Colleges had under their charters they must either discharge these or disfranchise themselves. They maintained that they were discharging these duties honestly and to the best of their ability. The General Medical Council had the undoubted right to criticise any examination but the Council was in this position: it said the fact that the General Medical Council had certain rules regard to the courses of study and examination red the people obtaining the Colleges' qualifications not possessed of the requisite knowledge and for the profession. To use such an expression e earlier studies was a twisting of words What ought Sir Victor Horsley meant was this—that in inion and that of the General Medical Council the ges' earlier examination might be improved. The ssion could not mean more than that. It was carrying beyond their true sense to think that it did. If the of the General Medical Council was to ascertain ier certain powers were given to it by Act of Parliament l not know any other way in which it could ascertain han by applying to a court of law. The Council did [illegible] egligence, or corruption, or any- xercise of the powers they had, [illegible] Council was absolutely supreme d only to issue an order, and if that was the law it be obeyed. But he doubted if any members of ouncil thought so. They felt that the Council had instituted by Act of Parliament and might wisely ise powers which were not dependent on law but for the general welfare of the public. When it so it should be supported by all the licensing bodies. at sense it was supported by the Royal Colleges; received its criticisms with respect, they considered in the utmost possible way, they attached all the tance that must be attached to such a body as the cil, they endeavoured to make use of these opinions ds perfection—there was nothing perfect on earth—of courses of study and examinations. That was their on. But they were not in a position to receive orders this and that and to be declared contumacious because presumed to discuss and thoroughly to investigate ons, however valuable these opinions might be.

CHRISTOPHER NIXON, while mentioning that he was vour of chemistry, physics, and biology being removed de the medical curriculum, contended that in order cure uniformity throughout the kingdom there must be itral body to lay down the law. Dr. Norman Moore that the General Medical Council had not issued an . But what about the regulation with the words roved by the Council"? That was an edict in respect stitutions in which the first year's subjects were taught h the Royal Colleges in very strong language refused to Then came the question of the registration of nts. So that since the words "approved by the cil" were introduced it might be said that the l Colleges had put the General Medical Council at nce. The whole profession, he ventured to say, had attention centred on this one question: Had the ral Medical Council any authority beyond giving a pious opinion? That was the reason why the time arrived when the Privy Council should determine whether General Medical Council had been exercising the powers erred upon it or whether it had been exceeding these rs.

. BRUCE rose to move an amendment. He said he ght the action of the Royal Colleges had been in many opposed to the real interests of medicine and surgery, e could not follow Sir Victor Horsley in moving to go e Privy Council in this matter, because he was opposed aking action against these recalcitrant bodies on two nds. He was convinced that if the Council attempted amper the education given in the intermediate schools of country it would be dealing a blow to the reform of ndary and elementary education which was now in the His second objection was involved in the result of [illegible] almly at [illegible] way of [illegible] y asked n to take. He moved:—

> [illegible]
> our [illegible] of the Council respecting courses of study and the examina- in [illegible] tic [illegible] of [illegible] reconstructed examination the Council resolves to defer in the ntime taking any further action.

r VICTOR HORSLEY contended that this was not a com- nt amendment to his motion There was nothing in it would not be covered by the "previous question."

The PRESIDENT ruled otherwise and called on Dr. Pye-Smith who had consented to second the proposal.

Dr. MCVAIL, interposing, suggested that if the proposal could be put Dr. Pye-Smith should give the Council evidence of the Royal Colleges' reconstructed examination because there was no such evidence before the Council.

Dr. PYE SMITH was afraid he would not be able to do so as he could only say that the Colleges had assured the Council that the matter would receive their respectful attention and that already changes had been made in the curriculum.

Sir VICTOR HORSLEY: No references are made to changes in the curriculum in what we have before us. These must be contained in some official documents and these documents ought to be in our hands.

Dr. NORMAN MOORE: The Colleges have written to the Council to say that all *that the Council has forwarded to* them will receive respectful consideration. That means that the fullest consideration shall be given to every remark.

Sir VICTOR HORSLEY: Dr. Pye-Smith says that the curriculum is changed. Is it a fact?

Dr. NORMAN MOORE: If I could utter a single word which would convey my meaning I should never make a speech. If the Royal Colleges could discuss this subject in a quarter of an hour they would no doubt do it, but it requires a great deal of time and consultation with a great number of people. It has been the custom to consult the teachers when any changes in the curriculum were under consideration. Certain principles of change have been adopted but the details have not been worked out. I cannot communicate these because they are not yet published in complete form So soon as they are they will be sent here.

Sir VICTOR HORSLEY: I referred myself to Dr. Pye-Smith.

Dr. PYE SMITH said that he had told Sir Victor Horsley all he knew. What he first rose for was in recommendation of the amendment to plead once more for the cause of peace. He doubted the wisdom of receiving medical students from schools but the matter was one on which there might be difference of opinion There had been difference of opinion in the College of Physicians as there had been difference of opinion at the General Medical Council. The opposite view, however, was held by Dr Bruce, it was held by Dr. Lombe Atthill, and held and vindicated again and again by Sir William Gairdner, and he was sure that such a consideration would induce the Colleges to see that there was a difference of opinion. As to the conduct of examinations, the final conclusion of the visitors inspecting the examinations on the primary subjects was that of all examinations some had some good in them and some had defects He should admit that the examinations of the two Royal Colleges had defects, but in this respect the Royal Colleges did not differ from other institutions. For all parties concerned with these examinations the results of deliberations of this Council were most admirable and useful. With regard to the conference, he regretted that the invitation of the Council was not accepted, for it was felt that when such charges as had been made—that the *Council's suggestions had been put on one side and that the* Council had been disobeyed—were made they were likely to raise a little of the spirit of independence, and if they were to have peace it would be well to lay aside words as to whether the *Colleges* had, as they said, the power to do what they had done. The question of appealing to the Privy Council was the question of, Who is master? and he ventured to deprecate the Council embarking on such questions. He thought he was justified in that if he referred to the time when the Council had a special meeting to discuss this same question and when a most important motion was proposed in the morning and run away from in the afternoon. That, he thought, was reason *for the Council to postpone action. If the Council* did not go to the Privy Council what would it depend upon? They should depend upon their influence. Surely they ought not to submit the rival claims of Colleges and Council which were quite open to discussion to the adjudication of lawyers who knew very little about them and their objects. He thought that doing so would be an irretrievable mischief and in any case the result would be most disastrous.

Dr. WINDLE thought that the last part of the amendment was confused and that *the words were rather cumbersome*, and he suggested that it might be better to make it read:

> That in view of the reconsideration of the whole subject by the Royal Colleges the Council resolves to defer taking any further action until the examination has been again inspected under the new regulations.

Dr. Bruce and Dr. Pye-Smith were willing to accept this modification of their proposal.

Dr. Windle agreed with Dr. Pye-Smith that the question now before the Council ought not to be the question of the jurisdiction of the Council, but he thought that they were a little sick of hearing of charters and Acts of Parliament. What was the best way of getting the medical education improved at the present time? Was it the best plan to go to the Privy Council or was it not? In his opinion it was not. They would advance better on the lines of the amendment. He was sorry that the Colleges did not see their way to meet the Council in conference, but the communication did not really invite them. They had the option expressed in "if desired," and apparently they thought it was not desired. He was not defending the Colleges but placing them on the line that existed. As to the Colleges' regulations, were the Colleges attempting to alter these? New regulations proposed by the College of Surgeons had already appeared, having been published in The Lancet of Nov. 21st. Among them was one proposing a minimum length of course. That was one thing the Council wanted and if instruction was given to this extent and in proper institutions the Council would have all that they could ask for from the Colleges. It was also proposed that study at an institution other than a recognised medical school should be counted for not more than six months of the curriculum. As far as the scheme went the College of Surgeons placed itself on the lines of the London University which did not require any evidence as to where a student had received education. If, therefore, the Council quarrelled with the Royal Colleges they would also have to quarrel with the London University on that point. So far the Colleges had gone to meet the Council and this was not the end of their consideration, but only a stage in their journey. Therefore he ventured to think that the Council would obtain the improvement in medical education that they desired and that was what he wished and not the determination of—Who is to be master? He should hope that the Council would adopt the same policy as in the case of the University of Oxford. Respecting that university they had a report which was not satisfactory and they agreed that they should do no more about it until a new inspection was made. He hoped it would be possible to put the Colleges' new regulations into operation as soon as possible and after inspection of the examination under them they should see what was done. Until they saw what the changes amounted to he thought that they were not in a position to go to the Privy Council.

Mr. Brown intimated that if the motion went to a division he should vote for it.

Sir Charles Ball said that the spirit in which this matter had been approached that day compared very favourably with what had been previously heard on this subject. But the representatives of the Colleges, while representing their desire that the fullest consideration and the fullest information should be given to the General Medical Council, had yet left it to another member of the Council to read from a medical journal what had actually been accomplished at the Colleges. It would, he thought, have added much to the force of what the Colleges had done if they had had it stated by one of the representatives of the Colleges. He went on to contend that the dragging on of this question during the last five years had been very injuriously affecting medical education. In Ireland they did not know where they were, for when asked what they were to do they could only give the answer that what the Conjoint Board of England did that they should do. That was certainly not a satisfactory state of affairs and if Sir Victor Horsley's motion brought a climax he should support it. He did not like the amendment which postponed settlement indefinitely until the reconstructed examination of the Colleges was reinspected. The examination had not been reconstructed yet and the Colleges might delay reconstruction as long as they chose.

Dr. Little regretted that the term supreme authority had been used so often that day. He hoped all would remember that the General Medical Council did not claim to be the supreme authority: the Privy Council was the supreme authority. They must thank Sir Victor Horsley for raising the issue, but he should vote for the amendment for three reasons—namely: (1) that he observed on the part of several members of the Council a disposition to change the character of their views; (2) that he wished to continue negotiations, for if the General Medical Council went to the Privy Council it should have to put very specific charges against the Royal Colleges at a time when the whole question of education was in such a condition that great changes might soon occur; and (3) that he felt persuaded they should get to an end of the matter by continuing negotiations sooner than by doing what was proposed—that was, "withdrawing our ambassador."

Dr. MacAlister felt convinced that the information which had been laid before the Colleges since July last had had very considerable weight To many of the Fellows of the Royal College of Physicians that information was new. Although he had not been present at the critical meeting—at any of the meetings—he knew that all the documents had been placed in the hands of all the Fellows and he knew enough to say that a very genuine change was in progress. That change, he had no doubt, would be accelerated by what had taken place since and he had no doubt that so soon as the last stages were complete a communication would be made to the General Medical Council which would be satisfactory to all who had the interest of medical education at heart.

Sir William Thomson asked Dr. Norman Moore if he could give the Council any idea as to when they would have a definite reply from the Colleges.

Dr. Norman Moore replied that it would be out of his province to fix any date. The committees having the matter in hand would go on continuously until they had arrived at the conclusion. He was sure the Council could not wish for more.

Sir William Thomson thought the reply could be a little more satisfactory. He should like to know from Dr. Norman Moore, with his knowledge of how things were going on, whether the Council would have a definite answer from the Colleges by next session or, say with certainty, in 12 months.

Dr. Norman Moore said he should think himself from the present state of the work that perhaps two more meetings of the joint committee might conclude its work and perhaps one meeting more of the committee of each College, with perhaps a final meeting of the joint committee. He thought three or four months sufficient for such meetings. He was not quite certain whether the work could be ended by March next but he thought that substantially it would be concluded before the Council's meeting in May next.

Mr. Brown asked Sir Victor Horsley whether in view of that statement he would withdraw his motion If the matter was to be determined by next session he felt sure that many members of the Council would hesitate to vote for the motion.

Dr. McVail wished to propose that the further consideration of the motion and amendment should be postponed until next May.

The President: Don't you think the amendment does that?

Dr. McVail did not think so. It was, of course, quite open to the President to take a vote on the amendment, but if that was done he (Dr. McVail) could still propose postponement. He thought that Sir Victor Horsley, having been victorious all along the line, might be satisfied with having driven them into the position in which they now were.

The President: I do not know exactly how we stand with regard to this question.

After a brief conversation

Dr. McVail thought that Sir Victor Horsley had gained a substantial victory in this matter and that the Royal Colleges were now clearly going to come up to what the General Medical Council required, but they were only endeavouring to save themselves from the formal appearance of having acceded to the recommendation of the General Medical Council. So far as he was concerned he was quite willing to accept that. It had been got with great difficulty. He thought that now the Colleges were disposed to give way. Dr. Pye-Smith gave them hints of something going on behind the doors, Dr. MacAlister told them that the Council's documents had had considerable weight with the Fellows of the Royal College of Physicians, and then Dr. Windle had quoted from The Lancet a report of action taken, which action Dr. Norman Moore did not repudiate. Therefore he thought that substantially the Council had achieved what it had been contending for so long. The whole thing was to be finished by the Colleges in four months or so and they should have before them the whole case at their next meeting. He thought that in the circumstances Sir Victor Horsley might withdraw his motion.

Sir VICTOR HORSLEY wished to speak on the amendment because he must be satisfied that the authority and the influence of the General Medical Council, which had been challenged not merely by the English Colleges but by other bodies which had followed them, would be restored. Dr. Pye-Smith said that the quarrel was a petty one. But the scientific education of medical students was not a petty matter at all but the most serious question any man could take up. There were points concerning the scientific education of students on which they had not been satisfied. The first of these was the registration of students, the whole of which had been destroyed by the action of the Colleges. Where was the registration of students to come from? Nothing had been said as to the scientific education of the students being brought back to what it was before 1901. On the contrary, the English Colleges had said that they had their own register. Then as to the reconstruction of examination, what finality was there? They were told that change in the curriculum was in process, but there was not a word as to where the courses of study were to be carried on, nor a word on the central point which originated this discussion. The original contention of the Council was that it should have a supervisory control over the teaching institutions. The Council had not surrendered that control and he asked what had they to show that the Council would be allowed supervision in the future. He had not heard a word which showed that the Council's supervision would not be challenged. The Colleges said they reserved to themselves to say what courses of study and examination should be adopted. They had given a tardy acknowledgment that their examination and courses of study were not what they professed in this Council they were. They had acknowledged that change was in progress. And they would come in May next and say: "Do you approve of that?" They were going to shelve the Council again and he asked members not to vote for the amendment thinking that they had settled the whole question. He could not see that he should be justified in the interests of medical students or justified in the interests of those who had sent him to the Council in withdrawing his motion and he hoped that for similar reasons the Council would not accept the amendment.

The PRESIDENT proceeded to arrange for a vote on the subject and Dr. BRUCE, at the instance of Sir VICTOR HORSLEY, substituted in the last part of the amendment the words "courses of study and examination" for the words "whole subject." Sir VICTOR HORSLEY also wanted registration of students to be included, but Dr. NORMAN MOORE objected that that was not a question under debate. The amendment was finally arranged as follows:—

> That the General Medical Cc [illegible]
> munications set out in the minu [illegible]
> of Physicians of London of the [illegible]
> [illegible]
> [illegible] ology are to
> [illegible] that in view
> [illegible] nation by the
> [illegible] further action
> [illegible] ler the new
> regulations.

On a division 16 voted for this amendment and 12 against it. One Member did not vote and two were absent.

The PRESIDENT: The amendment has now become a substantive motion.

Mr. BROWN: I beg to move—

> That the consideration of the motion be postponed.

Sir JOHN BATTY TUKE seconded this proposal The terms of the motion, he said, were humiliating to the Council.

Dr MCVAIL remarked that the motion committed the Council to take no action in the matter until after the inspection of the examination under the new regulations The position was absurd and he thought the best course would be not to adopt Dr. Bruce's proposal but to postpone the matter.

Dr. BRUCE objected to the words "humiliating" and "absurd" In the interests of peace he urged that they should go on. He pressed his proposal.

Sir VICTOR HORSLEY hoped that in the interests of real peace Mr Brown's motion would be accepted.

The Council divided on Mr Brown's proposal. On a show of hands the PRESIDENT announced that 13 voted for it and 13 against it. On names and numbers being called it was found that 14 voted for it and 13 against it. One member did not vote and three were absent.

As Mr. Brown's motion was thus carried the question was postponed *sine die* but it may be raised again in some form in the session of May next.

The Council adjourned.

MONDAY, NOV. 30TH.

The Council met to-day, Sir WILLIAM TURNER being in the chair, and before it rose concluded the work of the session.

The Inspection of Final Examinations.

The first business was to receive from the Examination Committee reports on the inspection of the following final examinations—viz.: the English Conjoint Board, the Irish Conjoint Board, the Apothecaries' Society of London, and the Apothecaries' Hall of Dublin (July, 1903). These reports were in each case presented by Mr. BRYANT, chairman of the Examination Committee.

English Conjoint Board.

The following was the report of the committee on the examination of the English Conjoint Board, viz.:—

The final examination in medicin [illegible]
January, 1903 commenced on Tues [illegible]
the 30th. 228 candidates were exar [illegible]
56 per cent., passed and 101, or 44 [illegible]
[illegible]
teacher.

The general arrangements for the examination were similar to those [illegible]
[illegible]
wifery is three for each paper, the maximum in each being ten. The [illegible] the answers of several candidates whose oral [illegible]
[illegible] had followed and pronounced the
[illegible] given with satisfactory fulness and
[illegible]
[illegible] port of either medical or
[illegible] of the cases in clinical
[illegible] minutes in which to
[illegible] but under the eyes of
[illegible] the examiner on the case
[illegible]
specified disease.

In clinical surgery the candidates under the five years' regulations were examined orally for 30 minutes on at least two cases, each of which they had been previously allowed to examine by themselves for five minutes Several candidates were examined on more than two cases and were then taken over a wide range of surgical subjects. At the conclusion of the clinical examination each candidate was required to write at a side table a short description and diagnosis of two microscopical specimens of new growths or crystals, and ten minutes were allowed for this. The visitor and inspector state that they were impressed by the thoroughness of this examination and the uniformity in the standard of answering that was required In clinical medicine and surgery the cases were numerous and excellent In the oral examination in medicine and surgery a different pair of examiners were allotted to each group of candidates, and both examiners examined each candidate; in medicine one of the two for ten minutes in urine testing and the other for another ten minutes in pathological specimens. The oral examination in surgery was conducted at the Royal College of Surgeons at five tables. Every candidate was examined at two tables, ten minutes at each table. Excellent pathological specimens were upon all the tables and upon two or three of them each candidate was questioned.

In practical surgery each candidate was examined for 15 minutes upon a large collection of surgical instruments, splints, and in bandaging, as well as upon surface surgical anatomy and the lines of incision for operations No operations upon the cadaver were practised. T[illegible] to the visitor and inspector to set the standard [illegible]

The exam[illegible] id diseases of women was pronounced by the visitor and inspector "a most excellent and practical one." Every candidate was examined for ten minutes by one of the examiners alternately at two tables—at one table in midwifery and at the other in gynæcology. Upon each table (four in all) an ample supply of pathological specimens and instruments was provided, as well as female pelves, "dolls," pessaries, &c. To pass this examination each candidate must have half-marks.

In medicine the maximum marks are 50. To pass the candidate must get 25. In surgery the maximum is 30 and to pass he must obtain 15. In midwifery the maximum is 20 and pass marks 10. The visitor and inspector were not satisfied with the system of marking adopted by the Colleges and refer to the former report for the reasons of their objection. On page 19 of the present report they illustrate the defect of the system adopted and point out that where the maximum mark for a subject is five and a candidate in the opinion of the examiners deserves anything more than one whole number, up to five, he is given the benefit of the fraction and awarded the next number above; and as the pass mark is 50 per cent. it follows that a candidate who in the opinion of the examiners just qualifies to pass must secure 3 or 60 per cent. They also support this view by an example. They express the opinion that the maximum marks awarded at any portion of the examination should not be less than ten. The visitor and inspector in their observations at page 17 of the report pronounce the arrangements for the different parts of the examinations to have been excellent. There was not the slightest hitch or delay in any part of the examination, and considering the large number of candidates that were examined the organisation that ensured such results must be looked upon as perfect. They express their satisfaction that the time devoted to the examination in clinical medicine and surgery has been extended to 30 minutes and that the examination in clinical surgery is now as good a one of its kind as could be desired. They regret that the recommendation made in their last report "that in addition to the oral examinations candidates should be required to furnish a written report of at least one medical, as well as of one surgical, case has not been adopted." This committee are of this opinion. They likewise regret the absence of, and can see no difficulty in providing for, a special examination in ophthalmic surgery such as is so general in Dublin, and express an opinion "that no one should be granted admission to the Medical Register who did not give evidence by examination of having had adequate ophthalmoscopic training and who could not show at least that he was able to delineate the vessels on the fundus oculi," which opinion this Examination Committee endorses. The visitor and inspector also regret that there is no examination in operative surgery on the cadaver.

The Committee of Management of the Conjoint Board state that they have no remarks to make on the report but they inform the Council that inasmuch as some remarks are made by the visitor and inspector in reference to the examination in operative surgery, clinical, ophthalmic, and aural surgery, and to the scheme of marks, they have suggested to their respective Colleges that the Court of Examiners might be requested to take these remarks into consideration. Upon this suggestion the two Royal Colleges have arranged to act. The final conclusion of th report, that the final examinations of the Conjoint Board of England are "sufficient," is satisfactory to this committee.

Mr. BRYANT, seconded by Dr. FINLAY, moved the adoption of the report.

Mr. BROWN moved an amendment to the effect that the further consideration of the report be postponed until after the remarks of the Court of Examiners had been forwarded to the Council.

Sir VICTOR HORSLEY seconded this amendment.

Dr. MCVAIL thought this amendment should not be pressed. This report, he said, was quite as satisfactory as others they had adopted and when the work of inspecting the final examinations was completed they could have a report on the whole series and on this have a debate upon points of detail.

Dr. MACALISTER said that the bodies here had done all they could do at this stage—namely, to refer the criticisms passed on the examination to the Court of Examiners for their consideration.

The amendment of Mr. Brown was rejected and the report adopted.

Irish Conjoint Board.

On the examinations of this body the Examination Committee reported as follows, viz. :—

The visitation and inspection of the Irish Conjoint Final Examinations of the Royal Colleges were completed in May, 1902, and the carefully considered report of the visitor and inspector upon the examinations contains criticisms and suggestions which demand serious consideration by the bodies inspected. The final decision of the reporters must, however, be acceptable to this committee, for after viewing the examination as a whole they write: "We are of opinion that it is a fair and carefully conducted one and that as regards its sufficiency it fulfils the requirements of the Medical Act."

In the report by the committee of management adopted by the councils of the two Royal Colleges on Nov. 6th. 1902, we are assured that the recommendations of the visitor and inspector "are being carefully considered by the committee of management who are now drafting the details of the method of conducting the examinations" of a revised curriculum which was adopted by the Colleges in July last since the visitation and inspection. As in the case of the University of Dublin, this Irish Conjoint Board divides its examinations in medicine and surgery into two parts and as the visitor and inspector had not inspected the first part the committee recommend the Medical Council to pursue the course it adopted last May with respect to the University of Dublin.

The visitation and inspection of Part II. of the final examinations of the Conjoint Board of Ireland was made in April and May of 1902 and was reported upon by this committee in November of the same year. In this report the Council was recommended by the committee to direct that Part I. of the final examination should be visited and inspected and in accordance with this wish the visitor of this Council carried out his instruction in April, 1903, but unfortunately without the assistance of the inspector, Sir G. Duffey, who was too ill to attend.

When the report of Part II. of the final examinations was made in November, 1902, it was known that a "revised curriculum" was being drafted with the details of the method of conducting the examinations. This scheme, as a whole, was adopted by the Conjoint Colleges in July, 1902, and is now in force. The new curriculum requires five years of study at a medical school, except in the case of candidates who have studied for one year in institutions recognised by the Conjoint Board of England for the teaching of chemistry, physics, and biology. The visitor, in his report upon Part I. of the examination, tells us that "all the suggestions contained in the report of the inspector and visitor in May, 1902, had been accepted and acted upon."

That the examinations in pathology, therapeutics, and forensic medicine were carried out in strict accordance with the new regulations of the Conjoint Board in a painstaking and thorough manner. That the examination in pathology was at once practical and scientific with abundance of morbid specimens and of microscopic preparations, also that the successful candidates displayed a good knowledge of the subject. "In the departments of therapeutics and forensic medicine there was also an ample supply of specimens." "The marking was by no means lenient." The visitor finally reported that the oral examination was a good one and "sufficient."

No opinion was given by the visitor upon the written papers. "Owing to a misunderstanding on the secretary's part the papers asked for by the visitor were not forwarded"

To this Examination Committee the conclusion of the visitor after his inspection of Part I. of the final examination, "that the oral examination was a good one and 'sufficient,'" seems to support the following conclusion by the visitor and inspector after the visitation of Part II. in May, 1902:—"We are of opinion that it is a fair and carefully conducted examination nd that as regards its sufficiency, it fulfils the requirements of the Medical Act."

On the motion of Mr. BRYANT, seconded by Dr. BENNETT, the report was adopted.

Society of Apothecaries of London.

The report respecting this society was as follows:—

'The final examinations of this corporation, which are held monthly, are divided into two sections, the first composed of three parts and the second of two parts. Candidates may take up both sections together but are advised to take these sections separately—Section 1 at the end of the fourth year, Section 2 at the end of the fifth year. Section 1 must be passed before Section 2.

Section 1 consists of three parts:—

Part I. (A) includes a written examination in the principles and practice of surgery, surgical pathology, and surgical anatomy; an oral examination in surgery, surgical pathology, operative manipulation, surgical anatomy, instruments, and appliances. Part II (B) includes written and oral examination in the principles and practice of medicine, including therapeutics, pharmacology, and prescriptions; pathology and morbid histology, forensic medicine, hygiene, theory and practice of vaccination, and mental diseases. Part III. (C) which may be taken with Section 2, includes written and oral examination in midwifery, gynæcology, and diseases of new-born children; examination in obstetric instruments and appliances.

Section 2 consists of Part I. (A) clinical surgery; Part II. (B) clinical medicine and medical anatomy. Candidates may enter in Section 2 for A and B together or separately.

EXAMINATION IN SURGERY.

The general arrangements for the examination were satisfactory. Each candidate—there were 11—was examined by the four examiners in the clinical, practical, and oral examinations. The paper on surgery contained six questions, one of which was upon eye surgery. Four of them, and no more, were to be answered. Two questions were given on pathology and two on surgical anatomy, but only one of each had to be answered. So out of ten questions on surgery six only had to be answered, and for the surgical paper three hours were allowed. The questions were good. Except in doubtful cases the answers were read by one examiner only.

For the clinical examination, in which each candidate was examined for 20 minutes, there were sufficient cases, both in number and character, and the visitor pronounced the examination to have been a fair and searching one. This committee would, however, desire to see the length of time allowed for this part of the examination on clinical surgery prolonged for another ten minutes; half an hour is a minimum as to time for such an important subject as clinical surgery.

The examination in practical surgery included an examination for ten minutes at each of two tables, one devoted to surgical anatomy and operative manipulation and the other to instruments and bandaging. The instruments and appliances available were good and sufficient and three living models were available.

The oral examination in systematic surgery and pathology was pronounced by the visitor to have been a good and searching one. Each candidate was examined for ten minutes in surgery and for another ten minutes in pathology. The minimum pass mark in this examination was in each subject 50 per cent. The method of marking was judicious, being based on the percentage system. Of the 11 candidates who presented themselves for examination in surgery seven passed and four failed. There is apparently no provision in the regulations requiring evidence of study during the period for which a candidate is referred. This is to be regretted, for such requirement should always be made and enforced.

EXAMINATION IN MEDICINE.

This examination was conducted on the same lines as that in surgery and the arrangements for it were excellent.

Written examination.—Three papers were given at this examination:

one on medicine and therapeutics, containing six questions, four of which must be answered; three questions in pathology, two of which must be answered; and four questions [illegible] paper two hours. *The questions on the three papers the visitor pronounced to be unexceptionable.* The marking was likewise satisfactory to the visitor.

In the clinical examination each candidate was assigned a case out of the many which were present and half an hour was allowed for its examination. The candidate was then given another half hour in which to write a report on the case, including its diagnosis, prognosis, and treatment. One of the examiners also gave the candidates an oral clinical examination on another case which lasted 15 minutes. This examination was supervised by the two examiners. The examina- [illegible] candidate was sent to a table upon which was a selection of recent and of museum morbid specimens, upon which he was examined for 15 minutes. He then passed to a second table upon which were microscopes and a variety of slides illustrating urinary sediments, parasites and different pathological conditions and was examined for another 15 minutes. For a third quarter of an hour he had to examine a specimen of urine and to report the result in writing. The visitor pronounced the examination itself to have been satisfactory, although the knowledge of pathology displayed by the majority of the candidates was indifferent.

In the written examination on midwifery there were in the paper four questions, but only three had to be answered. In that on *gynæcology there were two questions, but only one had to be answered.* The oral examinations in medicine, forensic medicine, and in midwifery and gynæcology were conducted at three tables, one for each subject, and each candidate was under examination for 15 minutes at each. On the medicine table was a volume of plates of skin diseases—apparently no morbid specimens. On the forensic medicine table there were specimens of poisonous drugs, chemical reagents and apparatus, and samples of cloth acted upon by acids. On the midwifery table a female pelvis, fœtal skull, a few museum specimens, and some obstetrical instruments. Close by there was also a "phantom," which was used once. The visitor expresses no special opinion upon this part [illegible] [illegible] and seven [illegible] In midwifery [illegible] concluding observations of the visitor pleasure is expressed at the great care and [illegible] is conducted. He [illegible] but does not note [illegible] in the surgical paper. He expresses an opinion that the art of prescribing should have more attention at this examination. His conclusion, however, is that the final examination is "sufficient." This report is signed only by William Bruce, visitor, on account of the sad illness and irreparable loss of our Inspector—Sir George Duffey. To this committee the conclusion of the visitor that the examination is "sufficient" is satisfactory.

On the motion of Mr. BRYANT, seconded by Dr. BENNETT, the report was adopted.

Apothecaries' Hall of Ireland.

The committee reported on this Hall as follows, viz.:—

There were two candidates for the first examination, one for the second, one for the third, and five for the final. At the first examination one came up for chemistry and was rejected. The second came up in osteology, pharmacy, and biology and passed in all three subjects. The inspector reported the examination in practical pharmacy to have been exc- [illegible] tion came up in anatomy [illegible] rejected in the first two [illegible] medica. The candidate fo[illegible] jurisprudence and hygien[illegible] candidates for the final examination had been up before. Out of the four who came up in medicine one passed and three were rejected. Of *the five who came up in surgery one passed and four were rejected.* The successful candidate was said to have passed in surgery very creditably by the surgical examiners. Of the four who came up in midwifery one passed and three were rejected. Of the two who came up in ophthalmic surg[illegible]

The inspector repor[illegible] satisfactorily conducte[illegible] clusions upon his th[illegible] worthy of attention. [illegible] Hall express pleasure in the fact that the inspector reports that the examination was thoroughly and satisfactorily conducted and state that the Inspector's observations relative to the marking will receive full consideration.

Mr. TICHBORNE took exception to certain statements in the report and it was arranged that he should be given an opportunity of appending an explanation.

The report was agreed to like the others.

In Camerâ.

The Council sat for over an hour in private. On the readmission of the public

The PRESIDENT announced, first, that the Council had resolved to restore to the Medical Register the name and qualification of Mr. Charles Augustus Bynoe, Licentiate of the Royal College of Surgeons of Edinburgh; and, secondly, that the President had been authorised to communicate with the President of the Local Government Board with regard to death certification.

Preliminary Examinations.

Sir JOHN BATTY TUKE submitted a report from the Education Committee on certain preliminary examinations as follows:—

The Education Committee have had before them detailed reports by Dr. M'Cormick on the results of his inspection of the examination papers set and marked answers sent up by candidates, in the medical preliminary examinations held by the Educational Institute of Scotland and the Conjoint Board in Ireland. These bodies have also submitted to the committee full particulars of their *methods* of marking and other details of their systems; and these, with Dr. M'Cormick's comments have enabled the committee to form a satisfactory judgment on the scope and standard of the examinations in question.

As regards the examination of the Educational Institute of Scotland the improvements already effected or about to be introduced are so satisfactory that the committee feel justified in anticipating that during the next year the examination will have attained in every respect the standard desired by the Council. In future the examination in Latin and Greek, like that in French and German, will be conducted entirely by means of unprescribed books. Steps have also been taken for the appointment of examiners who have had experience of the standards and methods of the Scottish university preliminary and leaving certificate examinations, and these examiners will meet to revise the papers and marks conjointly before deciding on the passing or rejection of the candidates. In order to give the committee an *opportunity of observing* the effect of these and other changes it is proposed to continue for the year 1904 the recognition hitherto extended to the examination. It is hoped that next year the com- [illegible] examination definitively on the [illegible] the Irish Conjoint Board certain improvements in regard (1) to the distribution of marks between different branches of the several subjects included, (2) to the preponderance assigned to the oral examinations in classics and mathematics, and (3) to the requirements of a minimum standard in *each* of the subjects of examination, have still to be carried out. The [illegible] year 1904.

He moved that the report be received and entered on the minutes and adopted. In answer to a question by Dr. McVail he added that the College of Preceptors had adopted the system of unprescribed books with an alternative. He had no definite information as to whether the Irish Board would do the same but the matter would again be brought under their notice.

Dr. NORMAN MOORE seconded the motion.

Sir CHRISTOPHER NIXON thought that the Irish Conjoint Board would be unable to come into line with others in regard to the use of unprescribed books so long at least as the Royal University of Ireland was allowed freedom on the subject.

Dr. MACALISTER said that what the Council had been doing was to proceed upon the joint report of the three referees who had dealt with this subject. In that report the examination in unseen translations was held to be the ideal form, but there was no condition laid down that the system should be universally applicable. The Council was aiming at it but it could not lay down a universal rule.

Sir CHARLES BALL believed that the recommendations now made would produce an examination satisfactory to the Council. The examination was satisfactory to the Conjoint Board.

Sir J. W. MOORE said that as the representative of the Royal College of Physicians of Ireland he should like to express his recognition of the great courtesy and consideration shown in regard to the Irish Conjoint Board's preliminary examination. He could assure them that the committee of management of the Conjoint Board had spared neither time nor trouble nor expense in trying to improve the examination in every possible way and to bring it up to the proper standard. He thought that committee had achieved a large degree of success and he had no doubt that it would give the fullest consideration to any suggestion coming from the General Medical Council. He did not know what the Conjoint Board would do if this examination did not exist. The Board was anxious in every way to carry out the views of the Council's Education Committee.

Mr. TICHBORNE took exception to the penultimate sentence in the paragraph relating to Ireland, contending that against the understood arrangement that examinations in general knowledge should not be under the charge of medical corporations it was proposed to perpetuate the preliminary examination conducted by the Conjoint Board of Ireland. He moved to this effect.

Mr. Jackson seconded this amendment which was rejected by 18 votes to 3.

The report was then adopted.

Sir John Batty Tuke next submitted a report of the Education Committee on a communication from the Apothecaries' Hall, Dublin. The communication and report thereupon were as follows:—

40, Mary-street, Dublin, Nov. 19th, 1903.

To the President of the General Medical Council.

Dear Sir,—I beg to inform the President of the Medical Council that we, the Apothecaries' Hall of Ireland, intend on the 1st of the year 1904 to resume our preliminary examinations in arts.

It is intended, for the purpose of conducting these examinations, to appoint qualified university non-medical graduates.

When our arrangements are completed we shall be pleased to facilitate any inspection the Medical Council desire.

I remain, dear Sir, yours,

Robert Montgomery, M.R.C.S., Secretary.

This is an intimation that the authorities of the Apothecaries' Hall, Dublin, intend next year to revive the preliminary examination in arts which, in deference to the express wish of the Council, they have for many years discontinued. The committee are unaware of any circumstances which would justify so serious a reversal of the educational policy which, at the Council's instance, has been generally adopted by the licensing bodies, including the Apothecaries' Hall. The committee, therefore, strongly deprecate the proposed re-establishment of a preliminary examination conducted by a professional body which has no special relation to questions of general education. Should such an examination be, notwithstanding, instituted for candidates seeking the Licence of the Dublin Apothecaries' Hall it will rest with the Council to decide whether it should be recognise[illegible] gistration of students in general. Such [illegible] a practical way the arrangements of othe[illegible] to preliminary examination.

Accordingly the committee, in view of the grave educational issues involved, do not recommend that the Council's approval should be given to the step contemplated by the Apothecaries' Hall, Dublin.

He (Sir John Tuke) hoped that this report would be received, entered on the minutes, and adopted. Most members of the Council, he said, were aware that upwards of 30 years ago all the medical corporations gave up examinations in general knowledge with the exception of the two authorities in Dublin. The Apothecaries' Hall, however, in 1885 also gave up its examinations in arts and no reasons had been put forward why a retrograde step should now be taken. To revive an examination which had always been deprecated and objected to by the Council at large was different from sanctioning what might be spoken of as a sort of remnant in the case of the Conjoint Board, which, he believed, would get rid of its arts examination at the earliest possible moment after a suitable examination was established to take its place.

Dr. McCall Anderson seconded the adoption of the report.

Mr. Tichborne said that the Apothecaries' Hall, Dublin, had not wished to undertake the preliminary examination in arts. To reinstitute examinations would mean a great deal of responsibility to the Hall; it would not mean money, it might mean loss. But they were forced into taking the step by the fact that the Conjoint Board had formed a cordon round the Hall that prevented any one of the students taking the Board's preliminary examination going to the Hall for their medical education. So long as such a system existed he did not see how the Hall could carry on its work successfully. He understood that the Conjoint Board did not contemplate giving up its examinations in arts and if that was so the Hall wished to persuade the General Medical Council to inspect any examinations it might institute. Legally, by its Act of Parliament, as well as by the Medical Act, the Hall was entitled to conduct examinations in arts and it wished to be on all fours with the Conjoint Board. If it was necessary for the Conjoint Board to have the conduct of examinations in arts it was necessary for the Hall. If the Hall re-established such examinations the General Medical Council had no reason to suppose that they would not be properly conducted. The Conjoint Board had not been particularly successful with these examinations and the Hall thought it would be advantageous to have the liberty to inaugurate a system of its own.

Mr. Brown thought it would be only just that the Hall should be placed on the same footing as the Conjoint Board, especially as it had statutory rights to conduct examinations in arts.

Sir William Thomson protested against any assumption that there was hostility in this matter between the Conjoint Board and the Apothecaries' Hall. The only reason why the Conjoint Board did not give up its examinations in arts was that nothing had been instituted yet to replace them. The Conjoint Board was ready to give up its examinations to-morrow if something suitable were substituted.

Sir John Moore had heard with extreme surprise that the Apothecaries' Hall was, or should be, on all fours in this matter with the Conjoint Board. The Apothecaries' Hall had no school. There was no *raison d'être* for preliminary examination at the Apothecaries' Hall; it was simply going there to pay for examination.

Dr. McVail was prepared to vote for the adoption of the report, but, after all, the vote would be merely a piece of pious opinion on the Council's part. The Apothecaries' Hall could do exactly as it thought fit and what was here almost rebellion against the Council's wish was what had occurred in connexion with other subjects and other bodies. The gateway having been once opened it was not likely that only one party would pass through it. It was very unlikely that in future they would not have other bodies acting independently on lines of their own. He thought it was a great pity that at this time of day after all the discussions they had had that they should be brought back to the very first steps of their long, long journey.

Mr. Tichborne remarked that if the Conjoint Board was complimented on acceding in spirit to the wishes of the General Medical Council he must remind the Council that the Apothecaries' Hall had acceded to the Council's wishes in act.

The President: Why are you going out of your good way? Why, after so many years, are you going back?

The report was adopted.

Reports of the Council's Proceedings.

Dr. Norman Moore had on the programme a notice to move—

That it be referred to the Executive Committee to consider and report to the Council upon the possibility of making arrangements with the medical journals for an authorised report of the discussions of the Council.

On being called on he said: At this very late hour of the session I ought perhaps to withdraw this motion. It must take some time to discuss but I will explain in a sentence or two what was proposed. I fully recognise the excellence of the reports of the debates of the Council which appear in the medical journals. They are excellent but, of course, all reports of that kind must contain errors, very serious errors; and I thought it might be worth while if the Council considered whether it could enter into an arrangement which would, of course, cost the Council some money but which might provide in some way for greater precision. It might be to our advantage. I propose in a future session to present this but for the present I ask leave to withdraw it.

Leave was given and the subject dropped.

The Pharmacopœia Committee's Report.

Dr. MacAlister moved that the following report should be received, entered on the minutes, and approved:—

The Pharmacopœia Committee beg leave to report that from May 24th to Nov. 24th the number of copies of the British Pharmacopœia sold was 711, and of the Indian and Colonial addendum 123. The total numbers disposed of are thus: of the Pharmacopœia, 34,591; of the addendum, 664.

The committee held a special meeting on Oct. 30th for the purpose of considering in detail the questions raised by a digest of criticisms, prepared by their direction by Mr. W. Chattaway. At this meeting a number of details were considered and certain were selected as deserving of inquiry in preparation for the revision of the Pharmacopœia.

The final instalments of the investigation on the solubilities of drugs, conducted in the Research Laboratories of the Pharmaceutical Society of Great Britain by Professor Greenish, have been forwarded by the council of the society to the committee. These will, as in other instances, be published for general information. The series of memoirs on this subject constitutes a valuable addition to the data at the committee's disposal.

Professor Dunstan, of the Imperial Institute, has made substantial progress with the examination, begun last year, of the pharmacopœial tests for arsenic. In view of the laborious character of the inquiry the committee propose that a second and final grant of £50 should be made to Professor Dunstan to enable him to complete the work and to present it in a form that may be immediately available for the preparation of the next issue of the Pharmacopœia.

Other researches, initiated in conference with the representatives of the pharmaceutical societies of Great Britain and of Ireland, are in progress.

Dr. Norman Moore seconded the motion which was agreed to.

On the motion of Dr. MacAlister Sir J. W. Moore was appointed a member of the committee in place of Dr. Lombe Atthill.

Public Health.

Dr. BRUCE, seconded by Sir CHARLES BALL, moved that the following report by the Public Health Committee should be received and entered on the minutes :—

The committee had the following communication from the War Office submitted to them at their meeting on Nov. 27th :—

War Office, London, S.W., Nov. 26th, 1903.

SIR,—I am directed by the Secretary of State for War to submit the following recommendation of the Advisory Board for Army Medical Services, namely, that certificates granted by the sanitary officer of the [illegible]

[illegible]

health administration.

I am to request that this communication may be placed before the Council, which is, I understand, now in session.

I am Sir, your obedient servant,

The Registrar, General Medical Council. EWD. WARD.

After maturely considering the different points in connexion with the foregoing communication [illegible] the precedent of Gibraltar, [illegible] be added to the list of recog[illegible] [illegible] tory instruction required [illegible] opportunities of acquiring a knowledge of the working of the public health laws in relation to a civil (as distinguished from a military) [illegible]

Sir JOHN BATTY TUKE wished to enter his protest against the introduction of such important reports as this at the fag end of the session. There was, he must admit, considerable jealousy with reference to the Public Health Committee because it had been whittling down the conditions under which the Council started some years ago. He had not had time to look at what this particular report meant and it might mean a great deal more than appeared on the surface.

Dr. NORMAN MOORE: We should consider this report very thoroughly.

Dr. BRUCE: Are you against it going on the minutes? Do you not think it would be better to consider it when it has been placed on the minutes?

Mr. BROWN: Withdraw it and bring it up next session.

Dr. MCVAIL: Any debate on it should take place before it is entered on the minutes If it is to go back it should go back without being put on the minutes.

Dr. MACALISTER: I think it should go on the minutes. The letter from the War Office is dated Nov. 26th, so there has not been much time lost in getting it through. As to the substance, I do not see that there is any reason why the report should not go on the minutes

On a division the motion to receive the report and to enter it on the minutes was carried, 18 voting for it.

Dr. BRUCE then asked the Council to approve of the report.

Sir JOHN BATTY TUKE desired to know what the Council's responsibility would be under it. He said he had always noticed that Government communications came in at a time when they must be shoved through, but he saw no reason why if the Bombay command was recognised the Madras and Bengal commands should not also be recognised. He wanted to have some reasons for his vote in regard to the Bombay command and he had none.

Dr. WINDLE moved that consideration of the motion should be postponed. He did not think matters should be rushed through at the last moment and this one could well stand over until the next meeting of the Council.

Dr. NORMAN MOORE had no hostility to the report but he quite agreed that there was something in it which required great consideration and one consideration was the precedent of Gibraltar, for when they came to other parts of India there would, if the report was adopted, be the precedent of Bombay. He thought the Council ought to be quite sure that the training for an Indian command was equivalent to the training required of a man who was to hold a public health appointment in England. If it were so he should support the report; if not he should not vote for it.

Dr. MCVAIL considered it unfair to the War Office to say that its letter was sent out only on Nov. 26th, for it actually, though in an informal form, had been sent on the 6th. While it looked very sudden on coming before the Council at the last moment the Council was partly to blame for that because of the manner in which arrangements were made to hold meetings of committees. He must support the application made by the War Office; he did not see how they could refuse it seeing that they had already recognised Gibraltar. If they were not on the down grade in respect to the Bombay command application, they were expanding; and Mr. Power had told the committee that if the application was granted there would follow applications from the India command and from the navy. He would vote for the adoption of the report.

Dr. BENNETT considered that it would be very undesirable to postpone this matter.

On a vote Dr. Windle's motion for postponement was rejected by 13 to 10.

Dr. MACALISTER thought that instead of adopting the report it would be better to pass this motion :—

That Bombay be added to the list of recognised military districts, that the report of the Public Health Committee be communicated to the Secretary for War, and that his attention be specially called to the last paragraph of the report.

Dr. BRUCE made no objection and Dr. MACALISTER'S proposal, seconded by Dr. NORMAN MOORE, was agreed to.

Final Examinations of the Scottish Universities.

Dr. MACALISTER moved :—

That the Executive Committee be requested to arrange at its meeting in February for the inspection of the final examinations of the Scottish Universities next year.

He remarked that it would take some care to find an inspector so capable and much appreciated as Sir George Duffey had been and he thought the Executive Committee should have some time in which to look around before it made an appointment.

Dr. BRUCE seconded the motion which was at once agreed to.

The Apothecaries' Hall of Ireland.

On the motion of Dr. MACALISTER, supported by Sir J. W. MOORE, it was resolved :—

That the Executive Committee be requested to arrange for the appointment of a visitor or inspector for the examination of the Apothecaries' Hall, Dublin, and that the inspection take place from time to time as the President directs.

Dr. MACALISTER next called attention to a communication from the Apothecaries' Hall, Dublin, which showed that :—

[illegible]

He suggested that the reply should be to the effect that under the Medical Act, 1866, the Council had no power to pay the expenses of an examiner.

This was agreed to.

Report of Students' Registration Committee.

Sir HUGH BEEVOR submitted a report from the Students' Registration Committee showing how certain applications for exceptional registration as students or for the antedating of the commencement of professional study had been dealt with, and recommending that the Swansea Technical College (day classes) should be added to the list of recognised institutions approved by the Council.

The report was adopted.

A Vote of Thanks.

Sir HUGH BEEVOR, seconded by Dr. NORMAN MOORE, moved :—

That the thanks of the Council be given to Dr. Windle and to Professor J. Campbell Brown for their visiting all the first medical examinations of the licensing corporations of the United Kingdom and reporting upon them individually and collectively.

The motion was passed and the PRESIDENT wished personally from the chair to thank the two gentlemen named for their great services and for having given the Council so admirable a summary of the whole subject of the visitation of the first medical examinations.

Annual Returns.

On the motion of Mr. BRYANT, seconded by Sir CHARLES BALL, the following report was received and entered on the minutes and the recommendation in the last paragraph of it was adopted:—

The Executive Committee having considered a return showing the answers of the licensing authorities in regard to the practicability of the proposed changes in the presentation of the information laid before the Council in the annual tables, obtained pursuant to the following resolution of the General Council adopted on May 23rd, 1903:—

That the report of the Examination Committee upon the desirability of obtaining additional information from the various licensing bodies for use in the preparation of the Annual Table (*a*) showing results of professional examinations, which was received by the Council and entered on the minutes and appears as Appendix XXII. of the volume of minutes for 1902, be referred to the various licensing bodies and that they be requested to inform the Council whether it is practicable to give the information in the form suggested in Table I. of that report.

RETURN.

Answers received from the licensing bodies in response to a request for information as to whether it is practicable to give the information in the Annual Table (*a*) in the form suggested in the Examination Committee's report.

Name of body.	Table I., showing results of examinations according to subjects for qualifications primarily admitting to Register.	Table II., showing number of repeated rejections.
R. Coll. Phys. Lond.	No serious difficulty.	Time and labour required would cause considerable inconvenience.
R. Coll. Surg. Eng.	No objection.	Would involve too great expenditure of time and labour.
Apoth. Soc. Lond.	Practicable.	—
Univ. Oxford.	No particular difficulty.	—
Univ. Camb.	No (except in certain groups of subjects).	—
Univ. Durh.	Practicable.	—
Univ. Lond.	No difficulty.	—
Victoria Univ.	No objection.	—
Univ. Birm.	No difficulty.	—
Scottish Conjoint Board	Can supply the information if desired.	—
R. Coll. Surg. Edin.	Can easily supply.	Table I. will show.
Univ. Edin.	Practicable.	—
Univ. Glasg.	Practicable but modification suggested.	Form suggested for this.
Univ. Aberd.	Ditto.	—
Univ. St. And.	Practicable.	—
Irish Conjoint Board (answering also for both Colleges).	Will be happy to comply.	At present impossible.
Univ. Dubl.	Practicable.	—
R. Univ. Irel.	Not possible. Passes in separate subjects not awarded.	—

Resolved: That this return be remitted to the Examination Commi[illegible]

[illegible] having carefully considered the replies fro[illegible]s, find:—

I [illegible] of the University of Cambridge and the Royal University of Ireland all the licensing bodies are prepared to give the information as to the results of professional examinations for qualifications primarily admitting to the Register in the form of Table I. suggested by the Examination Committee. The difficulty with both these Universities is identical—namely that they do not recognise the passing in any one of the subjects forming a group for purposes of [illegible] didate passes in all the others at the same [illegible] information given as to passes and rejectio[illegible] jects grouped together for an examination. As will be seen by the footnote appended to the suggested table this difficulty has been provided for. For example, at the final examinations a candidate may obtain good marks in medicine but low ones in surgery and midwifery; he is therefore rejected for [illegible] to present himself again for examina[illegible] e subjects in which he was deficient. [illegible] that he should appear as a rejection in the separate columns for the sub[illegible] wifery. Acting upon this principle [illegible] in preparing the table from information received from these Universities in [illegible]

[illegible] bodies (the Universities of Glasgow and [illegible] passes and rejections in botany and zoology separately and not combined under the general heading of biology.

III. That the replies received indicate that it is practically impossible to obtain the suggested information as to repeated rejections. This the committee regret as they consider the information, if obtainable, would be distinctly valuable.

The committee therefore recommend that for the future the annual returns showing results of professional examinations for qualifications registrable under the Medical Act, 1886, should appear in the form suggested in their previous report, with the addition to Table I. of columns for the subjects botany and zoology.

Mr. BROWN, on the ground that it was impossible at the end of the session to get the full opinion of the Council, with the consent of his intended seconder, Mr. JACKSON, withdrew for the present the following motion, of which he had given notice:—

That copies of the returns which have been officially furnished to the Council relating to the competitive examinations for vacancies in the department of the Royal Navy and for commissions in the medical staff of His Majesty's Army and in the Indian Medical Service, held in January, May, July, and August, 1903, be sent to the Presidents of the Royal Colleges of Physicians and Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the Royal Colleges of Physicians and Surgeons in Ireland, and that their attention be directed to the large percentage of rejections at the examinations referred to of candidates who held the diplomas of the Conjoint Boards of Scotland and Ireland.

End of the Session.

Mr. BRYANT proposed that now that the whole business was disposed of they should express to the President their warm thanks for the kind and able way in which he had conducted them through an anxious session. The work, he said, had gone pleasantly and with less difficulty than usual.

Sir J. W. MOORE, as the junior member of the Council, seconded the proposal.

The PRESIDENT having acknowledged the compliment,

The Council rose till May, 1904.

EPSOM COLLEGE.

AN extraordinary general meeting of the governors of Epsom College was held at 37, Soho-square, London, on Nov. 26th, the President of the College, Lord ROSEBERY, being in the chair.

The Treasurer, Dr. CONSTANTINE HOLMAN, proposed the following motion:—

That in accordance with the powers given under Section 12 of the [illegible] College Act of 1894 the name of the college [illegible] College" in lieu of "The Royal Medical [illegible] in documents issued from the office in London the following words, so far as is practicable, be added immediately after the title: "Established in 1855 as a public school with a Royal medical foundation."

He said that he regretted the absence of the chairman of the council of the college, Sir Joseph Fayrer. In his (Dr. Holman's) opinion the proposed change of name would benefit to an enormous extent both the medical profession and the college. He explained that the college was founded for all classes but offered special advantages to the sons of medical men. Provision was made for 50 foundation scholars elected from the necessitous orphans or sons of medical men. There were 50 pensioners chosen from the most necessitous cases in the medical profession as vacancies occurred. There was a curious insistence on the part of the public and also on the part of some members of the medical profession to regard Epsom College as a class school. Mr. Propert who founded the college never intended it to be a class school or a charity school, and in support of this contention he read a letter from Mr. L Propert, the son of the founder. The word "benevolent" in the title "Royal Medical Benevolent College" was used by the founder to find the money for building the college and the time had now arrived when the word might very well be dropped. In 1894 some doubt was thrown upon the power of the council to admit all classes to the college. Therefore an amending Act was procured from Parliament to declare the college open to all and also to give the council power to change the name. A pledge, however, was given that in choosing another name the identity of the institution should not be obscured. It had been found that it was the earnest wish of all that the name should be changed and that boys had not been sent to the college simply because of the title containing the word "benevolent." The council therefore proposed the change indicated in the motion he proposed. Marlborough College and Wellington College had large foundations and he did not see why Epsom College should not have the same. The institution was to be a public school with a Royal medical foundation and by using the word "foundation" the college was safeguarded from the imputation of it being a charity. He could see within a measurable distance a very large portion of the sum necessary for this purpose and under the title now proposed the charitable work of the institution would be rendered secure.

Mr. HENRY MORRIS, treasurer of the old Epsomian Club, in seconding the motion, said that he did so because he was an old Epsomian and there was not a single old Epsomian who did not gladly hail the change of title. There was no doubt that there had been among the laity and among a large number of the medical profession an idea that Epsom College was a charity school. It had been a great satisfaction to him to hear read out the letter of Mr. L. Propert, the son of the founder. Boys from Epsom College were made to feel that the college was considered to be a charity because they were asked on saying where they were educated whether their father was still alive or whether he had broken down in health. Questions of that kind could only mean one thing and the imputation was naturally resented. There was no more reason why Epsom College should be called "benevolent" than Marlborough College or other public schools which had foundation scholars. The word "benevolent" applied to an institution was meaningless, or if it did mean anything it implied something objectionable. The word "benevolent" was an abomination as applied to an institution for it inferred nothing but the idea of charity, implying assistance given to people who were absolutely necessitous. It was undesirable to keep this word "benevolent" because it did not fulfil the intentions of the founder and of those who assisted him in the establishment of Epsom College. They need not fear that the funds of the institution would suffer. It was not to be believed that people gave money to any institution because it was called "benevolent"; financial assistance was forthcoming to an institution when it made good use of the money it had.

Four letters from governors of the institution were then read, two being in favour of the proposed change.

The motion was then submitted to those present by Lord ROSEBERY and carried *nemine contradicente.*

Sir WILLIAM S CHURCH, Bart., K.C.B., President of the Royal College of Physicians of London, in moving a vote of thanks to Lord Rosebery for taking the chair, said that they thanked him for coming to that meeting and acting as chairman. They also thanked him as a neighbour, for not only did he reside in close propinquity to Epsom College but he was also a neighbour in a much fuller and nobler sense, placing his help freely at the disposal of the institution whenever it was required.

Mr. CHRISTOPHER HEATH seconded the motion which was put to the meeting by Dr. HOLMAN and carried with acclamation.

Lord ROSEBERY, in reply, said: I am much obliged for the cordiality with which this vote has been received. Long before I was connected with Epsom College I felt deeply that this question of the name handicapped very severely the energy and prosperity of the college. In the first place the [illegible] is the fatal [illegible] stitution in [illegible] so lengthy [illegible] ys marvels, for those who have been connected with the management of this college, whether as treasurers, governors, or as headmasters, that they should have made the college what it is under the great disadvantage of the name. The other disadvantage under which the late title laboured has been called attention to—namely, the inclusion of the meaningless but distasteful word "benevolent." When you come to think of it, there is no reason in the world why Eton, which, in my opinion, holds pride of place among public schools and which I put at the head of all educational establishments, not perhaps in respect of education but from certain other points of view, should not have applied to it the word "benevolent." I hope there are no Harrovians or members of rival schools here to tear me in pieces for putting Eton first but we all have these childish prejudices. There was no reason why Eton should have omitted the words and title we have just discarded. There was no reason why the word "benevolent" should not have been given to Eton, because when Eton was founded by Henry VI. with 70 foundation scholars it was a Royal Benevolent College, and I cannot conceive that anybody will think that Eton College would prosper so well if it were suddenly to add the additional epithets of "royal" and "benevolent" to its name. I say this because I notice in one of the letters of objection sent by one of the governors a lingering regard is expressed for the word "royal." The discarding of the word "royal" does not mean that we are ungrateful or unmindful of the constant proof of the interest of past and present members of the Royal Family in our institution. We are justly proud of it, but so great is the interest that the Royal Family has developed in all public institutions under the reign of our late gracious Queen that almost every institution that does any munificent work would be justified in claiming or retaining the word "royal" for having received some mark of royal interest. That I regard as an immense credit to our Royal Family. Although that be so, would it not be thought absurd if Eton College were suddenly, in memory of the various bounties which it has received from the Kings of England beginning with Henry VI., to say that the word "royal" would be a flattering addition to the title it already enjoys? You can hardly fancy "The Royal College of Eton" and it is even more difficult to imagine "The Royal Benevolent College of Eton." I think that that simple illustration goes to the root of the whole matter and it shows that we are right in discarding these superfluous epithets and adopting the simplest and most direct name, which is the name, too, by which the school has long been popularly known I believe in my heart of heart that this will be a memorable date in the history of Epsom College. I believe the change in the name means a new start, for we have dropped the encumbrances which I think weighed us down, and I who know fairly well as a neighbour the admirable character of the school and of the lads who are trained in it venture in the most sanguine spirit to prophesy that to day will mark a new era of prosperity in the history of Epsom College.

The meeting then terminated.

THE MEDICAL SUPERVISION OF PUBLIC EDUCATION.

NOW that recent legislation has handed over to local councils elected for general purposes of local government the duty of controlling and of directing all public education throughout England and Wales innovations and changes of method are to be expected in various directions, and important questions have arisen and from time to time will have to be decided with regard to the part to be played by the medical profession in the country's education and under the new *régime.* The principles which are likely to be discussed may conveniently be referred to in the consideration of a concrete question which will be ventilated in many places with reference to the medical men who under the school boards, that have passed away, performed such duties as were assigned to them upon their appointment, duties not necessarily alike in different localities. The question is whether school medical officers are to be appointed as to a distinct post or whether the medical officer of health is to combine with his duties as such those of medical officer to the schools controlled by the local authority employing him. In some instances already the medical officer of health has been appointed [illegible] Stovin, to act in the dual capacity, with the consequent displacement of Mr. W. H. Best, medical adviser to the late school board, was urged with considerable vigour by the former gentleman upon grounds of public expediency and of the proper performance of the duties required. His view was not adopted without prolonged argument by the Ilford urban district council and similar discussions have taken place, and, no doubt, will take place, elsewhere. There are many elements of controversy in a subject involving the consideration of "vested interests," of economy, and, most important of all, of efficiency. Before, however, the question of efficiency can be determined or even submitted to argument it is necessary to arrive at a conclusion with reference to another. Previously to deciding by whom the duties of medical officer to a school authority may best be performed that authority must more or less definitely make up its collective mind what those duties are to be, not perhaps with any delimitation of their details but with some distinctness as to their direction and scope. To sum the matter up at the outset, the question is whether the school medical officer is to be mainly a medical officer of health responsible as such for the school, or whether he is to be this and a great deal more. If the duties imposed upon him are to be limited to such as fall within the normal jurisdiction of the medical officer of health there can be no reason of general application why that official should not be appointed or why he should not ably carry out his work and there are obvious reasons which point to him as the right man for the post. It will be more convenient to have one authority to advise the council and to carry necessary measures into effect, uniformity and promptitude of action will be better assured, and the gentleman appointed will have the advantage of experience with regard to an important and preponderating portion of the task assigned to him. The duties of a school medical officer are not, however, in all respects even similar to those performed by medical officers of health acting in that capacity. They must include some, and they may include many, matters with which a medical officer of health has nothing to do. If the latter is the case and the scope of the school medical officer's duties is enlarged the man undertaking both posts may find that there is more to be done than there is time to do thoroughly and that duties have to be attended to for which special study and previous experience would be desirable qualifications.

The Education Acts do not specifically require the appointment of, and assign duties to, medical officers. The Elementary Education Act, 1870, section 35, empowered a school board to appoint necessary officers, and under this section the School Board for London and the school boards for some other large centres selected medical men to perform during the pleasure of the board those duties for which a medical man was necessary—such as the remedying of sanitary defects in schools, the dealing with outbreaks of infectious disease, and the examination of teachers and candidates for school appointments as to their health and of children believed to be mentally or physically defective. The employment of medical practitioners for these purposes was required directly or indirectly by various Acts of Parliament dealing with education. Their further employment for general purposes of school and educational hygiene was a natural development of the educational movement in the hands of boards zealous in the cause of education which found that the advice and coöperation of a medical practitioner making a special study of educational requirements were of considerable practical advantage to them Examples of school boards employing medical officers in this manner are to be found in London, Bradford, Halifax, Manchester, Newcastle, Salford, and elsewhere, but in order to make the study of what may thus be done complete attention must necessarily be directed to the practice prevailing in the United States of America and in various continental countries.

If we assume that it is desired by any educational authority that its medical officer shall be a specialist in school hygiene, charged with the care of its schools and with the duty of making them, so far as his skill and powers permit, efficient educational agents, we shall then find that there are many arguments against the school medical officer being at the same time medical officer of health. The question whether he will have time for the proper fulfilment of the two offices will depend principally on the size and importance of his district and of the schools therein. In small places and outlying districts there may be no difficulty upon this score and the medical officer of health may be on account of his attainments and for other reasons the best man obtainable. In large and populous districts, however, it will be otherwise, and apart from the question of time there are important points to be considered. The medical officer of health and the medical officer of a school authority have to regard the school from different points of view, one of them being concerned with the public health and the other with the health of the school and with the cause of education. For example, where infectious disease has broken out the former by habit of thought and the natural impulse to be on the safe side with regard to the public health may be disposed to close the school at once. The other, having as his first care the progress of education, will rather be impelled to do his utmost to keep the school open, although his desire not to check the education of the children who are in health will cause him to eliminate carefully those likely to prove centres of infection. If through the appointment of two medical men to fill the two offices differences of opinion arise at the time of an outbreak of infectious disease as to the steps to be taken, each can maintain his own point of view and the local authority may have to take the responsibility of deciding between them, but at all events the educational side of the question will not be lost sight of by the one official and the duty of protecting the public health will be enforced by the vigilance of the other. It has already been suggested that such duties as the examination of children who require special educational treatment do not form part of the ordinary functions of a medical officer of health and that the best performance of these duties may most effectually be insured by the employment of one who through inclination and previous training has become a specialist in such matters. The gentleman selected, whoever he may be, and whatever the number of children under his charge, if he is to perform these necessary duties with the utmost efficiency, will have to devote himself to them with constant vigilance. If he is expected to do more, then beyond the exercise of his skill in the detection of defective vision, hearing, and intelligence he will find himself called upon to pronounce opinions upon a variety of other matters, such as the cleanliness, lighting, and ventilation of buildings, the preservation of the health of children with a view to the carrying on of their education, their physical training, and their susceptibility to mental and bodily fatigue, with all the details relating to such subjects. In these circumstances the duties which are akin to those of a medical officer of health will occupy comparatively but a small part of his time and attention, and the others, which are those of a medical expert in education, will demand the exercise of skill, sympathy, and acquired knowledge of a different but no less important description.

It is for this reason that we would urge educational authorities to decide in some measure the nature of the functions which they will expect their medical officer to perform before they make their selection and before they decide to dispense with the aid of those who may have obtained experience and evinced zeal in the performance of those very duties. In case the mere idea of a medical man being employed for school purposes may seem to some a step towards socialism and towards relieving the parent of the care of the health of his offspring it may be pointed out that the school medical officer is for the benefit of the school, not of the child, and in case others who are medical men attending school children may be apprehensive of a tendency to oust them or to discount the value of their services it may be as well to quote in further explanation the concluding paragraph of the annual report recently issued by the medical officer of the London School Board, Dr James Kerr, where he says: "The function of the school doctor in relation to children in the schools is often mistaken even by medical men who should know better. It is no part of his duty to prescribe for or treat any individual case. His work is preventive and in individual cases only applies to matters involving educational questions. He can call attention to the need of glasses but has nothing to do with prescribing them. He may notice the presence of adenoids but takes no part in their removal. On the other hand, his work should extend far beyond mere investigation of the sanitary state of buildings or the excluding of unhealthy or diseased children. The methods of education, requirements of physical exercise, avoidance, particularly in the very young, of overstrain from prolonged fatigue or from improper tasks are all matters in which improvement can only be obtained by the school doctor acting, not as an authority to shut or close, to disturb or interrupt the proper work of the school, but as a counsellor and adviser with a knowledge of school routine and of the requirements for health to assist and collaborate with the teacher and administrator, and it is with this in mind that he should enter any school"

Looking Back.

FROM

THE LANCET, SATURDAY, DEC. 3, 1825.

INJUNCTION DISSOLVED.

TRIUMPH OF THE MEDICAL PRESS.

Court of Chancery, Monday, Nov. 28, 1825.

THE LANCET.

Mr. HORNE said he had a motion to make in the case of "Abernethy *v.* Hutchinson," which he mentioned at the last seal, to dissolve the injunction granted against the defendant, restraining him from continuing to publish, or sell, Mr. Abernethy's Lectures in THE LANCET. At the last seal, the learned Gentleman understood that the Solicitor General, or some other gentleman was to appear for the plaintiff, to oppose the present motion, but he was *now given to understand, that it was not intended to be opposed*, therefore he moved for the dissolution of the injunction, and submitted that he was entitled to his order.

LORD CHANCELLOR: I dissolve the injunction.

We feel confident that this result will be hailed with satisfaction by thousands of our readers, as *the triumph of principle* in a legal struggle, which has been declared by the highest authority in the realm to be one of no ordinary importance, involving, as it did, the rights of Lecturers properly understood on the one hand, and the interests, not so much of a publication, which the Lord Chancellor characterised as one of great utility, as of the whole Medical Profession, and of the public at large on the other.

MEDICINE AND THE LAW.

Blackmail by a Sanitary Inspector.

A SANITARY inspector employed by the city of Westminster has been sentenced to 12 months' hard labour at the Old Bailey for attempting to levy blackmail upon a French restaurant keeper on whose premises he had apparently found certain tinned food which was subsequently condemned and who was thus to some extent in his power. The Frenchman had the good sense to communicate at once with a member of the city council and a detective, by concealing himself and by arresting the blackmailer at the moment when he obtained possession of the bribe which he had tried to extort, was able to prove the case up to the hilt. Blackmail, however, is an offence which it is not always easy to bring home to the culprit even where the intended victim resists and the penalty imposed is by no means too severe for the serious nature of the crime. The occurrence of this incident raises the question whether sanitary inspectors are sufficiently highly paid to secure a class of men who will be superior to the temptations to which their position exposes them. British police and minor officials are probably less corrupt than are those of many foreign nations, but a few black sheep easily gain a bad name for any calling and their example is liable to infect their fellows. Careful selection and supervision, with the prompt conviction and severe punishment of offenders, are necessary in cases where powers such as those exercised by sanitary inspectors are given.

An Extraordinary Medical Impostor.

Convicted under the name of Hubert Part for bigamy a man named John Thompson Cubbin had his true name and history disclosed by the police at Liverpool assizes before receiving from Mr. Justice Ridley a sentence of five years' penal servitude. Born at Chorley in humble circumstances and having been at one time a timekeeper in a colliery, he had for some time pursued a career characterised by fraud and lust, representing himself in many places as a medical man, of which offence he had been convicted, as well as for obtaining jewellery and money by false pretences. He had been through at least one ceremony of marriage since marrying a wife in 1898 and one of the
crimes for which he was indicted and not tried was tha
rape upon a woman whom he induced to believe that he
her husband, thus causing her to spend a night with
A considerable part of his recent history was connected
this incident. He had met and made the acquaintance
medical man named Herbert Part, who was procee
abroad very soon after a marriage the details of which
not been published. Having obtained knowledge of
Herbert Part's private affairs and knowing that he w
be likely to remain abroad Cubbin personated him
being enabled thus to use a name that was on the Med
Register was protected in carrying on the illicit med
practice which seemed to exercise such an attrac
for him. As Herbert or Hubert Part, for he used
names, he went through a ceremony of marriage
a girl named Alice Ford and through her meeting
wife of the real Part was charged with bigamy. In
succeeding investigations his true character and a
cedents were revealed and it was found that before
ceremony with Alice Ford he had been married
to Ellen Mary Part but to another lady. The ease
which medical men can be personated should make t
cautious in dealing with plausible strangers claiming to
members of the same profession. The story of the wife w
even after a married life of only a few days' duration a
parting of three or four years, was deceived by a stra
into accepting him as her husband is an extraordinary
Such an occurrence renders many instances of mista
identity such as those connected with the late Tichb
claimant easier to understand and also shows that
identification of accused persons by witnesses at crim
trials may at times be entirely unfit to be relied upon.

The Liability of a Nursing Association.

An action of considerable interest to the medical
fession and to associations for the organisation and su
of nurses was tried by Mr. Justice Jelf and a spe
jury at the recent assizes held at Manchester.
plaintiff had undergone an operation for the removal
a kidney. Dr. G. J. Robertson of Oldham performe
with the assistance of two other medical men and
nurses supplied by the Oldham Nursing Association w
present. After the operation had been completed and a
the patient had been placed in her bed when recover
from the anæsthetic she cried out that her leg was be
burnt. A hot-water bottle was then removed by one of
nurses and Dr. Robertson afterwards dressed the leg wh
was very seriously injured, so that the patient was at
time in a critical condition. Dr. Robertson spoke to
nurses as to what had taken place and they appear to h
met his observations with indignant denial and the re
that the blame was with him. In consequence
what passed he immediately removed them and repla
them with other nurses from Manchester. Upon the issu
fact as to whether the hot-water bottle or bottles were u
upon the operating table or were placed in the bed a
the patient was in the hands of the nurses there was a di
conflict of evidence. Upon this issue the jury found t
the injury to the plaintiff was caused by the negligenc
the nurses. A further defence was raised that the relati
of master and servant or employer and employed did not e
between the Nursing Association and the nurses sent out b
so as to render the association liable for their negligence,
it was urged that the association was merely an agency for
benefit of the nurses, providing them with board and lodg
and making arrangements for their employment. On
other hand, correspondence with the association was put i
show that it contracted for the services of the nurses w
those who required their attendance upon patients, pay
them less than it received for their services and reserving
itself the right to recall them at any time. On this issue
jury found that the defendant association undertook to nu
the plaintiff through the agency of its nurses. A stay
execution pending an appeal upon this latter point was ask
for and refused, but no doubt the question of the liability
associations of this kind will be argued again before long
the Court of Appeal. The medical men whose credit was
stake in this trial to which they were not parties are to
congratulated upon the result of it. The damages w
assessed at £300.

Inaccurately Worded Legacies.

Recourse was had recently to the Chancery Division
order to ascertain the meaning of a testatrix who had

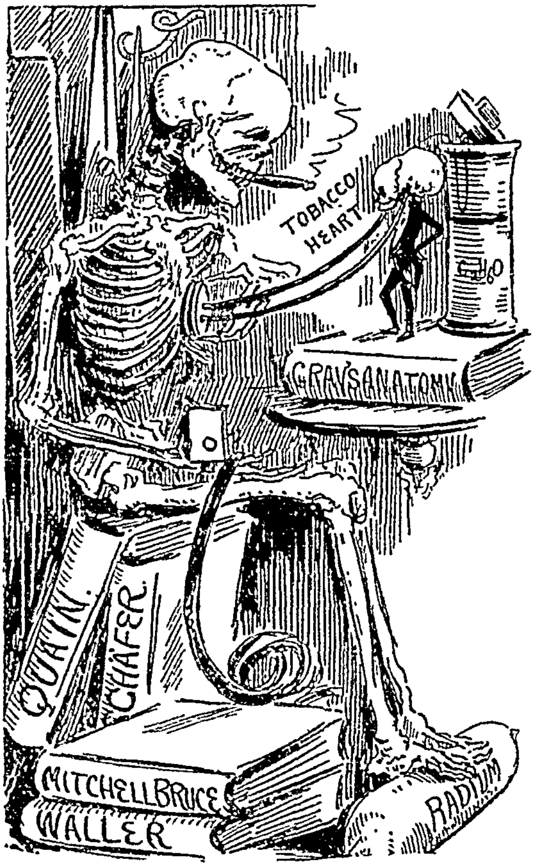
a legacy of £500 to the "Royal Home for Incurables, Streatham, S.W." She had subscribed during her lifetime to the "British Home and Hospital for Incurables" at Streatham and also to the "Royal Hospital for Incurables" at Putney. In her diary she had described the former as the British Home for Incurables and the latter as the Royal Home for Incurables and there was evidence as to her subscriptions of varying amounts to the two institutions which had to be considered in order to ascertain her probable wishes. The executors had paid the amount named to the Royal Hospital for Incurables at Putney, but Mr. Justice Kekewich was able to come to the conclusion from the facts laid before him that the British Home and Hospital for Incurables at Streatham was intended, in which, taking the indication of locality into consideration, he was pretty clearly right and the legacy will now go to that institution. It is a matter of regret that litigation should be necessary upon such a subject. In this particular case and in others the circumstances of necessary haste in which wills sometimes have to be made may account for errors and excuse them. Solicitors, however, who have any leisure to draft a will properly should take the opportunity to verify all names of charities submitted to them as objects of the testator's benevolence. With their accuracy in other matters we are not concerned. Hospitals and benevolent institutions of all kinds are properly described in the "Annual Charities Register and Digest" (published for the Charity Organisation Society by Messrs. Longmans and Co.) and in other accessible works of reference. Testators are known to be inaccurate, almost unaccountably so; they have at times described their relatives by wrong or by wrongly combined names, they have called their first cousins once removed second cousins and their step-children their children. It may sometimes be possible and desirable for the secretary to a charitable institution to whom a subscription is paid which is wrongly addressed, or accompanied by a letter describing the charity under a wrong name, to call attention to the error without giving offence.

A Dead Body as a Bequest for Anatomical Purposes.

There is no "property" or right of ownership in a human body and no man consequently can own the dead body of his relative or of any other person in such a way as to be able to sell it or to leave it by his will to anyone so as to make it that person's property. He cannot even so dispose of his own remains by any bargain or will made during his life but when he is dead it will be the duty of his executors to afford his body such burial as is suitable to his estate. There is an apparent exception to this created by the Anatomy Act (2 & 3 William IV., c. 75). The seventh section of this statute makes it lawful for an executor or any other person, not an undertaker, having lawful possession of a dead body to permit it to undergo anatomical examination unless either the deceased has in his lifetime desired otherwise or his surviving relatives object, and by the eighth section, "if any person, either in writing at any time during his life, or verbally in the presence of two or more witnesses during the illness whereof he died, shall direct that his body after death shall be examined anatomically, or shall nominate any party ...... to make such an examination ...... then the party having lawful possession of the dead body shall direct such examination to be made" unless a husband or wife or other near relative shall object. Recently at an inquest in London a document left by the deceased was read which expressed his desire that his body should be handed to the authorities at St. George's Hospital for dissection in the medical school and the coroner made the observation that the gift was invalid and that the deceased could not leave his body as he wished. The section quoted was apparently overlooked by the coroner and the man who said in his letter expressing his wish, "I have the right to dispose of my body," was right so far as the particular mode of disposition selected by him was concerned. There does not appear to be any recorded case where anyone to whom a body should have come for anatomical purposes under Section 8 ever sought to enforce that right against an unwilling executor, but the wording of the section appears to leave the executor no choice in the matter so long as the relatives do not object. The phraseology used would apparently include post-mortem examinations made for the purpose of elucidating the cause of death (but not ordered by a coroner) as well as the handing over of a body for dissection in a medical school.

LEEDS MEDICAL SCHOOL: A SMOKING CONCERT.

A SMOKING concert was recently given by the Leeds Medical School under the chairmanship of Mr. W. H. Brown when a programme of 17 items, all songs but four, was successfully carried out. The bill of the evening was very happily drawn by Mr. Fred. Reynolds, as may be seen by our reproduction of the principal figure upon it.



VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 7950 births and 5092 deaths were registered during the week ending Nov. 28th. The annual rate of mortality in these towns, which had been 16·2, 17 9, and 17·4 per 1000 in the three preceding weeks, increased again last week to 17·6 per 1000. In London the death-rate was 17·4 per 1000, while in the 75 other large towns it averaged 17·7 per 1000. The lowest death-rates in these towns last week were 8·0 in Hornsey, 8·1 in Wallasey, 8·7 in Hastings, 9·0 in Stockton-on-Tees, 9 3 in Walthamstow, 9·7 in Leyton, 10·3 in Croydon, and 10 6 in Smethwick; the highest rates were 23·0 in Coventry, 23·2 in Bootle, 23·6 in Warrington, 23·7 in Preston, 24 7 in York, 25·1 in Swansea, 26·2 in Burnley, and 29 6 in Sunderland. The 5092 deaths in these towns last week included 430 which were referred to the principal infectious diseases, against 419, 432, and 436 in the three preceding weeks; of these 430 deaths, 114 resulted from measles, 99 from diphtheria, 92 from whooping-cough, 49 from diphtheria, 42 from "fever" (principally enteric), 30 from scarlet fever, and four from small-pox. No death from any of these diseases was registered last week in Croydon, Hornsey, Hastings, Bournemouth, Norwich, Devonport, Handsworth, Smethwick, Grimsby, Wallasey, Huddersfield, Middlesbrough. Stockton-on Tees, or Tynemouth; while the highest death-rates from the principal infectious diseases occurred in Willesden, Walsall, Bootle, Warrington, Bury, Preston, York, Sunderland, and Rhondda The greatest proportional mortality from measles occurred in Willesden, Ipswich, West Bromwich, Warrington, Preston, York, and Sunderland, from whooping cough in Walsall, Bootle, Warrington, and York, and from diarrhœa in Preston and York The mortality from scarlet fever, from diphtheria, and from "fever" showed no marked excess in any of the large towns Of the four fatal cases of small pox registered in these eight towns last week one belonged to London, one to Coventry, one to Newcastle on Tyne, and one to Tynemouth The number of small pox patients under treatment in the Metropolitan Asylums hospitals, which had been 43, 51, and 47 at the end of the three preceding weeks, had further declined to 40 at the end of last week, five new cases were admitted during the week, against five, 16, and five in the three preceding weeks There were 1770 scarlet fever cases in these hospitals and in the London Fever Hospital on Saturday last, Nov 28th against 1854, 1824, and 1833 on the three preceding Saturdays, 157 new cases were admitted during last week against 224 185, and 191 in the three preceding weeks The deaths referred to pneumonia and diseases of the respiratory system in London, which had been 271, 339, and 325 in the three preceding weeks, rose again last week to 399 and were 18 above the number in the corresponding period of last year The causes of 57, or 1 1 per cent, of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in West Ham Bristol, Leicester, Leeds, Hull, Newcastle on-Tyne, and in 44 other smaller towns, the largest proportions of uncertified deaths were registered in Birmingham, Grimsby, Nottingham, Liverpool, St Helens, Preston, Barrow in Furness, Sheffield, and Gateshead

HEALTH OF SCOTCH TOWNS

The annual rate of mortality in eight of the principal Scotch towns, which had been 15 8, 17 4, and 17 4 per 1000 in the three preceding weeks, further rose to 18 7 per 1000 during the week ending Nov. 28th and was 1 1 per 1000 in excess of the mean rate during the same period in the 76 large English towns Among these Scotch towns the [illegible] Perth and 11 6 in Aberdeen, [illegible] n Paisley The 611 deaths [illegible] were referred to diarrhœa 17 to measles, nine to whooping cough, five to diphtheria, four to "fever," three to small pox, and two to scarlet fever In all, 62 deaths resulted from these principal infectious diseases last week, against 53, 49, and 61 in the three preceding weeks These 62 deaths were equal to an annual rate of 1 9 per 1000, which was 0 4 per 1000 above the mean rate last week from the same diseases in the 76 large English towns The fatal cases of diarrhœa, which had been 20 in each of the two preceding weeks, increased last week to 22 of which 12 occurred in Glasgow, five in Edinburgh, two in Aberdeen, and two in Paisley The deaths from measles, which had been 19 10, and 13 in the three preceding weeks, rose again to 17 last week and were all registered in Glasgow The fatal cases of whooping cough which had been four and seven in the two preceding weeks, further rose last week to nine of which seven occurred in Glasgow The deaths from diphtheria, which had been four and seven in the two preceding weeks, declined again to five last week and included two in Glasgow The fatal cases of fever," which had been ten and six in the two preceding weeks, further declined last week to four, of which three were recorded in Glasgow, where the three deaths from small pox also occurred The deaths referred to diseases of the respiratory organs in these towns, which had been 107, 129, and 136 in the three preceding weeks, further rose last week to 148, and were 13 in excess of the number in the corresponding period of last year The causes of 14 or more than 2 per cent, of the deaths registered in these eight towns last week were not certified

HEALTH OF DUBLIN

The death rate in Dublin which had been 21 7, 20 9 and 24 5 per 1000 in the three preceding weeks further rose *to 24 8 per 1000 during the week ending Nov 28th During the past four weeks the death rate has averaged 23 0 per* 1000 the rates during the same period being 16 7 in London and 17 0 in Edinburgh The 180 deaths of persons belonging to Dublin registered during the week under notice were slightly in excess of the number in the preceding week and included 11 which were referred to the principal infectious diseases, against two, seven, and nine in the three preceding weeks, of these, four resulted from "fever," three from whooping cough, three from diarrhœa, and one from diphtheria, but not any from small pox, measles, or scarlet fever These 11 deaths were equal to an annual rate of 1 5 per 1000, the death rates last week from the principal infectious diseases being 1 3 in London and 1 1 in Edinburgh The fatal cases of "fever," which had been one, three and one in the three preceding weeks, rose last week to four The deaths from whooping cough, which had been three and two in the two preceding weeks, rose again to three last week The three fatal cases of diarrhœa showed a slight decline from the number in the preceding week The 180 deaths in Dublin last week included 48 of children under one year of age and 47 of persons aged 60 years and upwards, the deaths of infants were 17 in excess of the number in the preceding week, while those of elderly persons showed a slight decline One death from violence and four inquest cases were registered, and 54, or nearly one third, of the deaths occurred in public institutions The causes *of* ten *or nearly* 6 per cent., *of the deaths* registered in Dublin last week were not certified

THE SERVICES

ROYAL NAVY MEDICAL SERVICE.

Fleet Surgeon Christopher Pearson has been promoted to the rank of Deputy Inspector General of Hospitals and Fleets in His Majesty s Fleet (dated Oct. 10th, 1903)

The undermentioned gentlemen have been appointed Surgeons in His Majesty's Fleet, viz —Walter Perceval Yetts, Norman Sinclair Meiklejohn, Thomas Dixon Liddle, William Perceval Hingston, Guy Leslie Buckeridge, Arthur Henry Sims Richardson, Henry Woods, George Herbert Stephens Milln, Charles James Boucher, Reginald Hugh St Bernard Ellis Hughes, Frederick Morton Vincent Smith, George Deleval Walsh, David Haddon Vickery, Palmer Devoy Ramsay, Walter Graham Moore Anderson, Arthur Robertson Davidson, Edward Bryan Kenny, James Ernest Johnston, James Campbell Bringan, Francis Jollie Gowans, John Shipsey, Lionel Coldbeck Esmonde Murphy, Frederick Cock, Evelyn Richard Townsend, Arthur Dillon Croker Cummins, Charles Murray Woods, Arthur Reginald Schofield, Thomas Walter Jeffery, Edward Postle Gwyn Causton, and Bertram Raleigh Bickford (dated Nov 23rd, 1903)

The following appointments are notified —Fleet Surgeon E B Townsend to the *Monmouth* Staff Surgeons J D Hughes to the *Pioneer* and W R M Young to the *Venus* Surgeons J Macdonald to the *Hibernia* for the *Maine* and A D Spalding to the *Jackal*

ARMY MEDICAL STAFF.

Colonel J D Edge, C B Royal Army Medical Corps, to be Surgeon General, vice G J H Evatt, C B, retired (dated Nov 11th, 1903)

ARMY MEDICAL SERVICE

Surgeon General Thomas O Farrell is placed on retired pay (dated Nov 20th, 1903)

ROYAL ARMY MEDICAL CORPS

Lieutenant Colonel J J Morris to be Colonel, vice J. D Edge (dated Nov 11th 1903) Lieutenant Colonel H Grier is placed on temporary half pay on account of ill health (dated Nov 20th, 1903)

VOLUNTEER CORPS

Rifle 1st Volunteer Battalion the East Lancashire Regiment Surgeon Lieutenant A Foster resigns his commission (dated Nov 28th 1903) 1st Bucks Surgeon Captain J Shaw resigns his commission (dated Nov 28th, 1903) 1st Nottinghamshire (Robin Hood) Captain R P Shearer resigns his commission and is appointed Surgeon-Lieutenant (dated Nov 28th, 1903) 1st Tower Hamlets Surgeon-Lieutenant J F F Parr to be Surgeon Captain (dated Nov 28 h, 1903)

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS)

The Edinburgh Company · Major D Hepburn resigns his commission with permission to retain his rank and to wear the prescribed uniform on retirement (dated Nov. 28th, 1903). The Glasgow Companies: Captain J. G. Graham resigns his commission (dated Nov. 28th, 1903).

DEATHS IN THE SERVICES.

Surgeon General Alfred James Dale, I.M S. (retired), on Nov. 24th at his residence in Rosary Gardens, South Kensington, aged 73 years. He entered the service in 1853, was promoted surgeon in 1864, surgeon-major in 1873, brigade-surgeon in 1879, deputy surgeon-general in 1882, and retired with the rank of surgeon-general in 1886. He served in the Afghan War in 1879 with the Kuram Valley Field Force (medal).

Surgeon-Major Hamilton De Tatham, I.M.S. (retired), on Nov. 25th, in his sixty-first year. He entered the service in 1867 and was promoted surgeon-major in 1879. He served in the Abyssinian War in 1867–68 (medal).

Correspondence.

"Audi alteram partem."

BAYLISS *v.* COLERIDGE.

To the Editors of THE LANCET.

SIRS,—May we ask you to be good enough to give publicity in your columns to the following undertaking and apology which we have obtained from the publisher of "The Shambles of Science," a work intimately associated with the above action. We may state that the terms of Mr. Bell's undertaking have been complied with.

To Dr. W. M. Bayliss, "St. Cuthberts," West Heath-road, Hampstead, and to Messrs. Hempson, 35, King-street, Cheapside, E O. (his Solicitors).

I, the undersigned Ernest Bell of 6, York-street, Covent Garden, London, W.C., the printer and publisher of a book entitled "The Shambles of Science," the authors of which are Lizzy Lind Af Hageby and Leisa K. Schartau, and which book contains therein certain matter libellous upon Dr. Bayliss hereby acknowledge that I have given instructions for the withdrawal from circulation of all copies of such book and hereby undertake that no further copies of such book shall be printed or published by me, that the circulation of such book shall cease, and that all copies in stock and withdrawn from circulation shall be handed over to Messrs. Hempson, Dr. Bayliss's solicitors, and I hereby express to Dr. Bayliss my sincere regret for having printed and published the book in question.

Dated, this 25th day of November, 1903.
Witness, HENRY RAYMENT. ERNEST BELL.

In the interests of truth and of science it is desirable that it should be publicly known that the circulation of the book has been suppressed.

We are, Sirs, yours obediently,
HEMPSON AND CO.,
Solicitors for Dr. W M. Bayliss.
35, King-street, Cheapside, London, E.C., Nov. 28th, 1903.

RECURRENT OVARIAN CYSTOMA AND ABERRANT ACCESSORY OVARIAN STRUCTURES.

To the Editors of THE LANCET.

SIRS,—Mr. Roger Williams shows in THE LANCET of Nov. 28th (p. 1530) that "of 138 ovarian tumours from the Kelly clinic submitted to microscopical examination at the Johns Hopkins Hospital 11, or 8 per cent, were malignant." Greig Smith[1] quoted Shroeder as having 16·6 per cent. of malignant cases in 600 ovarian tumours and he also quoted Leopold as finding that 22·4 per cent. were malignant in 126 cases. Mr. Williams contrasts the 8 per cent, which he takes as the proportion of malignant disease in these cases, with "the great frequency of its occurrence after ovariotomy, which in Spencer Wells's large experience amounted to no less than 36 per cent." He obtains the 36 per cent. from a table of 1000 cases of ovariotomy[2] and a summary of the results[3] in Sir Spencer Wells's book on ovarian and uterine tumours. Of the 1000 cases of completed ovariotomy, 117 were reported as having died after recovering from the operation, but the cause of death was known only in 88, and in 32 of these cases death was due to cancer. This shows a malignancy of about 36 per cent. *in the 88 cases.* It does not seem to me, however, that it may be logically argued from this that the occurrence of malignant disease after ovariotomy "amounted to no less than 36 per cent." In addition to the 32 patients who died of cancer after convalescence was complete there were four who died with cancer immediately after their operations. Thus there is evidence of the occurrence of 36 cases of malignant disease in the 1000 and the figures seem to me only to warrant the assertion that at the time of publication malignant disease had developed in 36 cases or 3·6 per cent of the whole. The comparison made by Mr. Williams is appropriate only if it can be shown that the incidence of malignancy in the 88 cases constitutes a fair sample of the results to be expected in the cases still alive at the date of publication. If this is so, malignant disease would develop in about 276 of the 768 cases which were not immediately fatal from the operations—a truly appalling result.

There are, however, reasons, which seem to me conclusive, indicating that the patients surviving a few years would not be so liable to malignant disease as those dying early. The 1000 cases were operated on between 1858 and 1880 and were published in 1882. Of the 36 patients who had or developed cancer four (Nos. 747, 155, 236, and 882) died on the sixth, twelfth, thirteenth, and fourteenth days respectively after their operations; one died after six weeks (No 111); six more died within six months (Nos. 61, 63, 331, 433, 764, and 890); 13 more died within two years (Nos 3, 151, 330, 397, 519, 545, 557, 605 656, 712, 762 802, and 977); another three died within three years (*Nos. 696, 810, and 904*); two died after about three years (Nos. 774 and 832); three in about four years (Nos. 127, 494, and 691); one in five years (No. 736); and one in seven years (No. 2). In two cases (Nos. 831 and 847) the duration of life after ovariotomy is not stated, but as both patients were operated on in 1877 they must have died within six years. Thus 27 of the 36 patients that had cancer died within three years of their operations.

I think it will hardly be gainsaid that the four patients dying with cancer within a fortnight of their operations had malignant disease when they were operated on. Moreover, it is incontrovertible that in many cases when an ovarian tumour is removed and examined under the microscope conclusive evidence of the presence of cancer may be found. The patients may become quite well for a time but the disease, so far as my experience goes, always recurs and usually this is evident within three years. Hence, when I see that so many of Spencer Wells's cases developed malignant disease within three years of being operated on the conclusion seems to me unavoidable that in most of them, if not in all, the disease removed was malignant. The 3·2 per cent. in which a recurrence (as I believe it to be in most of the cases) took place and the 0·4 per cent. of cases dying from the operation, with cancer, make 3·6 per cent, a figure very much below the 8 per cent. which Mr. Williams quoted as the percentage of malignancy in ovarian tumours. A larger number of cases of malignant disease was therefore to be expected and there is no doubt that a later investigation would have revealed more by allowing other cases time to develop. But the table only included completed ovariotomies and therefore many malignant cases would not be in it. As three-fourths of the deaths from malignant disease occurred within three years of removal of the ovaries, and none after seven years, it is obvious that the patients who lived beyond three years would show a much smaller proportion of deaths from malignant disease, so that when all were dead the percentage of 36 would be very materially reduced. In THE LANCET of Nov. *14th*, p. 1394, Mr. Williams wrote that there is "an extraordinary frequency of malignant disease after removal of both ovaries." This is not supported by Spencer Wells's table, for only six of the patients dying from malignant disease had both ovaries removed. This gives 0·6 per cent. which cannot be described as "extraordinary frequency."

I am, Sirs, yours faithfully,
JOHN D. MALCOLM.
Portman-street, Nov. 30th, 1903.

THE LUNG REFLEX OF ABRAMS.

To the Editors of THE LANCET.

SIRS,—In view of the communication of Dr. R. D Rudolf to THE LANCET of Nov. 21st, p. 1461, and a further communication from Dr. H. Campbell in THE LANCET of Nov. 28th, p. 1531, perhaps you will kindly allow me to add a few words to my last letter There seems to be a misconception on the part of Dr Harry Campbell, otherwise he would not deem it necessary to insist on such an elementary physiological fact as that the inspiratory muscles augmented pulmonary suction, or, in other words, the negative intrapleural pressure Of course they do, but such augmentation is produced by these muscles acting as an opposing force to the resistance offered by the pulmonary tension (or suction) or, to use my former expression, they are "directed against this resistance Now this is quite a different condition of affairs from that which obtains at birth (or say in very extensive emphysema) At birth there is no negative pressure in the pleural cavities, no pulmonary tension acting [illegible] tory muscles , consequently in [illegible] ld s lung the forces inside and [illegible] the same direction, whereas when pulmonary elasticity is established these forces are acting against each other Surely, therefore, my contention is correct that these conditions are "not parallel" With regard to the other points in his letter, I have stated several times the limits of passive recoil and if Dr Campbell now admits this factor to be alone competent to produce a certain degree of thoracic expansion it is a pity that he should have made use of the expression "any expansion" As to the effect of the lung traction on the auricles I am not aware that physiologists have ever doubted that for which Dr Campbell contends

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[1] Abdominal Surgery, third edition, p. 156

Spencer Wells: Ovarian and Uterine Tumours, 1882, pp. 342-393.

[3] Loc. cit. p. 475.

Coming to the possible extension of the lung borders in connexion with the production of the lung reflex there is a consideration introduced by Dr Campbell which can be disposed of without much difficulty He states that "by means of a complete inspiration the borders of the lung are made to travel to the uttermost confines of the pleura' and *that a more extensive downward movement of the lungs than this* must be "a physical impossibility" Such is by no means the case The pleura does not descend as far in the thorax as the diaphragmatic attachments and after the pleural cavity is fully filled by the lungs there remains an interval into which the lungs can be stretched As this is a fact of much importance and possibly but little known I may here quote Cunningham, than whom there is no greater authority "The diaphragmatic pleura covers the portion of the upper surface of the diaphragm which lies to the outer side of the base of the pericardium, but it does not dip down to the bottom of the narrow interval between the thoracic wall and the diaphragm In other words, a strip of the upper surface of the diaphragm adjoining its costal attachment is left uncovered"[1]

Dr Rudolf has made some very interesting observations and like him I have also found certain discrepancies in the results obtained, but I am not to be held as endorsing every phenomenon described by Abrams not because I have failed to obtain them, but because I have not had sufficient experience to warrant my giving an opinion. I have certainly obtained many of his results and for the rest I shall believe what he says owing to his already proved reputation as an observer In regard to a great descent of the lung by means of the ether spray Abrams affirms that he can produce this ' dependent upon certain conditions," and until these conditions are fulfilled any results obtained are inconclusive It would have been more satisfactory seeing Dr Rudolf attempted to elicit the reflex on subjects who had already practised deep inspirations if he had made control experiments so as to check any possible disturbing effects of these His observation of a rhythmical contraction and dilatation of the lungs is of high interest both intrinsically and in connexion with the lung reflex phenomenon and I can only endorse his hope that these matters will receive the full investigation which they deserve

I am Sirs, yours faithfully,
A G AULD

Henrietta street W Nov 28th 1903

THE ACTION OF MEDICINAL AND OTHER REMEDIES IN CARDIAC FAILURE

To the Editors of THE LANCET

SIRS,—At the very interesting and instructive discussion that followed Sir R Douglas Powell's paper on this subject at the meeting of the Medical Society of London on Nov 23rd, time did not allow many Fellows to speak who would otherwise have done so Perhaps you will allow me the hospitality of your journal for one or two remarks The use of oxygen in heart failure, both from disease of the organ itself and in dilatation in the course of pneumonia, was strongly advocated by the reader of the paper and subsequent speakers It was, however, pointed out that the extreme coldness of the gas when inhaled direct from the cylinder might do some harm, especially in pneumonia I get over this difficulty by connecting the cylinder with a large Woulfe's bottle half filled with hot water by which means the gas is not only warmed but also moistened An additional advantage of this arrangement is that one can see at a glance the rate in which the gas is issuing —I am, Sirs, yours faithfully,

CHAS W CHAPMAN

Weymouth street, W , Nov 30th, 1903

THE NOMENCLATURE OF TRYPANOSOMES

To the Editors of THE LANCET.

SIRS,—At a time when our knowledge of trypanosomes is extending rapidly and when within a brief space of time several new species have already been discovered it seems opportune to call attention to the law which governs the naming of a genus and its species—a law accepted without any reservations by all scientific men Briefly it is the "law of priority" which establishes once and for all the generic and specific names Thus, if an observer describing an organism for the first time does so in such a way as to make his description recognisable to subsequent observers and if he at the same time proposes to call the organism *A a*, then that name holds good *absolutely* and *immutably always* and it is not possible for a subsequent observer to call it *A b*, and even if it were shown later that the organism does not belong to the genus *A* but to the genus *B*, *a* (the specific name) still holds good as *B a*

I desire to point out how in the naming of trypanosomes this law has lately been broken Leaving totally aside any question of priority of discovery, for it has not the least bearing on this matter, it was Dutton who first described a trypanosome in man and also proposed for it the name trypanosoma Gambiense If Dutton had not taken the remotest part in the discovery this name absolutely has priority and consequently trypanosoma hominis (Manson) and trypanosoma Nepveu (Sambon) must disappear Similarly Castellani describing the trypanosome at present associated with sleeping sickness, proposed for it the name trypanosoma Ugandens [illegible] tellani (Kruse) subsequently [illegible] Should eventually trypanoso [illegible] e shown to be the same as [illegible] the former must also disa [illegible] (Dutton) must therefore [illegible] the trypanosome of human trypanosomiasis and trypanosoma Ugandense (Castellani) for the present, at any rate, of that associated with sleeping sickness

I am, Sirs yours faithfully,
J W W STEPHENS, M D Cantab ,
Lecturer on Tropical Medicine Liverpool University

Dec 2nd 1903

THE TREATMENT OF LUPUS

To the Editors of THE LANCET

SIRS,—I was glad to note Dr R Prosser White's comment upon my article the Successful Treatment of a Few Cases of Lupus, which appeared in THE LANCET of Nov 14th, p 1353 I was also glad to note the success that Dr White has had in excision of similar cases I feel convinced that excision combined with other treatment is most efficient where the disease is not far advanced being more speedy in its effect and certainly less disfiguring in result than many methods of treatment. Dr White inquires my reason for injecting arsenic From experience I have found that this assists very materially the healing process after excision Whether it is due to the alterative action of arsenic on the system or to its tonic action on the skin I cannot say, but it is certain that cases do better with than without it Even in cases of eczema psoriasis &c , arsenic administered subdermically is attended with far superior results than when given by the mouth The tuberculin injections after excision I consider of the greatest importance as a prophylactic measure and from the fact that we can never be certain, however well excision has been performed, that all the diseased tissue has been completely removed. I have always found a reaction from the tuberculin injections after apparent thorough extirpation of very small patches of lupus, showing, I think, definitely, some remaining tuberculous material somewhere.

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[1] Text book of Anatomy, 1902 p 928

I am, Sirs, yours faithfully,
Newport, Mon., Nov. 28th, 1903. C. STANSER BOWKER.

THE BEHAVIOUR OF CANCER IN NERVE AREAS.

To the Editors of THE LANCET.

SIRS,—May I be allowed to add two remarks which your reporter omitted in epitomising my communication to the meeting of the Pathological Society of London held on Nov. 17th. I was speaking on the behaviour of carcinoma within nerve or trophic areas. I showed rodent ulcers corresponding to the areas of distribution of certain muscles Your reporter omitted to say that they were the cutaneous muscles of the face. The addition is an important one because it is as yet unknown what is the exact nervous relationship between those cutaneous muscles and the skin of which they are component parts.

Neither does the epitome include that I showed, or attempted to show, that muscular, fascial, vascular, and lymphatic limitations were not the predominent factors of distribution of these ulcers, but their spread and areas of occupation were probably mainly influenced by a nerve or trophic agency. I am, Sirs, yours faithfully,
Harley-street, W., Nov. 25th, 1903. G. LENTHAL CHEATLE.

MEDICAL FACULTY OF THE UNIVERSITY OF LIVERPOOL.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to a mistake in the return made by me of the winter entry of medical students at the University of Liverpool and published in THE LANCET of Oct. 31st (p. 1242). The number 111 in the first column represents the total number of students now in the school who are taking the full medical curriculum. The number of students entering for the first time and taking the full medical course is 23, as against 24 last year.

I am, Sirs, yours faithfully,
B. MOORE,
Dec. 1st, 1903. Dean of Medical Faculty.

SHIPS' SURGEONS AND FEES FROM PASSENGERS.

To the Editors of THE LANCET.

SIRS,—In a series of articles on "Life on a Liner" published recently in *Lloyd's Weekly* I notice that "The Ship's Doctor" refers to the subject of fees from passengers for medical attendance. His remarks are as follows :—

> Many travellers are in doubt as to the position of the ship's doctor in regard to his remuneration from passengers for services rendered. The Merchant Shipping Act enacts that "every foreign-going ship having 100 persons on board, or upwards, shall carry on board as part of her complement a duly qualified medical practitioner" Furthermore, an emigrant ship (i.e., a foreign-going ship which carries 50 or more steerage passengers) must have a medical man irrespective of the number of the crew or of the other passengers carried. The salary of the doctor on board is commensurate with these duties to his ship. To any passengers who are suffering from ordinary forms of sea-sickness and its concomitant evils or who receive injuries which are in any way due to the ship—for example, as from a fall produced by the ship's rolling—the doctor's services are free. For any sickness contracted before sailing or during a voyage which is not connected with the above-named conditions he is entitled to a remuneration at the same rate as he would receive on shore. Obviously it would be as unfair to expect that his services to passengers should be rendered gratis as it would be for any visitor in a hotel or traveller on the railway to expect to have medical attendance free in any illness for which the hotel or railway authorities could not be held responsible.

The case has here been put clearly and concisely. After seven years' experience in first-class ocean-going steamers I should like to supplement these remarks with a few of my own observations. Ships' surgeons are of two kinds: 1. Those who at the end of a college curriculum, for health or the sake of pleasure and to see the world, take a voyage or two as surgeon thereby saving travelling expenses. Such men, I take it, are not particularly interested in the emoluments attached to any position which they do not intend to hold for any time. Not a few, I fear, have earned a reputation for intemperate habits, hence the suspicion still lurks in the minds of too many that because a man is a ship's surgeon therefore he is not much good. 2. Those who for various reasons elect to make the sea life a permanency. That the post of ship's surgeon in first-class passenger lines is difficult to obtain and that attainments, professional and social, of a high order are required of those who hold them are known best to those concerned. "The Ship's Doctor," in quoting from the Merchant Shipping Act, demonstrates clearly that in large passenger ships the surgeon's first obligations are to his ship and the crew for whose benefit he is employed by the company. For this he receives a "wage" varying from £6 to a maximum of £10 per month. Were this to be the only remuneration obtainable at sea it is reasonable to suppose that no experienced or well-qualified surgeon could stay any time on a ship.

As regards passengers in relation to the surgeon I think the following groups will include all: (1) the passenger who takes the initiative by remunerating the surgeon, perhaps handsomely, for any services rendered; (2) the passenger who, at the end of a consultation or attendance, will at once ask for his bill and pay it if reasonable; (3) the passenger who, travelling perhaps for the first time, really does not know whether to approach the surgeon or to wait for a bill being sent in or what he ought to do but is pleased to be enlightened on the matter; (4) the passenger who, either wilfully or through ignorance, clings to the old-time notion that the surgeon is there solely for the benefit of passengers; and (5) the passenger who never intends to pay the surgeon any more than he intends to tip the steward or the stewardess for any services rendered.

Of these groups the last two are obviously unsatisfactory to deal with. The difficulty is increased by the fact that seldom is a ship's surgeon allowed by his company to send in a regular bill for attendance as he could do on shore. Why he should not do so and thereby make it a matter of ordinary business instead of sentiment seems difficult to imagine. I presume that the particulars of the bill would be open to analysis both by the patient and by the company if referred to them; therefore any overcharge by the ship's surgeon who did not know his business could be remedied or repudiated. I have met at least three managers who have considered it right and proper that the surgeon should send in a bill for attendance. Of these one I remember who summoned me to answer the charge made by a passenger that I had presented him with a bill for five guineas for three weeks' attendance while suffering from syphilitic ulceration of the mouth. "Doctor," said the manager, "I am surprised at your folly for trying to convert our ship into a hospital for the treatment of venereal disease. You ought to have charged that man 25 instead of five guineas." In "Presbrey's Information Guide for Transatlantic Travellers," published and circulated on all steamers by the Frank Presbrey Company, New York, U.S.A., the following lines appear: "It is an erroneous impression that the ship's physician is provided solely for the accommodation of passengers. Maritime laws require steamship companies to employ physicians on all vessels carrying large crews. Every transatlantic steamer carries a competent physician and surgeon whose services are obtainable by passengers at corresponding rates of remuneration to those paid on shore." This recommendation from such a reputable source is valuable, but, of course, is not "official." Even if companies were to allow their surgeons to send in a bill I know from experience and for reasons already stated that in the majority of cases there would be no occasion to render it. In order to deal with the class of passengers who do not intend to pay the surgeon at all, the remedy I would suggest is *that the bill be sent in not in the surgeon's, but in the company's, name.* This would bring home the obligation to the passenger and the company could deal thereafter with the surgeon on the matter as they considered proper. "The Ship's Doctor" is wise in recognising that no remuneration should be suggested in the case of an injury to a passenger being due to any fault of the ship or carelessness, perhaps, of the crew.

One other point. Passengers often call at, or send to, the surgery for pills, powders, &c., where no attendance or consultation is asked or even necessary. I have known ships' surgeons foolish enough to make a charge for these. This is radically wrong, inasmuch as the drugs being provided by the company, are not theirs to sell. To charge for *professional skilled advice* is quite another matter. The fact that ships' surgeons, isolated as they are at sea, have little chance even of meeting in consultation, urges me to lay this matter before those whom it may concern through the medium of your valuable columns in the hope that they may see that nothing I have stated is either untrue or unreasonable. Perhaps, also, thereby misunderstandings which have hitherto existed may be removed.

I am, Sirs, yours faithfully,

Nov. 27th, 1903. ANOTHER SHIP'S DOCTOR.

THE FUTURE OF ST. BARTHOLOMEW'S HOSPITAL.

To the Editors of THE LANCET.

SIRS,—I am glad to find that Mr. Andrew Motion has not the hardihood to repeat his statement that "the views of the staff have never reached the governors." My object in writing has been attained and I thank you for the opportunity you have afforded me of proving beyond the possibility of contradiction that no one can truthfully say that the staff did not inform e [illegible] fully of their opinions more th [illegible] add that I did not expect Mr. [illegible] isfactory answers to my questions as to what action he has taken in the past, neither do I regret his reticence. My questions have quite satisfactorily answered themselves, for Mr. Motion's silence as to what he did is more eloquent than many words.—I am, Sirs, yours faithfully,

Nov. 30th, 1903. A ST. BARTHOLOMEW'S MAN.

THE ASSURANCE OF UNDER-AVERAGE LIVES.

To the Editors of THE LANCET.

SIRS,—Should a medical officer recommend for acceptance at ordinary rate on a "limited payments" scale a life chargeable with an extra premium on the "whole of life" scale? It seems to me that the practice where it exists must be due to misapprehensions not altogether unnatural as to the relationship of one scale of premium to another and the relative position of a life office with reference to the risks on each scale. Yet it concerns both the medical profession and the life offices that on points common to both clear *general* ideas should be held, whatever may be considered reasonable in isolated and exceptional cases. I therefore venture to ask space in your columns for a discussion of the question I have put.

To take an example. At the age of 35 years the average "with profits" premium payable during life is about £2 16*s.* per cent. for a first-class life, while the corresponding rate limited to 20 annual payments for the same benefit—an assurance of £100 payable at death—is about £3 16*s.* Now, on the "whole of life" scale an under-average life is generally admitted as at an advanced age, or, what is practically the same thing, at an addition to the normal premium of it may be from 5*s.* to 20*s.* per cent. of the sum assured. But suppose such a life were willing to pay on the 20 years scale. It might at first sight seem that the higher premium justified the office in dispensing with extra altogether or at least in accepting at a modified addition. I venture to think otherwise and would offer the following considerations. Both premiums are based on the mortality experience of first-class lives. The difference of 20*s.* between them is the discounted equivalent of the life scale premiums after 20 years. To set it in whole or in part against extra risk is to make it do double duty, for which it is inadequate. It places the under-average life on the same footing as a first-class life, adopting the same scale, and is thus unfair to the latter. If the excess over the life scale rate were adequate for both purposes—for commutation and to meet extra risk—1 [illegible] on the [illegible] rate, [illegible] passes current thereafter as first-class. In a subsequent proposal to another office he may be able to conceal the full truth as to the previous acceptance.

These appear the main objections to the practice. There are other considerations against it but I pass these to answer one or two points that might be urged in its favour. It might be said that if the life survives at least long enough to complete the 20 payments the office is safe. But that does not follow. The office has not merely to receive premiums but to pay the claim and if the claim is accelerated—if, in other words, the normal "expectation of life" on which the premium is based does not hold good for the class of lives in question—the office must lose no matter how many premiums have been received. Again, it might be said, if the life should fail before the premium has ceased then the office will generally have received more than the life-scale rate with a substantial addition and thus be actually better off than if the latter had been charged. No doubt; still the fact remains that the addition had quite another purpose to serve, as already explained. An office must balance losses with gains, and where are the gains in the case of those lives of the same class that survive long enough to be free of premiums and yet by hypothesis fall short of the normal expectation? If all the under-average lives are to fail within the 20 payments period the business cannot be good for the office. And to say that in the case of those that do fail the loss has been minimised is to forget that on life scale with a suitable extra the office would be recouped out of the premiums of those who would survive the 20 years period.

What, then, should be the "limited payments" extra corresponding to a given extra on "whole life" scale? Any investigations of my own point to an *increased* extra, the increase over the "whole life" extra depending mainly on the scale selected and partly upon the *incidence*—whether immediate or deferred, increasing or decreasing—of the extra risk in the particular case. This may read like a counsel of actuarial perfection; nevertheless, I imagine it is one which most actuaries would concur in. I am of course aware that purely actuarial considerations do not alone affect this more than other assurance questions. No one, again, could be more sensible than I am of the services of medical science to life assurance. To those services the results of the recent official mortality investigation bear striking testimony in the light mortality disclosed. But the new tables are being adopted as the basis for the future and just on that account it is important to maintain the same high standard of selection as has hitherto been the rule.

I am, Sirs, yours faithfully,

Nov. 24th, 1903. ACTUARY.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Cooking in the British Army.—A Modified Form of the Liernur System of Drainage for Part of Bombay City.—The Plague Epidemic.—A Proposed Burial By-law for Calcutta.—The Great Improvement Scheme for Calcutta.—The Conservancy Question.

FURTHER steps are about to be taken with the object of banishing the native cook from the kitchens of British troops in India. Over 100 Warren's cooking ranges will be erected at various stations and 22 sergeant-cooks are to be appointed. A school of cookery is to be established at Poona at which non-commissioned officers will be trained to become sergeant-cooks and the soldier-cooks of batteries, squadrons, and companies will also be instructed there. In the plains during the hot weather the actual cooking will be done by natives supervised by British soldiers who will be responsible for cleanliness and the observance of sanitary conditions, but elsewhere and during the cool season the cooking will be done by soldiers. It is contemplated to introduce gradually Warren's cooking range at all stations where British troops are quartered. During field training the school students will be placed at the disposal of companies and a portion of the training will consist in taking a company away from barracks for several days during which individual cooking of rations will be the only manner of preparing food permitted. It is considered that every individual soldier should be trained to cook for himself exactly as he may have to do on service. Instruction will also be given upon the slaughter of animals and the baking of flour.

passed expressing the opinion that it is detrimental to the best interests of public health and the efficient carrying out of the laws relating thereto that medical officers of health should be appointed for limited periods and on a precarious tenure of office, and it is desirable that all medical officers of health should hold office upon the same terms as district Poor-law medical officers. It was also decided to request the council of the association to bring the question of the insecurity of tenure of office of medical officers of health before the divisions of the association.

Incorporated Society of Medical Officers of Health.

A dinner of the Midland branch will take place at the Grand Hotel, Birmingham, on Dec. 10th, at 7 P.M., when it is expected that Dr. Alfred Hill, late medical officer of health of Birmingham, and Dr. Joseph Groves, the president of the society, will be present as guests.

Housing of the Working Classes at Newport (Mon.).

The Newport (Mon.) town council placed itself in a very undignified position at a special meeting held on Nov. 24th, when the question of proceeding with a scheme for the erection of 66 workmen's houses which had received the sanction of the council on August 11th last[1] was again discussed. A proposal to defer the matter for 12 months was defeated, but a proposition to proceed at once with the scheme found 17 supporters and an equal number of opponents and the mayor declared that it was not carried. It is to be regretted that at the same meeting the housing committee was dissolved, for it has done most excellent work not only in preparing the scheme referred to but in the direction of causing uninhabitable houses to be closed or made fit for habitation.

Overcrowding in Bristol.

At the last meeting of the Bristol board of guardians during a discussion as to the adoption of four young girls of ages from eight to 15 years whose father was dead and whose mother was recently charged before the city justices with neglecting her children, a very lamentable condition was disclosed. It appears that the woman in question occupied two rooms and in one of them there slept, in addition to herself and the four girls, her son aged 20 years, her daughter aged 18 years, a child of three years, and a woman of bad character. According to the statements made by some of the guardians this is not an isolated instance and there would seem to be much more over crowding in one room tenements in Bristol than is generally supposed. One member of the board said that it would be a long time before he again subscribed to foreign missions, for it was apparent that there was a great deal to be done by home missions.

Nov. 30th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Epidemic of Fever in Sligo.

WITHIN the past fortnight a serious outbreak of fever has appeared in the district surrounding the town of Sligo and so many patients have been admitted to the County Fever Hospital that it has become overcrowded. Dr. B. MacCarthy, medical inspector under the Local Government Board, attended a specially convened meeting of the hospital committee and his report which has just (Dec. 1st) appeared states that 48 cases of a malignant type of fever have already been admitted to the hospital and he feared that within a few days many more patients would be brought in. The report goes on to say that the hospital was absolutely without drainage and that the building was standing in a mass of sewage which was lapping its foundations. The medical men and nurses were in daily danger of losing their lives from the poisoned atmosphere which had now become so oppressive that the nurses found themselves unable to sleep at night The committee decided to have sewers constructed at once. Dr. MacCarthy also attended the meeting of the board of guardians and reported on the filthy condition in which he found many of the houses in the infected area and as to the necessity of the overplus fever cases being provided for in the workhouse hospital. The guardians decided to leave the arrangements to the inspector and to the medical officer of the workhouse.

Insanity in Ireland.

At a conference of representatives of Irish district asylum committees held in the Richmond Asylum, Dublin, on Nov. 25th, some most alarming statistics in reference to the great prevalence of insanity in Ireland were brought forward. The total number of registered lunatics in Ireland is 22,138, showing an increase for 1902 of 508, which is an advance of 47 upon the increase of the previous year and a higher average than for the past ten years. Not only is there an increase, but an increasing ratio of increase in the total number of the insane. Mr. E. D. O'Neill (Limerick) read the first paper in which he referred to the excessive use among the young of alcohol, tea, and cigarettes as factors in the causation of insanity. The terrible depression and the emigration of the young and the healthy were, he said, directly or indirectly responsible for a large portion of the insanity which existed in Ireland to-day. Dr. W. Graham (Belfast), in the second paper, pointed out that in 1844 the number of registered insane was 4714; in 40 years it was doubled, and in 1902 it was almost quadrupled—17,380. In 1882 the number of first admissions to asylums in Ireland was 2137, in 1901 the number had swelled to 2821. In 1882 there were under care per 100 000 of the population 269, in 1901 it had risen to 487. He regarded alcoholism not merely as a cause of insanity but as an effect as well. He pointed out that in Ireland the gentry and the middle classes (professional man, educated artisan, and farmer) are rapidly disappearing—that is, the country is being depleted of her best and strongest elements, retaining only the weak and the unfit. In the past 40 years 4 000 000 people have left the country. Dr. Thomas Drapes (Enniscorthy) read a communication pointing out that in Ireland the situation was little short of appalling for out of 4 500,000 people 25,000 were mentally incapable. He thought that unless drunkenness could be reduced as one of the chief causes of insanity there was little hope of any diminution. He recommended that children should be brought up in absolute ignorance of the taste of alcohol until they were of age and as long as possible afterwards. An interesting discussion followed.

The Ulster Hospital for Children and Women.

A bazaar in aid of the funds of the Ulster Hospital for Children and Women was opened by the Lord Lieutenant of Ireland in Belfast on Nov. 26th. The object of the effort is to wipe out a debt of £2000 and to form an endowment fund. Mr. H. C Craig, of Sydenham House, Belfast, has given £1000, thus practically liquidating half the debt. From the large number of people who are interested in the bazaar it is expected that a good sum of money will be raised.

Dec. 1st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Experimental Production of Aortic Atheroma by Repeated Injections of Adrenalin.

AT the meeting of the Biological Society which was held on Nov. 14th M. Josué read a paper upon the above subject. Atheroma is a chronic diseased condition of the economy which is generally attributed to the action of slow poisons; whether endogenous, as those due to defects of nutrition; or exogenous, such as tobacco, alcohol, and lead; or infective, such as the poison of typhoid fever. Some observers have added another factor—namely, arterial hypertension, whether local or diffused. Experiments with the injection of toxic substances have been made by Crocq, Boinet, and Remak, but these have not brought about any atheromatous lesions at a distance from the point of injection, while at that point they have never produced any calcareous plaques but only an occasional abscess. Intravenous injections, however, of adrenalin administered in small doses repeated for a long time have produced in the rabbit calcareous plaques but no actual lesion of the aorta. In rabbits which died after the first injection or even after five or six injections into the marginal vein of the ear no aortic lesion was produced. After eight injections of a very weak (*étendue*) solution spread over a period of five weeks the heart was found to be dilated and there was one calcareous plaque in the thoracic aorta and another lower down. In a rabbit which received 16 injections there were numerous plaques, while the heart was hypertrophied and dilated. Another rabbit which received 20 injections within a period of three months was found to have its aorta profoundly affected and the calcareous plaques were very numerous. Adrenalin, then, would appear to possess a specific action on the arteries and to be capable of bringing about a condition of atheroma, perhaps owing to its raising the arterial tension. If it be remembered that adrenalin is the secretion of the suprarenal capsules it is only reasonable to suppose that these organs may play an important part in the production of atheroma.

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[1] THE LANCET, August 29th, p. 635.

The Revue de Déontologie and the Corporative Association of Medical Students.

A group of medical students have withdrawn from the general association of students and have founded an association of their own called the Corporative Association of Students in Medicine. This a sociation, the numbers of which are rapidly growing, proposes to publish a monthly journal and has founded the *Revue de Déontologie et d'Intérêts Professionels Médicaux*. The assistant editor of this journal is a student. It is to be feared that from the point of view of medical practice the editorial staff of this journal, being only students, are somewhat lacking in experience. The other medical journals are astonished to see this new review offering to give advice as regards medical practice, since the directors thereof are only at the threshold of their career.

Drinking Water for the Army.

In conformity with a resolution passed by the Senate after the question which was asked in the House relative to the sanitary state of the troops the Minister for War submitted to the Academy of Medicine a number of questions dealing with the supply of drinking water to the various garrisons. The Academy has just sent in its report which was drawn up by the medical inspector, M. Vallin, in the name of the commission. The commissioners were M. Proust, M. L. Collin, M. Brouardel, M. Ernest Besnier, M. Magnan, M. Motet, M. Chantemesse, M. Josias, M. H. Monod, M. Roux, and M. Vallin. The report states that the best measure of protection against water-borne diseases is to insure that all garrisons are supplied with pure spring water of which the source must be well protected. All chance of contamination of the water, both at its source of origin and during its course to the distributing centres, must be strictly guarded against, even if the contamination be only of a momentary nature. If these conditions are fulfilled no sterilisation of the water is necessary except as a temporary measure in the case of an accident. Filters need not be given up provided that they are kept in good order, but the report recommends a trial of sterilisation by means of heat, the sterilised water being carefully guarded against contamination occurring afterwards.

Different Letters of the Alphabet from the Point of View of Rapidity of Reading.

At the meeting of the Academy of Sciences held on Nov. 16th M. André Broca and M. Sulzer communicated a paper upon the above subject, following on some researches which they had carried out. They showed that the different letters of the alphabet are not all apprehended with the same quickness. For instance, the time taken to recognise an E is nearly one-third longer than that taken to recognise a T. They consider that the alphabet is badly designed from a physiological point of view. It should be composed of very simply designed letters such as T or L Rapidity of reading would thus be increased and cerebral fatigue would be notably diminished. It would also be better to have the letters printed in white on a black ground than the reverse which obtains at present. The time taken to recognise a letter printed in black on a white ground was nearly ten times longer than that taken to recognise the same letter printed in white on a black ground. M. Broca and M. Sulzer had also inquired into the best forms of letters, both capitals and "lower case," and they gave examples. They had only made researches into the simple act of reading single letters and the reading of groups of letters and of complete words was still to be inquired into. In the case of words it is very probable that all the letters are not separately analysed by the reader.

The Syndicate of Medical Men of the Seine and the Tramway Company.

The First Chamber of the Civil Tribunal of the Seine has just decided a case in which an action was brought by the Syndicate of Medical Men of the Seine against the tramway company. The complaint of the syndicate had reference to a notice posted in the depôts of the company and the action was brought to obtain the removal of this notice together with the payment of 1000 francs damages. The notice was to the following effect. "In case of serious illness or accident requiring immediate medical aid the patient, in the absence of the company's medical officer, may send for the nearest medical practitioner, but he will have to give immediate information, either verbally or in writing, to the official in charge of his depôt. After having been visited by the company's medical officer the patient will have to pay for every other visit made by an outside medical man." The syndicate maintained that this notice was at variance with the law relating to accidents to workmen, for this law entitles the injured workman not only to choose his own medical attendant but also to recover from his employer a definite proportion of his medical expenses. The workmen would therefore be deprived of a right which belongs to them and the interests of the medical profession of the Department of the Seine would be affected, for they would be deprived of a portion of their patients. The company replied, in the first place, that the syndicate was not entitled to bring the action, which. in fact, did not involve any corporate interest, because several of the medical officers of the company belonged to the syndicate, and, in the second place, that the claim was unjustifiable because the notices only referred to the operation of the company's medical service and its sick fund and did not refer to the accidents to workmen provided for by the law of 1898. The tribunal has found that the syndicate has not made out its claim and is not entitled to take action because it does not act on behalf of a purely collective interest. The syndicate has therefore been non-suited.

Dec. 1st.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Emperor's Health.

ALTHOUGH it has been announced that no further reports on the Emperor's health would be necessary an additional bulletin was issued on Nov. 25th by Professor Schmidt, Dr. Leuthold, and Dr. Ilberg. This bulletin is to the following effect. "The wound on the left vocal cord has healed since Nov. 19th His Majesty has been advised to spare his voice till the cicatrix has become stronger. Laryngeal massage and exercises have now been commenced and we hope that His Majesty within a few weeks will be able to use his voice as before." The massage is performed by Dr. Spiess of Frankfort, Professor Schmidt's former assistant. The recent bulletin, though quite satisfactory, is not so distinctly optimistic as the former ones and obviously a convalescence of longer duration than had been anticipated will follow. His Majesty walks daily in the park at Potsdam but has not yet appeared in public. The reports as to a visit to the south of Europe are not denied by the court journals, though, of course, ample information is not given. Professor Schmidt is said to have left Berlin for Frankfort but will return within a week. The rank of Real Privy Councillor has been conferred on him by the Emperor. This rank, with which is associated the title of Excellency, is the highest distinction open to civilians and is held by only a few medical men—namely, Professor von Bergmann, Professor von Behring, and Professor von Esmarch.

German Sanatoriums in Madeira.

Sanatoriums for consumptives will be established on the island of Madeira by a German committee of which Prince Hohenlohe is the president. The committee already possesses a concession from the Portuguese Government on the condition that 20 per cent. of the patients shall be Portuguese who are to be received free of charge. A commission consisting of Professor Fränkel and Professor Pannwitz of Berlin [illegible] the Queen of [illegible] emen advised [illegible] ertain height above the sea but not actually in the mountain region as had been proposed by some. The commission visited one of the highest peaks of the island and considered that sanatoriums situated at this height would have to be closed during the winter, whilst at a lower level they might be kept open all the year round. The sanatoriums will be constructed and managed in accordance with German ideas. In addition to the sanatoriums for consumptives the committee intends to build a vast establishment for sufferers from other chronic diseases and for convalescents where hydrotherapeutics, mechanotherapeutics, and various other systems of treatment will be a principal feature. The institution will be situated close to the beach so that visitors may have ample opportunity for sea-bathing even during the winter months. A fear has been expressed that this establishment might eventually degenerate into a kind of Monte Carlo where roulette and other forms of gambling might be indulged in, but Professor Fränkel, writing to the *Deutsche Medicinische Wochenschrift*, mentions that he is authorised to state that gambling will be strictly prohibited in the sanatoriums.

Hysterical Somnolence.

A remarkable case of hysterical somnolence is reported in the daily press. A woman, now 44 years of age, had an accident about 20 years ago by being thrown out of a carriage. She complained of severe headache and fell into a sleep, from which she only awoke after several months and was apparently then quite well. Two years afterwards, however, she again became somnolent, this second period lasting about twice as long as the first. Prominent medical men were consulted but declared the case to be obscure. She soon fell asleep again and only awoke a week ago, this period of sleep lasting about 17 years. A fire had broken out in the neighbourhood of the patient's residence and she was so much impressed by the general alarm and by the glare of the conflagration that she suddenly rose and spoke to her family. She had a full remembrance of past events. She wanted to speak to her mother, who had meanwhile died, and she recognised her friends. She was, of course, very emaciated and weak but her bodily functions are said to be quite normal. During her somnolence she was nourished by light food, soups, vegetables, and meat and the family noticed that she moved about in bed when meal times arrived. She even refused to eat if she happened to dislike what was offered her. The case must of course be regarded as one of hysteria, although hysterical somnolence of such a duration is very uncommon.

The Behring Institute.

A Behring institute, after the pattern of the Institut Pasteur at Paris, will be established by the Government. The new institute, in addition to its scientific work, will undertake the wholesale production of sera of every kind and especially of antidiphtheritic serum. The *Vossische Zeitung* rightly observes that the decision of the Government comes rather late. About ten years ago Professor Behring asked the Government for financial assistance in his very expensive studies on immunisation. This request being refused he was obliged to apply to the Höchster Farbwerke, the largest chemical manufactory in Europe, which liberally provided him with the necessary funds on the condition that they should have a monopoly of the sale of Professor Behring's serum. The prices charged were rather high and it is to be hoped that serum will become less expensive now that the Government has undertaken its production.

Nov. 30th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Convention of Railway Surgeons in New York.

THE thirteenth annual meeting of the New York State Association of Railway Surgeons was held recently at the New York Academy of Medicine. Dr. Henry Flood, president of the association, was chairman. Among the papers read was one on Car Sanitation by Dr. James A. Exton and one on the Diagnosis of Injuries of the Hip by Dr. Wisner R. Townsend. Dr. C. B. Herrick read a paper on the Diagnosis of Injuries to the Head. Dr. W. B. Coley presented a paper on Traumatism as a Factor in the Causation of Hernia and said that his experience at the Hospital for the Ruptured and Crippled had convinced him that traumatism as a cause of hernia was very rare; out of 15,000 cases he had seen at the above-mentioned institution only four had resulted from external accident. Dr. A. J. Gilbert asserted that hernia had cost the railroad companies more money than had any other form of injury and that "it is a frightful source of fraud, particularly among employés."

Yellow Fever in Mexico.

A considerable amount of alarm exists in Texas owing to the prevalence of yellow fever in Mexico. The statement was made a short time ago that the epidemic of the disease now raging in Mexico has gone beyond the control of the Mexican health authorities. The long spell of warm weather and the negligence exhibited by the lower classes of Mexicans in reporting cases of yellow fever to the health authorities has caused, it is said, the disease to be spread far and wide. The medical officer of health of the State of Texas fully appreciates the gravity of the situation and a few days ago said that he would invite General Wyman, the chief of the United States Public Health and Marine Hospital Service, together with the representatives of the health departments of Louisiana, Mississippi and Alabama, to accompany him to Mexico in January next for the purpose of holding a conference with the Superior Board of Health of that country to decide upon a concerted plan of action which would prevent the occurrence of another epidemic of yellow fever in Mexico and the spread of the disease to Texas and to the Southern States of America next season. Efforts will be made to induce the health authorities of the districts in Mexico in which the disease is epidemic to improve the sanitary conditions therein. The authorities will be also urged to compel the ignorant and superstitious Mexicans to report all cases of yellow fever. Failure to do this has been one of the main factors in the rapid spread of the malady in Mexico during the present season.

Care of Criminal Epileptics.

The Conference of Charities and Correction of New York State is in session at Buffalo. The report of the committee on the Treatment of the Criminal by Frank W. Robertson, superintendent of the State Reformatory, Elmira, was read by Dr. E. V. Stoddard, President of the State Board of Charities. In regard to the care of criminal epileptics the report demands suitable provision for this class, "some of whom," it says, "while not by transfer or otherwise inmates of hospitals for the insane, are yet not fit cases for the prisons." The report makes the suggestion that provision for the care of the insane might be so amended as to insure the transference of those suffering from mental disorders to the Dannemora State Hospital.

Nov. 23rd.

Obituary.

GILBERT KIRKER, M.D., M.CH.R.U.I., M.R.C.S. ENG.,

FLEET SURGEON, R.N.

THE medical department of the Royal Navy, and his many friends in the medical profession, heard with profound regret of the death of Fleet-Surgeon Gilbert Kirker at Haslar on Nov. 24th. Whilst performing an operation, an excision of the hip-joint, on Nov. 14th, he cut his finger. On the following day he amputated a thigh and on the third day noticed a slight inflammation of the wounded finger. The finger was incised and all signs of local trouble quickly passed away. But on Nov. 18th he had rigors and high fever and was placed on the sick list; toxic hæmaturia followed with suppression of urine and six days later he died. Fleet-Surgeon Kirker was an Ulsterman and studied at the Belfast Academy, of which the principal was Dr. R. Bryce, uncle of the Right Hon. James Bryce, M.P., and subsequently at Queen's College, Belfast, where he matriculated in 1872. He greatly distinguished himself as a medical student and in 1876 graduated at the Royal University of Ireland as M.D. In the following year he came to England and after becoming a Member of the Royal College of Surgeons of England attached himself to the Turkish side as surgeon in the Russo-Turkish war. At the end of the operations he returned to England and in 1879 entered the medical department of the Royal Navy. At the entry examination he obtained first place and at the end of the Netley course of instruction he carried off the Parkes prize in hygiene. He was then appointed to H.M.S. *Iris* on the M ation and took part in the Egyptian war of 1882, for which e was awarded the Egyptian medal and the Khedive's ronze star. Later he was appointed assistant professor at [aslar where he worked with unremitting energy until he as appointed staff surgeon in 1891 when he was commissioned to H.M.S. *Phaeton* and gained the Gilbert Blane gold ıedal for the excellence of his professional records on oard that vessel. For some time he was in charge f the Royal Naval Hospital at Esquimalt where he vailed himself to the full of many opportunities for oing good work. He afterwards returned to Haslar, here at the time of his death he held the posts of ıstructor to surgeons on entry at the Royal Hospital and f principal medical officer to one of the surgical sections. . man of fine physique and attractive appearance. Fleet-urgeon Kirker at school, at college, at the Royal Victoria Iospital, Belfast, where he was formerly resident, and ıroughout his distinguished naval career was always reatly liked, his manly character and straightforward ctions making him an especial favourite. Throughout is career he took a keen interest in all hygienic and urgical work, his active brain seeking how he could 'improve," for it was always his idea to get "to he bottom" of everything that he was interested in nd many small inventions were the result, the most *asting being the Kirker ambulance sleigh which is now* ully recognised as the most useful method of transporting he sick and wounded on board ship, having been intro- [illegible] Navy, the Japanese Navy, [illegible] Association he was well [illegible] ›r the Navy, Army, and ımbulance section last year at Manchester and doing much o make it a success. His early death is a very great loss ıot only to his many personal friends but to the whole Vaval Medical Service and *it is to be regretted that his* istinguished career had not placed him in a higher rank han that he held, *for it is* well known that his abilities vere fully appreciated and that if he had been spared hey would have been recognised in promoting him to the ıigher ranks very shortly. He married the daughter of a vell-known solicitor in Dundalk, and his widow and children two boys and two girls) will have the deepest sympathy of ll the friends of their deceased relative in the great and *rreparable loss which they have sustained.*

WILLIAM DINGLEY, M.R.C.S. ENG., L S.A.

WILLIAM DINGLEY of Elm Bank, Camden-road, London, vho died on Nov. 17th, was born on Nov. 9th, 1828, at Sherborne, Dorset, and was educated at the well-known chool of his native town. At the age of 16 years he chose he medical profession as his career in life and was articled o a surgeon in Sherborne for three years. At the end of that ime, in October, 1847, he entered as a student at St. Bartholomew's Hospital when Sir William Lawrence was senior urgeon and Sir James Paget was junior assistant surgeon. After qualifying in 1850 he saw a year's practice at some ron-works in South Wales before starting in general ›ractice. After a short sojourn in Trowbridge he came to London and entered *into partnership with his cousin* and ater with his sons in Bloomsbury and Camden-road. Blessed with a good constitution he stood the strain of a aborious practice for 49 years without a day's illness. His nidwifery practice was large and his help and advice were nuch sought by brother practitioners in difficult cases. He was an earnest Christian with a high standard of conluct. He was much beloved and trusted by his patients, his hatred of pretence and unswerving devotion to duty being ›bvious to them.

Mr. Dingley was a wide general reader, at the same time keeping himself informed on *current medical literature* and ›ractice, and was treasurer of the North London Medical and Chirurgical Society, at the meetings of which body he spoke with quaint force fro [illegible] lf a century. His remains [illegible] me- tery on Nov. 21st. He [illegible] the [illegible] On [illegible] address of the *minister upon* a life which had been so full of human service in all its relations.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. J. J. Chisolm, formerly professor of ophthalmology and otology in the University of Maryland, Baltimore.—Dr. Brun, surgeon to the hospitals of Paris.—Dr. Francesco Folinea, a Naples surgeon—Dr. Friedrich Goll of Zürich, whose name is known in every medical school in the world in connexion with the columns of the spinal cord. He was born in Zürich in 1829. He studied under Kölliker and Virchow in Würzburg and under Claude Bernard in Paris and then settled down in practice in his native town.

Medical News.

UNIVERSITY OF OXFORD.—At the examination in Preventive Medicine and Public Health (D.P.H.) held recently the following gentlemen were successful:—

[illegible]

In a Congregation held on Nov. 19th the following degrees were conferred:—

Doctor of Medicine.—John Wood, Pembroke College, and Peverell Smythe Hichens, Magdalen College.

In a Convocation held on Nov. 24th the following decree was proposed and carried *nemine contradicente*:—

[illegible] decree.

UNIVERSITY OF CAMBRIDGE.—On Nov. 26th the following degrees were conferred:—

Bachelor of Medicine.—H. A. Cutler, Clare.
Bachelor of Medicine and Bachelor of Surgery.—F. Bryan, King's C. V. Bulstrode, Trinity; and W. H. Fisher, Emmanuel.

Professor Howard Marsh and Dr. D. MacAlister have been appointed members of the State Medicine Syndicate and Dr. J. Griffiths a member of the special board for medicine. Mr. F. C. Parsons has been appointed an examiner in Human Anatomy in the place of Dr. A. Birmingham who is unable to examine this term. The Graces for the appointment of a syndicate to consider what changes are desirable in the studies and examinations of the University were on Nov. 26th adopted by large majorities in the Senate. The examiners in State Medicine for the ensuing year are: Professor G. Sims Woodhead, Mr. J. E. Purvis, Dr. J. F. W. Tatham, Dr. J. Lane Notter, and Dr. R. D. Sweeting.

TRINITY COLLEGE, DUBLIN.—At the Final Examination at Michaelmas the following gentlemen passed:—

Section A.—H [illegible] iam J. Powell, Cyril H. M [illegible]
Surgery.—Th [illegible] C. Hallowes, Philip S. [illegible] Willington, Cecil J. Wyatt, and Thomas J. Crean.

FOREIGN UNIVERSITY INTELLIGENCE.—*Budapest:* Dr. N. Berend has been appointed *docent* of [illegible] moted to the Ordinary Professorship of Pharmacology and Therapeutics and Dr. Troisfontaines to the Ordinary Professorship of Dermatology.—*Marburg:* Dr. Erich Opitz of Berlin has been appointed Extraordinary Professor of Gynæcology.—*Pavia:* Dr. Ercole Pusateri has been recognised as *privat-docent* of Psychiatry and Dr. Tommaso Busacchi as *privat-docent* of Surgery.—*Prague (Bohemian University):* Dr. Alois Velich [illegible] ordinary Professor of General [illegible] Dr. Ottokar Frankenberger, [illegible] Laryngology and Rhinology; and Dr. Emanuel Formánek, Extraordinary Professor of Medical Chemistry.—*Rome:* Dr. Arnaldo Pieraccini has [illegible] Psychiatry.—*Utrecht:* [illegible] cognised as *privat doce* [illegible] Dr. Julius Tandler has been promoted to an Ex [illegible] Professorship of Anatomy; Dr. Ferdinand [illegible]

Extraordinary Professorship of Pediatry; and Dr. Josef von Metnitz to an Extraordinary Professorship of Odontology.

MR J. J. UDALE, M.R.C.S. Eng., L.R.C.P. Lond, has been elected a member of the council for the metropolitan borough of Finsbury.

Donations and Bequests.—Under the will of Mr. George Harwood £500 are bequeathed to the London Hospital; £500 to the treasurer of the City of London Hospital, Victoria park; £500 to the North-Eastern Hospital for Children, Hackney; and £500 to the Metropolitan Hospital, Kingsland-road.

Medical Circulating Library.—It may be useful to announce that Mr. H. K. Lewis, of Gower-street, London, W.C., whose old-established medical circulating library is well known to our readers, is now prepared to undertake the weekly delivery of books at subscribers' residences and to arrange for their re-collection.

A New Method of Sharpening Knives.—The *Engineer* of Nov. 27th states that a German experimenter named Bernhard has discovered that aluminium may be used for putting an edge on fine-cutting instruments such as surgical knives or razors and that it acts exactly like a razor-hone of the best quality. He found that when steel was rubbed on it the aluminium disintegrated with the formation of a powder of a somewhat greasy nature which clung to the steel with great tenacity and assisted in cutting away the hard surface of the metal.

Presentations to Medical Practitioners.—Mr. J. Rowlands Essex, M.R C S. Eng., of Pontypool, Mon., medical officer of health of Panteg, who has recently resigned his appointment as surgeon to the Pontypool town forge tin and iron works, has been presented by the workmen with a marble timepiece and a smoking cabinet. Mr. Essex was for 27 years surgeon to the works with which his father was connected in the same capacity for 51 years.—Mr. William Grant, M.B, C M. Aberd., who for nine years has been assistant surgeon to the Treherbert (Glam.) collieries, has been presented with a gold watch and chain and a purse of gold on the occasion of his leaving the district owing to ill-health.

Irish Medical Schools' and Graduates' Association.—Dr. P. S. Abraham, the President of the Irish Medical Schools and Graduates' Association, took the chair at the autumn dinner on Nov. 25th at the Trocadéro Restaurant, Piccadilly-circus, London. Dr. Abraham, in the course of a reply to the toast of "The Association," proposed by Professor William Graham of Dublin, observed that the association had done good work. It had raised the position of Irish medical men throughout England. It had helped to show those concerned that the attempt to exclude Irish graduates and diplomates from public appointments in England was a failure. Happily at the present time but little of the former spirit of intolerance prevailed. A more liberal view was now taken and the old grievance that candidates with Irish degrees were ineligible for appointments on the honorary staff of English hospitals was being rapidly removed. This improvement was due to a great extent to the influence of the Irish Medical Schools and Graduates' Association. Another interesting matter was touched upon by Mr. J S. Whitaker, organising secretary of the British Medical Association, who replied to the toast of "The Guests." He said it was his duty to pay visits to many parts of England, Ireland, and Scotland. When in Dublin he was told that the best investment John Bull could make was to secure the goodwill of the Irish and that had been recognised by the British Medical Association. That body had decided that assistance should be given to the Irish Poor-law dispensary doctors in their fight against the wrongs to which they were subjected. He pointed out that everyone who heard him at that dinner could be of assistance in the struggle of the Irish dispensary doctors by preventing medical men from filling up the posts vacated by them and in that manner reform would be hastened. Another subject of public concern was introduced by Surgeon-Major W. Moyle O'Connor, second in command of the Royal Army Medical Corps Militia, who, in the course of responding to the toast of "Our Defenders," proposed by Sir J. W. Moore, contended that the Royal Army Medical Corps Militia should be permanently employed in home billets. In that manner, he explained, the officers of the Royal Army Medical Corps would be available for service abroad in their full strength. This, he considered, was the only means by which officers could be encouraged to join the medical service of the Militia. The corps had been increas from 800 to 1600 men and was the largest embodied unit that nature.

Singular and Unsuccessful Claim against Dentist.—At Gloucester county court last week a clai for damages was brought by a carpenter named Freem against Mr Ebenezer Apperley, L.D.S. R.C.S. Eng. T plaintiff claimed £161 in circumstances which had be mentioned in a previous action in October when the ju could not agree and a new trial was decided upon. appears that towards the end of December last the plain was suffering from toothache and went to the defendan a properly qualified dental surgeon, whose son stopped t tooth with cotton-wool steeped in a preparation of cocain When the plaintiff got into the street, according to t evidence, he felt giddy and on Christmas Day while eati some rice pudding the stopping came out of his tooth a he swallowed it with the pudding. After that he becar very ill and the suggestion was that Mr. Apperley, ju had put an overdose of cocaine upon the cotton-wool whi formed the stopping and so had caused the illness. Aft hearing the evidence for the plaintiff his honour agre with the counsel for the defendant that there was no ca to answer and non-suited the plaintiff with costs.

The Open-air Treatment of Pulmonary Tuberculosis.—Proposed Sanatorium for Middlesex.—S Ralph Littler, K.C., presided at a meeting at the Middlese Guildhall on Nov. 27th, held for the purpose of considering the question of establishing an open-air sanatorium fo Middlesex. Sir William H. Broadbent, after remarking that he would do the utmost in his power to promote the establishment of such a sanatorium, pointed out that London was the worst provided with sanatoriums of all large towns in the kingdom, while at the same time it was overwhelming in its demands for the treatment of consumptive cases. It would therefore be no advantage to Middlesex to share a sanatorium with London. On the motion of the Bishop of Kensington, seconded by Mr. Bott, it was decided that a sanatorium should be established and an executive committee was appointed for the purpose of collecting funds and of negotiating with public bodies. This committee wi consist of the following gentlemen: Mr. Montagu Sharpe, Mr. Bott, Dr. Kenwood, Dr. Benjafield, Mr. J. Box, and Mr A. W. W. King. Sir Francis Cory-Wright was appointed treasurer and Colonel Gerard Clarke was elected secretary Lord Rothschild and Mr. Leopold de Rothschild have each promised a donation of 200 guineas towards the proposed building.

Association of Physicians and Surgeons (Society of Apothecaries).—The first meeting of the members of this society since its incorporation took place in the hall of the Society of Apothecaries in Blackfriars, in the City of London, on Tuesday, Dec. 1st. The meeting was advertised to include the Licentiates of the Apothecaries' Hall of Ireland, and the chair was taken by Mr. A. Rivers-Willson (Oxford). The following gentlemen had written wishing to join the Association of Physicians and Surgeons of the Society of Apothecaries: Mr. A. M. Sheild, Mr. C Stonham, Mr. W. Bruce Clarke, Mr. F. J. Steward, Mr. J A. Ryan (Glasnevin), Mr. J. Evans (Dublin), Dr. Alexis Thomson (Edinburgh), Dr. R D. Purefoy (Dublin), and Sir Charles A. Cameron (Dublin). The meeting was attended by about 30 medical men. The proceedings commenced by the Chairman moving the following:—

> That the Association of Physicians and Surgeons, Limited, having for its objects the professional advancement of the Licentiates of the Society of Apothecaries of London and of the Apothecaries' Hall in Ireland, deserves the encouragement and cordial support of all Licentiates of the Corporation.

Turning to the Master of the Society of Apothecaries who was seated near, the Chairman submitted for the consideration of the society the proposal that the Licentiates should have the title "Licentiate in Medicine, Surgery, and Midwifery." The motion was seconded by Mr. George Jackson (Plymouth), one of the Direct Representatives on the General Medical Council, who observed that a Licentiate of the Society of Apothecaries might use the title of physician and surgeon. But that right was not expressed in the letters L.S.A. What ought to have been done was that the Society of Apothecaries should have been amalgamated with the Royal Colleges of Physicians and Surgeons The only alternative that now remained was for the Society of Apothecaries to ask Parliament to consent to an alteration of the title Mr A. Mowbray Upton, clerk to the Society of Apothecaries, spoke in favour of the objects of the Association of Physicians and Surgeons of the Society Dr Clarence Cooper, the Master of the Society, pointed out that it had been contended by many that the Society had the power to grant the title of Fellow or any other title to anyone who had passed their examination for the Licentiateship of the Society The usual votes of thanks concluded the business of the meeting after the motion submitted by the Chairman had been unanimously adopted

MIDDLESEX HOSPITAL.—At a meeting of the court of governors of the Middlesex Hospital, held on Nov 27th a report was submitted which stated that since the last meeting the constitution of the board had been strengthened by the addition of Prince Francis of Teck and the Hon Oliver A. Borthwick. The amount required for alterations and other current expenses had been approximately ascertained to be about £15,000, and in view of the existing depression in the stock market it was thought advisable to obtain a loan of £15,000 from the bankers The new clinical and bacteriological laboratories had been in working order for rather more than 12 months and could already show a satisfactory record of work done The total number of medical, surgical, and obstetrical patients treated during the past half year was 2079 with the following results discharged relieved 1517, discharged unrelieved, 125, left at own request, 29, deaths 136, remaining in the hospital on Oct 1st, 272, total, 2079 In the out-patient [illegible] were treated, the total number of [illegible] giving an average of 2 2 attend- [illegible] an average of 218 patients seen daily The council of the Metropolitan Hospital Sunday Fund had now recognised the cancer wing as a separate institution and had this year made a grant of £325 to the funds During the past half year the number of admissions to the cancer wing had been 69 and the deaths 51, whilst 18 patients had discharged themselves The number of outpatients had been 101, with a total attendance of 382

GLASGOW UNIVERSITY CLUB, LONDON.—Sir William Taylor, K C B, Director-General of the Army Medical Service, presided on Nov 26th at the half yearly dinner of the Glasgow University Club, London, which was held at the Trocadéro Restaurant Piccadilly-circus, London Among those present were Sir George Hare Philipson, Sir Charles B Ball, Sir John Batty Tuke, Surgeon General H Skey Muir, C B, Dr Guthrie Rankin, Dr C O Hawthorne, and Dr. D C McVail The toast of "The Imperial Forces" was proposed by Sir George Philipson who in the course of his remarks paid a high compliment to the Glasgow companies of the Royal Army Medical Corps. These companies originated in the University of Glasgow and were officered by Glasgow graduates Surgeon General A. H Keogh, C B, who was called upon to reply, observed that the Army Medical Service had started on the path of progress and reform Before the reorganisation of the department there were three Glasgow graduates at headquarters After the reorganisation they found that there were three more Glasgow graduates there and in that way the service was specially indebted to the University of Glasgow Sir William Taylor next proposed the toast of "The University and the Club' He said that it was not known perhaps to everyone how the Zachary Boydleian Library became the property of the University of Glasgow Zachary Boyd composed a poetical version of the Bible and the following was a fair example of his talents as a poet "Was not Pharaoh a rascal' That was the first line of a couplet The second line was "He wouldn t let the children of Israel go with their wives and families, their bags and baggage, 40 days' journey into the wilderness for to eat the Pascal" Boyd was anxious to have his book printed and published and after being refused by the Universities of Oxford and Cambridge the undertaking was accepted by the University of Glasgow That institution fulfilled its promise by printing and publishing two copies one was kept in the Boydleian Library and the other was presented to Zachary Boyd After reviewing the celebrated men who had come from the University of Glasgow Sir William Taylor concluded by saying that the Glasgow University Club existed in London because it was the natural result of one of the laws of nature that wherever two or three Scotch were gathered together they stuck to each other and took counsel for the common good of the race The other toasts were those of "The Guests" and "The Chairman" The former was effectively dealt with by Dr Rankin and the latter was proposed in a witty speech by Mr A. A. Jack In addition to the entertainment afforded by the eloquence of the orators those present were treated to Scotch stories by Dr G Ogilvie and to Scotch songs from several talented singers

BOOKS, ETC., RECEIVED

AMERICAN LARYNGOLOGICAL ASSOCIATION (Dr James E Newcomb, Secretary 118, West 69th street New York City)

Transactions of the Twenty fifth Annual Meeting of the American Laryngological Association held at Washington, D C, May 12th, 13th and 14th 1903 Price not stated

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Poetical Daily Calendar 1904 Proverbial Daily Calendar, 1904 Daily Calendar, 1904 Price 1s each

CHATTO AND WINDUS 111 St Martin s lane W C

The Stellar Heavens An Introduction to the Study of the Stars and Nebulæ By J Ellard Gore F R A S, M R I A Price not stated

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Manual of Midwifery By W E Fothergill M A B Sc, M D, Lecturer in Obstetrics, the Owens College Third edition Price 9s net

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The Treatment of Certain Malignant Growths by Excision of the External Carotids By Robert H M Dawbarn, M D, The Samuel D Gross Prize Essay Price $2 net

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Mrs Piper and the Society for Psychical Research Translated and slightly abridged from the French of M Sage by Noralie Robertson With a Preface by Sir Oliver Lodge Price 3s 6d net.

KARGER, S Karlstrasse 15 Berlin

Ueber die Prognose der Syphilis Vier Vorlesungen gehalten in [illegible] u Aachen 1902-1903 Von [illegible] e M 2

D [illegible] s Kindesalters Von Prof [illegible]

D [illegible] ihre Verwertung für die [illegible] Diagnostik Von Prof Dr O Schwarz in Leipzig Price M 7

[illegible] h klinische [illegible] 50 [illegible] eiterungen [illegible] B Heine [illegible] nd Privat- [illegible] Wilhelm [illegible] der Kgl [illegible] zu Berlin [illegible] Price M 4

Communications, Letters, &c., have been received from—

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B.—Mr. C. Birchall, Liverpool; Messrs. C. Beaumont and Co., Lond.; Sir James Blyth, Lond.; Battersea, Town Clerk of; Dr. Giuseppe Bellei, Bologna; Dr. Judson Bury, Manchester; Mr. E. Baker, Birmingham; Mr. A. A. Bradburne, Glasgow; Miss E. H. Bolton, Southport; Mr. H. Butterfield, Northampton; T. B. Browne, Ltd., Lond.; Mr. C. L. Bedford, Lond.; Mr. C. Stanser Bowker, Newport; Dr. Hubert Biss, Eastbourne; Dr. G. Granville Bantock, Lond.; Staff-Surgeon P. W. *Bassett-Smith*, R N., Haslar; *British Medical Journal*, Editor of; Dr. Bannatyne, Bath.

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O.—Mr. F. A. Osborn, Dover; Dr. Thomas Oliver, Newcastle-on-Tyne; Otological Society of the United Kingdom, Hon. Secretary of.

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The Bradshaw Lecture

ON

CANCER AND ITS ORIGIN.[1]

Delivered before the Royal College of Surgeons of England on Dec. 9th, 1903.

By HENRY MORRIS, M.A., F.R.C.S. Eng.,

SENIOR VICE PRESIDENT AND CHAIRMAN OF THE COURT OF EXAMINERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND; SENIOR SURGEON TO, AND CHAIRMAN OF THE CANCER INVESTIGATION COMMITTEE OF, THE MIDDLESEX HOSPITAL.

Mr. President and Gentlemen,—I have chosen cancer, meaning thereby both carcinoma and sarcoma, as the subject of this lecture for several reasons. 1. The discovery of the microbic origin of certain diseases has led to the most painstaking efforts to ascertain, by means of modern bacteriological methods, the cause or causes of cancer. What the result has been I shall endeavour to show. 2. The premature publication of immature and disputable conclusions and of crude and impossible theories has unfortunately aroused false hopes and has attracted the impatient and somewhat too credulous attention of the general public to everything connected with the word "cancer." It would be well, if it were possible, to allay these consequences. 3. No lecture specially on cancer has been given at this College since the last Morton lecture was delivered in May, 1894. 4. This Royal College has for the first time in its history recently embarked upon a great and important scientific inquiry by, conjointly with the Royal College of Physicians of London, undertaking the general direction and control of what may be called a national movement for the investigation of cancer, and it may be of interest to review, although very imperfectly, the general position of the subject at the commencement of this undertaking by the Royal Colleges.

In the 93 years since the foundation of the *Hunterian lectures* cancer, considered on general lines, not simply as it affects some particular organ or part, was never selected, so far as can now be ascertained, as the subject of a Hunterian lecture. In the Arris and Gale series which, like the Hunterian, was commenced in 1810, Sir James Paget is alone, he having taken for his course of lectures Malignant Tumours in 1852. In the Erasmus Wilson series Mr. H. T. Butlin in 1880 and 1881 lectured on the Relations of Sarcoma to Carcinoma. In 1882 Mr. F. S. Eve gave two lectures on the Etiology of Tumours, and last year (1902) Dr. C. P. White delivered three lectures on the General Pathology of Tumours. Of the Bradshaw lectures only one has [illegible] and that was given by Sir William Savory in 1884, th [illegible] hology of Cancer." Through t [illegible] John T. Morton of Caterham [illegible] were instituted in this College with the hope of advancing our knowledge of cancer and the treatment of cancer. The first of these Morton lectures on Cancer and Cancerous Diseases was delivered in 1887 and the last in 1894.

I had thought of prefacing what I have to say to-day on Cancer and its Origin by a short account of the leading views which have been expressed in this country during the last 30 years about cancerous affections. To this end I studied and made epitomes of all the lectures bearing on cancer which have been delivered in this College during that period, as well as [illegible] ancer which have taken place [illegible] in London in 1874 and the [illegible] iese lectures and debates contain all that was known about cancer and of the theories as to its causation up to the date of their publication, but I found that even the briefest *résumé* of them would extend far beyond the limits of an hour's discourse. With regard to the theories of causation of malignant diseases which have been published since the delivery of the last of the Morton lectures even a mere statement of them would occupy much time and any attempt at a complete account would take up several hours.

Several of the views put forward are mutually exclusive of each other. Thus while some persons attribute to arsenic, some to sugar [illegible] neats the increase of cancer [illegible] tive agent and molasses as a [illegible] common salt and the chlorine [illegible] the saccharomycete to which [illegible] due—excess of water and [illegible] articles of diet, climate, soil, cancer houses, occupations, mental worry, nationalities, &c., must be set aside as altogether inadequate to be the fundamental and essential cause of the origin of cancer. They at most are merely predisposing or exciting causes, but not one of them is the true, immediate, and essential factor. Injury, irritation, or inflammation may bring about a condition of the tissues favourable to the extension of cancer and may also excite the real factor into action, but, as we are all daily witnessing, these [illegible] primary tumour, but as a general carcinomatosis or sarcomatosis.

Dr. Alexander Katz of Hamburg in a paper read before the Berlin Cancer Committee in January, 1902, grouped the alleged causes of cancer formation into the entogenous (or intrinsic) and the ectogenous (or extrinsic). By entogenous causes are understood certain spontaneous and anomalous changes within the organism; by ectogenous causes those derived from outside the body. The entogenous embrace, amongst many others, the causes alleged under the two important theories of Thiersch and Cohnheim. Thiersch's theory and all the variants of it may appropriately be called the "lost balance theories" in contradistinction to the "matrix" or "tumour germ" theory of Cohnheim and his followers. According to Thiersch the beginning of a tumour formation is due to a loss of balance between the epithelial cells and the connective tissue. In carcinoma, for example, this loss of balance occurs during advancing age by the degeneration of the connective tissues and results in an invasion of these tissues by the epithelial cells. In other words, the theory supposes that in its origin carcinoma depends on some cause which produces as age advances a local impairment of resistance, a retrograde process in the sub-epithelial structures, whilst the epithelium maintains its activity or, it may be, acquires a special vigour. This view, Katz says, has never gained a foothold and is only of value in that by means of it the age limit of cancer can be explained. Katz's statement is, however, at variance with the somewhat considerable importance which has been attached to Thiersch's theory, at any rate in this country, for it was accepted as probable by Coats and Maylard in the Glasgow debate; it was adopted in his Morton lecture by Sims Woodhead, who corroborated it by what he found on microscopic examination of the tongues of old people; in principle it has been quite recently supported by Foulerton and by Woods Hutchinson; it appears also in the theory of "unstable equilibrium" of Powell White; and its influence is also traceable in certain other modern theories—as, for example, the "anaplastic" theory of Hansemann.

[illegible] to a biological change in the [illegible]

Thiersch's theory and the other "lost balance theories" are all open to the same objections which the "localists" brought against the "constitutional" theory. To hold that the formation of carcinoma is due to a loss of the normal balance between the epithelium and the connective tissue, the result of advancing age, is to imply the existence of an "all-pervading condition" of the connective tissues and yet that this "all-pervading condition" can give rise to a disease which [illegible] at least is strictly localised. A disease so origina [illegible] disease than one due to [illegible] and such a theory of cancer is open to all the same arguments as the "blood theory." Indeed, Paget, after pointing out that there are not many things which do "all-pervade the body" fixed upon the "all-pervading blood," rather than the "all-pervading connective tissue," as the medium of the supposed "virus," merely, as he said, "because at any rate we can then hold to our study by some sort of analogy with things that we recognise as blood diseases." If the theory was correct cancer should commence, not as a solitary tumour, but as a general carcinomatosis or sarcomatosis.

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[1] The paragraphs in smaller type were those which time would not allow the lecturer to read.

But these "lost balance theories" have to meet the further difficulty that carcinoma is continually progressing laterally as well as downwards by, as it is commonly stated, "the irregular and rebellious growth of the neighbouring epithelium." So that the disease does not consist, as these theories imply, merely in an invasion of the weaker by the stronger tissue, but there is likewise a retrograde and subversive metamorphosis produced in the stronger by the stronger—i.e., in the epithelium by the epithelium. Foulerton by substituting chronic inflammation and irritation for senility as the cause of the epithelium transgressing the limits of the basement membrane (and therefore of the loss of normal balance between the epithelium and the connective tissue) escapes some of the arguments against the constitutional theory; but he does not explain why it is that chronic irritation causes carcinoma in some cases and not in others, and in some parts of an individual but not in other parts which have been similarly and equally irritated; nor does he explain the origin of carcinoma where there has been neither traumatism nor chronic irritation.

Woods Hutchinson, by assigning the origin of cancer to a matrix of mature cells, which cells after becoming "detached" by a process of destructive elimination, revert to their ancestral or embryonic type, is to some degree open to the same objections by holding that whole organs, such as the uterus and mamma, are thus detached from the rest of the organism. Why, for instance, if this theory is correct, do we not frequently meet with multiple primary carcinomata in the female breast? Why, in the uterus do we not commonly find multiple primary carcinomata—one or more malignant neoplasms in the fundus, one or more in the cervix uteri, each one corresponding in structure with the glands of the part of the organ in which the neoplasm has arisen?

There are other entogenous theories as to which I cannot do more than just barely allude. Mr. Jonathan Hutchinson, for example, considers now, as formerly (see Glasgow debate), cancer as simply "a modification of the inflammatory process, which again in its turn is only a modification of that of normal nutrition"; he regards the causes which give proclivity to all malignant new growths as nearly identical, the chief of them being senility, chronic inflammation, and local irritation, and thinks that every human being, nay, every organism possessing tissues capable of inflammatory change, is liable to the different forms of cancerous disease. The late Mr. John Marshall, who delivered the third Morton lecture, and Dr. J. Inglis Parsons have advanced the theory that cancers, and, indeed, all tumours, "are in the first instance composed of cells formed in the normal process of repair, but that, having escaped from the control of the nervous system, they take on an independent life and continue to proliferate and develop without check just as all living cells are capable of doing *ad infinitum* under favourable conditions."[2] Mr. H. L. Lack's theory was that carcinoma formation is due to the migration of normal epithelium, by means of the lymphatics, to various parts and organs where the cells lodge and proliferate indefinitely. One of his experiments, and only one, seemed to support this view—and no similar or corroborating result has ever since been obtained. Dr. Jules Félix and Dr. Robert Bell have each laid great stress in recent works on the sinister influence of uric acid and the gouty diathesis in promoting the condition of the tissues which enables cancer to develop.

I must pass now to a brief consideration of the ectogenous group of conjectural causes. These are: (1) the various forms of injury, chronic irritation, and chronic inflammation, &c.; and (2) micro-organisms. Great importance has been attached by Virchow and many others to chronic irritation as a causative factor in cancer; and it is certainly needful for us all to bear in mind the pernicious rôle played by the clay pipe, the carious tooth, and many and various agencies of the kind in provoking the development of cancer. But not one of them can take rank as the essential and unconditional cause of malignant disease; that is, as the factor, without which cancerous diseases cannot arise, though they are unquestionably amongst the agents which excite the real factor of tumour formation into activity, and as such they must be referred to again in connexion with the "*tumour germ*" theory.

The Microbic Theories.

The theory of the microbic origin of cancer still occupies the very forefront of cancer research. There are not wanting, however, indications that it is on the wane and that it may soon come to be described, as indeed Hansemann in his recent work has already spoken of it, as "belonging to history." The search for a specific micro-organism of cancer dates back to the early days of modern bacteriology. As soon as tuberculosis was removed from the list of diseases due to a so-called diathesis, by the discovery in 1882 of the bacillus tuberculosis, a very large number of scientific workers made it their aim to demonstrate, if possible, the existence of a corresponding micro-organism as the causative agent of carcinoma and sarcoma. Nedopil in a memoir published in 1883 was the first to sustain with conviction the microbic origin of cancer. No sign of a specific cancer organism had, however, at that time been demonstrated. But research soon led to the alleged discovery by different experimental workers of three classes of living agents—namely, bacteria, protozoa, and saccharomycetes and blastomycetes, or yeast fungi

The bacterial or schizomycetic theory.—Bacteria were the first organisms which were thought to be the cause of can Nepveu as far back as 1872 had found them in carcin and Rappin is said to have actually isolated a diploco both from epithelioma and sarcoma in 1886. During there appeared a number of writings by different inve gators who claimed to have discovered—either in cance tumours, or in the blood of cancerous persons—the mic of cancer, and to have isolated and cultivated it; and means of inoculation of the fluid culture to have cau the reproduction of the disease in animals. Scheu claimed to have isolated and cultivated a special bacte from carcinoma. Francke described a bacillus of sar which he differentiated from the bacterium found Scheuerlen in carcinoma. Schill stated that he successfully cultivated a bacterium from both carci and sarcoma. Others subsequently made similar clai whilst, on the other hand, several eminent observers arriving at the conclusion that many of the supposed m organisms were the factitious products of faulty techni and that such micro-organisms as had been actually covered played but a very subordinate rôle, if any, in evolution of malignant tumours.

The protozoic or psorospermic theory.—Before the year attention had scarcely at all been directed to the pres of sporozoa in human pathology, but between that date 1891 coccidia—a group of parasites belonging to class of protozoa—were found in a variety of organs of man, especially in the pleura, the inte epithelium, the liver, and the ureter, as well as in the m from the air passages of persons suffering from whoo cough. In 1889 and the following year a number of des tions were given by several observers of coccidia bodies having a great resemblance to the coccidium of liver of rabbits which they had discovered in carcino the skin, jaw, intestine, stomach, nipple and breast, pe and bladder, and other parts. These bodies were found in the nucleus and protoplasm of cancer cells. In appeared Schueller's monograph with the description of round or oval yellowish-grey or yellowish-brown pr of cancer, showing radiating striæ or cilia in their sur which he had discovered. In 1891–92 Ruffer found described bodies which he regarded as psorosperms in protoplasm of carcinoma cells. In the same and the f ing years other workers described similar results. In Gaylord published an account of certain spherical alleged by him to be cancer organisms, and von described a protozoal organism in the form of motile In a work just published Dr. Ludwig Feinberg argues for the animal nature of the cancer parasite, to he gives the name "histosporidium carcinomatosum." the other hand, many observers have asserted that all alleged cancer organisms are not psorosperms but the ducts of cell degeneration, or cell inclusions of leuco-, red blood discs, or are the result of irregular for indirect division of epithelial cells; and Ribbert br forward, amongst other objections, his ingenious and argument of "symbiosis," against the validity of microbic origin of cancer.

The blastomycetic theory.—The theory that carcinoma to infection by a vegetable parasite belonging to the bl mycetes or yeast fungi was first promulgated by W. R in 1890. Russell found certain small round bodies the cells of carcinoma, which retained the fuchsin stain sections of carcinomatous tumours had been treated carbol fuchsin, then decolourised with alcohol, and counter-stained with iodine green. These "fuchsin he regarded as yeast-like or "sprouting fungi." Pri Russell's paper the yeasts had been considered as in any pathogenic effect, but within a few years after, of yeast infection in man resulting in the formati granulomata, but not of malignant new growths, came recorded. The blastomycetic theory of the origin of has been since pursued chiefly by Sanfelice and who not only confirmed Russell's views but have gone further. Plimmer who was previously a strong support the protozoic theory and had, like Soudakewitch, koff, Ruffer, and others, described the cancer bodies protozoa, became a convert to the views of Russell, felice, and Roncali, whilst Sawtschenko, who was also verted, has recently described as representing yeasts same figures which he had formerly described as protozoa.

As in the case of bacteria and psorosperms, so with yeasts alleged to have been found in cancers, their na disputed by many observers. The "fuchsin bodies" of Russell were regarded by Cazin and Duplay as a certain form of cell degeneration (*globes hyalines*); by Nepveu as being derived from changes in the nuclei of leucocytes or in red blood corpuscles; or still oftener from the endothelial cells of the lymphatics; and by others they were considered to be due to degeneration of protoplasm or to atypical mitosis and phagocytosis; whilst Foulerton and Price Jones have pointed out three possible sources of fallacy as to the presence of yeasts in cultures obtained from malignant new growths, the chief of the three being contamination owing to the presence of yeasts or torulæ in the air of the laboratory.

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[2] J. Inglis Parsons: Brit. Med. Jour., April 27th, 1889.

The failure of the microbic theories.—From a careful examination of [illegible] for and against the bacterial or blastomycetic nature of [illegible] the alleged bacterial or [illegible] postulates nor with [illegible] in the complete [illegible] alleged organisms in the [illegible] growth of which tumour [illegible] the multiplication of the [illegible] indeed the essential cause [illegible]ns. Apart from the fact [illegible] cultivating and inoculating [illegible] nature of the cancer bodies [illegible]; and even granting that [illegible] no evidence to show they [illegible] or sarcoma.

In short, neither fission fungus, yeast fungus, nor psorosperm—neither bacterium, blastomycete, nor protozoon—has up to the present moment been satisfactorily shown, in spite of years of patient study by many skilled workers, to be in any sort of causal relationship to these diseases. How different was the case of the tubercle bacillus! When Koch [illegible] his great discovery he was able to bring forward [illegible] of the correctness of his claim that [illegible] the most sceptical were forthwith convinced.

THE TRANSMISSION OF CANCER BY GRAFTING AND DIRECT INOCULATION.

Some of the results of grafting and direct inoculation have often been evoked in support of the microbic theories of cancer genesis, though upon very inadequate grounds. For more than a century experiments have been resorted to with the object of testing: (1) whether cancer can be transmitted from man to animals, or from one animal to another of a different species; (2) whether cancer is communicable from man to man, or from one animal to another of the same species; and (3) whether one part of a cancerous individual can be inoculated from another part which itself is the seat of cancer. Clinical observations have also been directed to [illegible] of these questions.

[illegible] made to Cazin[3] for the earlier, and to [illegible] "Cancer à deux," delivered before the Berlin Cancer Committee on April 3rd, 1901, for the most recent information on the second of these questions Macewen in his speech at the Glasgow debate and De Bovis in a recent article in *La Semaine Médicale*[4] have also quoted several cases of the alleged communication of carcinoma from man to man; and my friend and former house surgeon, Mr. W. G. Nash of Bedford, has collected five cases of supposed communication of cancer of the tongue and lip from man to man. Morau's observations seem to prove that cancer was communicated from mice to mice by means of bugs.

Many of the cases in man were instances of what is called "conjugal cancer"; and in these, as well as in the cases other than of the genital organs, the cancer was doubtless excited by chronic or repeated irritation and not communicated by the transmission from one person to the other of the carcinoma cells.

Several instances of auto-inoculation were quoted by the speakers in the London and Glasgow debates.

Hahn succeeded in grafting carcinoma and Cornil sarcoma from one part of a human being with incurable disease to another part of the same patient's body. Some experiments by Morau are of great importance, because they were the first which were made in a systematic manner to show the transmissibility of a malignant new growth from one animal to another of the same species.[5] Quite recently Jensen and Borrel have had successful series of inoculations and graftings in white mice.[6] Jensen[7] had a series of eight and Borrel of six successes.

None of the results of the experiments and none of the clinical cases just alluded to, however, give satisfactory support to the microbic theories; nor do they explain the specific capacity of the cells which enables them to grow and to multiply on new soil.

In the instances in which carcinoma has been developed the results have been due to the irritation excited by the tissue grafting, or to [illegible] implantation of the carcinomatous cells, and not to [illegible] ism. [illegible] bold [illegible]

The tumour products of microbic infection are [illegible] called granulomata formed out of the corpuscular elements of the blood, and the proliferation products of pre existing tissue; they are the results of a chronic inflammatory process, and all the tumours caused by the same kind of microbe are structurally the same, no matter in what part or organ they originate or develop. Not so the tumours of carcinoma and sarcoma. In endothelioma and spindle-celled sarcoma the cells of the secondary tumours are, as in carcinoma, histologically identical with the cells of the primary neoplasm. It is only in round-celled sarcoma that we cannot be sure whether the cells of the secondary growths are derived from the cells of the primary tumour or from the tissue in which the secondary growths occur. The round-celled sarcoma more closely resembles the chronic inflammatory processes than does spindle-celled sarcoma, and still more so than does carcinoma.

The primary tumour of carcinoma varies in structure according to its location and to the type of epithelial cell which is normal to the part affected. The secondary tumours are also composed of epithelium which has the same form and the same arrangement as that of the primary tumour; and the secondary tumours have, moreover, all the same delicacy of construction as to stroma, blood-vessels, and lymphatics, as well as other points of similarity with the primary tumour. All this was strikingly, if quaintly, put by Moxon at the London cancer debate when he remarked, "You find that rectum cancer is rectum tissue ...... whose structure is that of the Lieberkuhn follicles of the mucous membrane of the gut"; and as to the metastatic growths you do not "find rectum cancer in the rectum and liver cancer in the liver. But instead of that I have repeatedly seen rectum in the liver." Coats in the Glasgow debate told how the delicate structure of the blood-vessels which had led to fatal hæmorrhage from a primary growth was repeated in the secondary growths in the form of extensive extravasations of blood throughout the tumours. Stewart has recorded a case in which growths in the liver and lung secondary to carcinoma of the pancreas, besides having the racemous glandular structure of the primary tumour of the pancreas, had also a chemical resemblance, for upon analysis the secondary growths were proved to contain a high percentage of trypsin.

The definite establishment of these facts has proved that the secondary growths are produced by the migration of cells from the primary seat; that the development of these growths is solely by the multiplication of their own cells, and that there is no transition of the parenchyma of the part invaded into the tissue of the carcinoma. So with reference to sarcoma. The typical sarcomatous tumour element is the connective tissue cell and the secondary tumours resemble the primary in every respect.

[illegible] existing connective tissue [illegible] later removed and [illegible] What look like [illegible] every other theory which predicates that carcinomatous new growths are produced from anything else than epithelial cells, or that they are the result of changes in the pre existing mature cells, of the part or organ affected. Rindfleisch's theory, adopted also by Gussenbauer, while it grants the epithelial origin of the carcinomatous cells, attributes the local extension of the disease to a "spermatic influence" of these cells upon the adjacent connective tissue cells, as well as upon [illegible], and ascribes to them the power of con- [illegible] cells into epithelial elements. [illegible] that carcinomatous cells are derived from [illegible] hat carcinomatous tumours are primarily connective tissue growths. Other theories attribute the *original focus* and the local extension to retrograde changes in mature cells, either as the result of "over nutrition of the cells" (Maylard) or of atrophy and "reversion to their ancestral type from being worsted in the struggle for existence" (Woods Hutchinson), or of senile decay (Thiersch), or of inflammation, chronic irritation, or injury. Nor is the theory of Loeb that the penetration and migration powers of carcinoma are due to the dissolving effect of some ferment, probably allied to trypsin and secreted by the cancer cells, at all necessary to explain the general pathological anatomy of either carcinoma, endothelioma, or sarcoma. Considering the inherent capacity of a cancer cell (as of every primitive cell) for rapid breeding and self-maintenance, for abundantly proliferating in any part of the body to which it migrates, the wonder is that cancer is not readily transmissible from one subject to another. Instead of that, transplantation and direct inoculation of cancer from man to animals or from animals to animals have hitherto almost invariably failed. But had it been otherwise the success would not in itself have furnished the slightest proof that cancer genesis is due to a microbe; unless Koch's postulates had been complied with. In the successful transplantations and inoculations quoted by Cazin none of the experiments were controlled by trying if the resulting tumours could be reproduced in series in fresh experimental animals. Even in more recent experiments, with the exception of the few instances referred to above, this requirement has not been fulfilled.

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[3] Archives Générales de Médecine, June, 1892.

[4] La Semaine Médicale, Sept. 24th, 1902.

[5] Morau: Archives de Médecine Expérimentale [illegible]

[6] Annales de l'Institut Pasteur, [illegible] 1903

[7] For still later report by Jensen see [illegible] June, 1903. Jensen's work extends over [illegible] concerns 19 generations.

From nothing that we know up to the present time of the action of micro-organisms can the microbic theory throw the least light upon the cases of alleged transplantation and direct inoculation of cancer from one person to another. How can we on the microbic theory explain a glandular-celled carcinoma producing in another person a squamous-celled carcinoma, or a squamous-celled carcinoma of the tongue giving rise to a spheroidal-celled carcinoma of the mamma or to a columnar-celled carcinoma of the stomach or rectum? Such alleged cases are at total variance with what occurs in auto-inoculation and with all the knowledge we have of the local, regional, and general infection of cancer, as well as with our experience of the action of microbes upon living tissues.

While transplantation and direct inoculation, as well as contagion, of cancer from person to person stand so far absolutely unproved, auto-inoculation, *on the other hand*, undoubtedly occurs and cases have been reported by de Morgan, Sir W. Jenner, and others. An ulcerated carcinoma frequently rubbed against or continually in contact with a cracked, excoriated, or abraded surface finds a favourable soil therein for the development of any of its cells which are deposited there. Sarcoma, in the same way, may be inoculated. *This occurred in a man, aged 62 years, under my care.* He had a mixed-celled sarcoma of a diverticulum of the bladder. On post-mortem examination this growth had caused a local infection, by direct implantation, with the result that a similar growth had formed on the opposite wall of the bladder. But in auto-inoculation just the same sort of process goes on as is witnessed in a lymphatic gland when the carcinoma cells have migrated to it from the primary tumour. It is simply "a metastasis of epithelial cells," as Klebs has described it.

Auto inoculation is strictly comparable to, if not identical with, the recognised mode of regional and metastatic infection of carcinoma and is as unlike microbic infection as those processes are admitted to be.

THE "TUMOUR GERM THEORY"—COHNHEIM'S THEORY.

There is one theory which is more consistent than any other with all that we know about malignant diseases, which fully explains the origin of very many non-malignant tumours, and is, I believe, destined to be accepted as the true explanation of the genesis of malignant new growths. It is the theory which was put forth by Durante of Rome about the year 1874 and a year or two later by Cohnheim (1877).

Thiersch, Ecker, Mayo, Lebert, Billroth, Klebs, Rindfleisch, and others had said that carcinoma is the result of the proliferation of [illegible] thus breaking away from the doctrine [illegible] Cornil and Ranvier, and others who [illegible] metaplastic products of the connective tissue.

Cohnheim went a step further and referred the origin of carcinoma to the proliferation not of mature but of *embryonic* epithelial cells. He taught that all tumours originate from a matrix of embryonic cells which during fœtal life are cut off from their proper connexions, remain in an undeveloped state, are surrounded by developing and ultimately developed tissues, and thus become, so to speak, "embryonic inclusions." According to Cohnheim these groups of cells, or "tumour germs," are portions of the germinal layers which, through not being utilised in the growth of the embryo, or by becoming displaced from their proper relations during the process of cell differentiation in the embryo, remain in a quiescent or latent state until excited into activity by one or other of several causes at some indefinite period after birth

Cohnheim insisted that a tumour never had its origin directly or indirectly from mature tissue. And herein lay the difference between Durante and Cohnheim, for whilst the latter regarded the matrix of embryonic cells or "tumour germ" as always of congenital origin, Durante thought that the elements from which arise all neoplasms, and especially the malignant, are either those "which have preserved in the adult organism their embryonic [illegible] characters, or which *have acquired them aga* [illegible] *weakening of their chemical and physiological* [illegible] Obviously Cohnheim's doctrine is insufficient b[illegible] explain the formation of malignant new growt[illegible] tissue, in immature callus, in unabsorbed inflammatory products, and in parts after injuries and operations of various kinds. This deficiency is met by extending the theory so as to include groups of cells which become isolated beyond their own natural boundaries by post-natal processes. Nicoladoni in 1881, in a paper on "Epithelioma in Sequestrated Wounds" ("*les plaies à séquestre*"), attributed the origin of these new growths to shreds of skin which had become displaced into fistulous tracks and had there proliferated under the stimulus of an accidental inflammation of the part or of an operation. Ribbert has indicated the possibility, during an inflammatory process, of a group of newly formed epithelial cells becoming completely detached from their natural parent tissue; and of the cell or cells so withdrawn from the control and growth-regulating influence of normally surrounding cells, assuming an exalted independence and power of proliferation whereby a tumour becomes developed. He also recognises that a *fragment* of sequestrated tissue detached by trauma of any sort may in the same way become a "tumour germ."

It was to meet this deficiency of the Cohnheim theory that Senn added to it this corollary: "The tumour matrix may be composed of embryonic cells, *the offspring of mature cells, which have failed to undergo transformation* into higher tissue, and which may remain in a latent, immature state for an indefinite period of time, to become under heredity or acquired exciting causes the essential starting point of a tumour." Senn expresses this extension of the "tumour germ" theory in his definition of a tumour thus: "A tumour is a localised increase of tissue, the product of tissue proliferation of embryonic cells of congenital or post-natal origin, produced independently of microbic cause" We thus see how Durante, Nicoladoni, Ribbert, and Senn embrace and supplement the incomplete theory of Cohnheim by recognising a post-natal origin of a cell matrix.

By these theories metamorphosed mature cells, as well as pathological microbes, are excluded as etiological factors in tumour *formation*, and a well-defined line marks off malignant and simple tumours alike from the inflammatory swellings, or granulomata, which are the products of the action of micro-organisms. If it can be proved that epithelial and connective tissue cells can be displaced as well as isolated, after birth as well as during the development of the embryo, we can understand how carcinoma may spring up not only in parts where epithelium normally exists but also as a primary growth in bones, lymphatic glands, or other mesoblastic structures and organs. *Primary* carcinoma may also take origin, in situations unusual *for* epithelial new growths, from a vestigial structure, a rest, or an accessory *organ*. [illegible] or post-natal But if all kinds of tumours arise from [illegible] matrices of embryonic tissue, what is it whi[illegible] matrix shall in one case develop into an innoc[illegible] malignant new growth? The answer is that the simple or malignant nature of the tumour depends partly on the stage of differentiation of the cells of the matrix at the time when they are arrested and isolated and part[illegible] so-called physiological resistanc[illegible] If the cell growth is arrested [illegible] differentiation and the resulting matrix consists of epithelial cells the tumour will be an adenoma or a papilloma; if the arrest of the development of the same cells takes place at an earlier stage the tumour would be a carcinoma. The same applies to sarcoma and the benign connective tissue tumours. The nature of the tumour thus depends upon the embryonic layer from which a matrix is derived and upon the stage of cell differentiation at the time when the cell growth is arrested.

I propose now to examine, as well as the time will permit, the evidence in favour of the separate parts of "the tumour germ theory"—namely, (1) the existence of congenital matrices of embryonic cells; (2) the existence of matrices of post-natal formation; (3) the continuance of these matrices for a time in a dormant state; and (4) the causes which arouse the matrices into activity.

1. What proof do we possess of the existence of congenital matrices of embryonic cells? It is hardly necessary to enumerate the many instances of "vestiges" and "fœtal

rests" which are found in the human body, as they now form a brief chapter in the latest text-books on anatomy. Tracts of embryonic epithelium are well known to occur in the tongue, gums, face, scalp, neck, brain, eye, testicle, broad ligament, ovary, and along the lines of coalescence *of the trunk.*

Many matrices are derived, we know, from portions of embryonic skin becoming buried in the mesoblast in the process of closure. According to Ebstein it is not uncommon to find in newly born infants isolated pearls of epithelial cells buried in the connective tissue by [illegible] the product [illegible] tissue or [illegible] connective [illegible] of the epi- [illegible] Matrices of [illegible] s for such tissue or in abnormal; when in abnormal the matrix is said to be "*misplaced.*" *Bodies identical in structure with the suprarenal* gland are found not only in connexion with the capsule, the cortex and the hilum of the kidney, and in the perinephric tissue, but also beneath the capsule of the liver, in the broad ligaments of a fœtal uterus, in the inguinal canal, and in some fatty tumours of the spermatic cord. That they have not more frequently been met with than is the case is probably due to the fact that they have not been looked for, and Bayard Holmes states that remnants of the adrenal [illegible] the genito-urinary tract in [illegible] n discovered in the renal [illegible] They probably represent [illegible] to come into relationship [illegible] yma. *The occurrence of* [illegible] ditional mammæ is by no [illegible] s of additional mammary [illegible] to 30 per cent.[8] *In many* [illegible] ed as thickened ridges of [illegible] groins. *Subsequently the* [illegible] ch of which is capable of [illegible] gh such embryonic ridges [illegible] embryo, yet it has been shown that al [illegible] tions of cutane [illegible] sebaceous glands.

Roux discovered isolated columns of cells in the inner embryonic layer of frogs' embryos; once he saw as many as 13.

For many other instances of vestigial and abnormal structures reference may be made to Professor Arthur Robinson's article in Morris's "Treatise on Anatomy." Dr. John Beard in a lecture on the Embryological Aspects and Etiology of Cancer[9] states that in elasmobranch fishes (and he implies that the same conditions exist in man) a considerable percentage of the primary germ cells fail to reach their normal position, *the germinal ridge; that many of* these vagrant germ cells degenerate and disappear, but all do not; and that the common situations for the origin of cancer are the very ones in which vagrant germ cells are usually met with.

2. The occurrence of matrices of embryonic tissue of post-natal origin is capable of completely satisfactory explanation. Leo Loeb[10] has described how in the healing of a superficial wound the epithelium of the skin on either side of the wound was seen to have fused itself into a cell mass which sent off branches not only across the wound but down into the blood clot and the connective tissue, especially if the connective tissue had been injured, and these branches of the cell mass even burrowed through cartilage. It is intelligible enough, therefore, how in the cicatrisation of ulcers and wounds generally some of the epithelial buds become "isolated," and being thus shut off *from* their proper anatomical relations and from their normal function may, under suitable stimulation, develop into carcinoma. Epithelial cells not utilised in the process of epidermisation and becoming buried in the scar tissue may when brought under the influence of the needful exciting cause give rise to carcinoma This sequestration of unused cells may occur during healing after burns, chronic ulcers, lupoid and syphilitic sores, fissures, sinuses, fistulæ, compound fractures, cracked lips, the excoriations from soot, tar, or paraffin, and after lacerations and ulcerations of the cervix uteri; also after the alternate *breaking down* and *healing in such diseases* as ichthyosis of the tongue, cheek, vulva, vagina, and after ulcers caused by carious teeth, as well as after wounds, whether operation wounds or otherwise.

In like manner a matrix may be produced from which sarcoma may arise. In parts which have been the seat of chronic inflammation and in scars, unspecialised connective tissue cells may be buried, and will be there ready to grow into a sarcoma under the influence of a sufficient exciting cause. Some of the embryonic cells during the process of repair of a fracture may fail to attain to the perfection of their parent cells and will thus remain in the part in a latent condition, like the congenital matrix of embryonic cells predicated by the original theory of Cohnheim.

3. What proof have we that a matrix of embryonic tissue, whether of congenital or post-natal origin, can remain for a length of time in a quiescent state and then suddenly start *into active growth under the inflence of some stimulus?* This is actually witnessed in the growth and development of the teeth, the bones, the skin and its appendages, the larynx, the mammæ, and the organs of generation, the cells of which remain for years in a state of incomplete differentiation and then normally, under the physiological stimulus which occurs at puberty, take on rapid proliferation. Pathologically the same suddenly aroused activity is seen in certain epithelial tumours which are rarely noticed before puberty, such as dermoids, branchial cysts, and mammary adenomata. Rudimentary organs and accessory organs which hitherto as to growth had been stationary as well as functionless become the starting points of tumours, more especially at and after puberty.

Puberty is the time of life characterised by the highest degree of tissue activity, and it is at this time that a matrix of embryonic cells *is prone to* [illegible] a tumour [illegible] with the ca [illegible] adequate [illegible]

Vestiges and rests lie dormant for years, often throughout life; but they are "tumour germs" all the same which under suitable conditions would undergo active cell proliferation and rapidly develop into tumours. *The same latency, followed by activity of growth, is seen* in those excesses of embryonic tissue which give rise to local or general hypertrophies or giant growths; the excess of the embryonic tissue is present at birth, though it may not take on activity until comparatively late in the life of the individual.

4. The causes which arouse a matrix into activity are numerous. For a matrix of embryonic cells to be transformed into a tumour it must be aroused into activity by some exciting agent. We must now inquire what these exciting agents are and in what relation the commonly ascribed causes of cancer stand to the "matrix" or "tumour germ" theory. The stimuli which arouse the cells of the dormant matrix to active proliferation are either general or local, congenital or acquired, and the chief amongst them are the alleged common causes of cancer. Let us consider four of them in some detail—namely, heredity, age, traumatism, and chronic irritation.

(*a*) *Heredity.*—A case like that of Friedreich, where a woman with carcinoma gave birth to a child affected with carcinoma, is altogether exceptional.

In a case in which I performed Cæsarean section on account of [illegible] uteri and the vagina, both [illegible] *apparently quite healthy.* [illegible] later, the child being still [illegible] lost sight of. There are possibly not a few of such cases and it would be well if in future the lives of these children could be followed.

Statistics hitherto have given insufficient and inaccurate information concerning *the frequency with which the off*spring of parents carcinomatous at the moment of conception or delivery have been affected with carcinoma. There is, however, no more reason to doubt that an aptitude is transmitted from parent to child for the development of carcinoma and sarcoma than for denying an hereditary disposition to various other diseases. This aptitude, or predisposition to malignant disease, has been appropriately described as "a diminution of the physiological resistance of the tissues" which permits of their being invaded and destroyed by the proliferating cells of the tumour matrix. In the great majority of cases (in Cohnheim's view in *all* cases) the matrix itself is of congenital origin, but though congenital, it may never be excited into activity. In others, the matrix is of post-natal origin, and if the necessary stimulus arises and the tissue resistance is weak cancer will occur, *even in persons* in whose family cancer had hitherto been absent.

In a sense, then, all tumours are congenital or hereditary, except such as are derived from a post-natal matrix, and even in these cases [illegible] iological resistance [illegible] at least of those [illegible] *enital or acquired.* [illegible] ed, not inherited.

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[8] A. Robinson: Morris's Anatomy, third edition.

[9] THE LANCET, June 21st, 1902, p. 1760.

[10] Johns Hopkins Bulletin, January, 1898

If it be granted that there is a family tendency to vestiges, rests, or matrices of embryonic cells it is at once intelligible how such an hereditariness may lead to mammary carcinoma in one member, uterine carcinoma in another, squamous-celled carcinoma in another, and sarcoma in a fourth member of the same family.

(*b*) *Age.*—Carcinoma is admittedly a disease of middle-aged and elderly persons and of senile tissues or organs like the uterus and breast after the child-bearing age. But on the "tumour germ" theory there is no difficulty in explaining the occasional occurrence of carcinoma in very early life or at any period of life if the physiological resistance is especially weak in the individual and the matrix irritant or exciting cause is very considerable. Sarcoma occurs in much younger life than carcinoma and is most frequent in children and young adults, but no age is exempt from it.

There may be in the same person several congenital matrices, one or more of which may be of the epithelial type, one or more of the connective-tissue kind. During childhood and young adult life the exciting cause, or matrix stimulus, will start into activity a connective-tissue "tumour germ," but during mature life and in advanced age the same stimulus will arouse by preference a matrix of embryonic epithelial cells because the epithelium is more active and vigorous than the connective tissue at the later periods of life.

Assuming the presence of a matrix of each kind in the same individual and that middle life has been reached without the occurrence of any matrix-arousing stimulus but that after this period some *general* exciting cause comes into existence, the matrix of epithelial cells will most likely be the one to respond and a carcinoma, not a sarcoma, will result; but there may be the simultaneous appearance of different kinds of tumours. Should the stimulus be a *local*, not a general one, the matrix upon which alone it acts will be aroused and a carcinoma or a sarcoma will be developed according to the type of cells forming the matrix which is stimulated.

With advancing age, or senility of tissue, come impaired vitality and lessened power to resist the effects of injury, hence the diminution of the physiological resistance of the tissues and the increased proneness to the formation of cancer. Little is known, it must be admitted, of what this "physiological resistance" really consists; what this power is which holds in check altogether, or for a long time, the proliferating tendency or force of a tumour matrix, as it does for years the growth and development of the mammary glands, the organs of generation, the larynx, the teeth, and the beard. The existence of such a force was, however, demonstrated by Cohnheim and Maas who introduced pieces of young periosteum into the jugular veins of animals. The periosteum produced bone which was always limited in size to the lumen of the vessel in which the periosteum embolus became impacted; the bone never extended beyond the vessel walls, a physiological resistance restricted it, no further growth ensued, and in time the ossified periosteal graft was absorbed. The same investigators showed that transplanted grafts of embryonal tissue succeed, whereas grafts of mature tissue are invariably removed by absorption in a short time. Embryonic tissue—fœtal cartilage, for example—taken from animals before they are born and engrafted into rabbits proliferated abundantly; grafts from benign tumours only grew to a very limited extent, if at all, and were then removed by absorption. Grafts of malignant tumours have almost, without exception, failed, though composed as they are of embryonic tissues. This seems to show that the physiological resistance to malignant cell proliferation is, happily, more effective than against fœtal embryonic tissues or against the embryonic tissue of benign tumours. The weakness or want of this physiological resistance, besides being sometimes inherited and often a consequence of age, can be acquired through injury, irritation, inflammation, and other pathological, general or local, causes.

(*c*) *Traumatism* is often said to cause malignant disease just as it used to be said to cause inflammation and suppuration. But just as no amount of injury will of itself excite suppuration without the presence of pathogenic and pyogenic organisms in the injured tissues, so no amount of injury will give rise to a tumour without the presence of a matrix of embryonic tissue of either congenital or post-natal origin. No so-called exciting cause will produce cancer or sarcoma in the absence of the "tumour germ" of epithelial cells or connective-tissue cells respectively. But given the presence of such a matrix then injury of any kind, irritation of any kind—mechanical, chemical, thermal, or microbic—may excite cancer formation both by arousing the matrix into activity and by diminishing the physiological resistance of the surrounding or adjacent tissues. Whether the cancer follows the injury quickly or tardily depends upon the intensity of its effects upon the matrix, or upon the degree to which the physiological resistance or, what is probably the same thing, the nutrition is affected, or upon both these conditions.

(*d*) *Prolonged irritation and inflammation* may (1) excite a matrix of congenital tissue to proliferate; (2) may diminish physiological resistance of the tissues around it; or (3) may provide a post-natal matrix of embryonic epithelial or connective-tissue cells and thus originate the essential factor of malignant disease as well as stimulate it into proliferative activity. Carcinoma of the breast following eczema of the nipple is an instance of malignant disease aroused by chronic irritation and inflammation. Epithelioma of the tongue following long standing ichthyosis of that organ is another. They are typical illustrations of agents which act in each of the three ways just mentioned. Yet that neither of these pathological irritants is of itself the true and essential cause of carcinoma is proved by cases in my own practice. In 1880 I published two of the earliest reported cases of chronic eczema of the nipple (Paget's disease). Out of 305 cases of mammary diseases which up to that time I had seen in my hospital cancer out-patient practice, eczema of the nipple was met with in eight cases, in six of which there was no cancer present in the mamma. In only two cases then out of eight did carcinoma of the breast follow the chronic eczema of the nipple and areola. It is certain, therefore, that something more than the long-standing irritation of chronic eczema is needful for the development of mammary cancer, and this something is a "tumour matrix" in the breast. If due to irritation alone, why did not carcinoma occur in all the eight cases equally?

If during a stage of cicatrisation of part of the eczematous area a local post-natal matrix had formed, the carcinoma, beginning as it might then have done in the skin, would have been a true squamous-celled epithelioma, not a glandular carcinoma. In one of these two cases there was a wart in close proximity to the eczematous areola, but though a wart is apt in certain circumstances to become an epithelioma, it was the breast, not the wart, we must assume, which contained the tumour matrix most readily provoked into riotous epithelial proliferation. It can hardly be maintained that the carcinoma was due to the prolonged irritation of the eczema upon a breast in which the senility of the organ had very specially diminished physiological resistance (or the "tissue tension") of the part, because one of the women referred to was hardly 30 years old and the other was only just 40 years of age.

Ichthyosis of the mucous membrane affords similar proof against the sufficiency of chronic irritation *per se* to excite carcinoma. In 1883 I published a paper on Ichthyosis and Epithelioma of the Tongue. In 13 out of 36 cases of epithelioma of the tongue ichthyosis of the tongue had been a precursor of the carcinoma. In 11 cases of ichthyosis of the tongue and three cases of ichthyosis of the buccal and labial mucous membrane (14 in all) carcinoma *did not* occur. The inference from these cases also is that in the 13 cases in which carcinoma supervened there was in the corium, or submucous structures, a matrix of embryonic epithelial cells which was stimulated into malignant growth by the long-standing ichthyosis. In the 14 cases in which carcinoma did not supervene the presumption is either that there was no matrix, or that the exciting cause was inadequate to arouse the matrix into activity, or that the physiological resistance of the surrounding tissue was sufficient to prevent its growth.

If it be granted that for cancer to form a matrix must exist and that without such [illegible] however prolonged, can cause the formation of a [illegible] ve can at once explain how it is that a carcino [illegible] mate near a lupoid or syphilitic sore not in it, near an ichthyotic patch not in it, near an ulcerated nipple and areola not in them. A tumour matrix within the limits of an inflammation receives an increased blood-supply and this of itself is an incitement to active cell pr[illegible] has shown by experiments that inflammation [illegible] so that persons born with, or acq[illegible] are more likely to become the s[illegible] adjacent structures become the seat of inflammation [illegible] the consequent loss whereas without [illegible] the tumour matrix of power of resist[illegible] undoubtedly attacks might remain lat[illegible] longed and repeated parts and organs [illegible] irritation.

It is unnecessary to dwell on the several other alleged causative factors of canc[illegible] mental worry, and so on can [illegible] more than secondary or s[illegible] timulating a pre-existing [illegible] sistance of the structures, [illegible] or of doing either we do not know and we must await the compilation of more accurate statistics than have hitherto been made.

5. The validity of the premisses of the "tumour germ" or "matrix" theory being assured, let us see whether the conclusion to which the theory leads can be established by actual facts. This conclusion is that cancerous as well as benign tumours spring from "inclusion masses"—some of which are "displaced" masses—of embryonic cells either of congenital or post-natal origin. A large variety of benign tumours which are well known to arise from congenital matrices might be quoted.

[illegible] supplied.

(a) We now know that accessory spleens, accessory ovaries, accessory thyroids, accessory suprarenals, accessory mammæ and outlying portions of the mammary gland, and remains of the Wolffian body are all responsible for tumour formations. All that is known of teratomata—endogenous and exogenous—lends support to the Cohnheim theory. All endogenous teratomata or teratoid tumours, including branchial cysts, and the simplest as well as the most complex forms of dermoids, undoubtedly arise from congenital embryonic matrices. Skin dermoids are the most frequent form of fœtal inclusions and consist of portions of embryonal skin isolated and buried in mesoblastic tissues; dermoids which contain mucous membrane are derived from a matrix of hypoblastic origin; whilst dermoids with complicated contents, such as bone, cartilage, and portions of organs, can originate only from a displaced matrix representing different tissues and organs. Or, conversely stated, [illegible] cysts are derived from the remnants of branchial clefts and these remnants, like the "inclusion" matrices of dermoids, may remain [illegible] growth [illegible] nces at [illegible] y some [illegible] s of the [illegible] certain [illegible] and also remains of the Wolffian body, are the source of origin of certain paranephric tumours. Grawitz traced tumours of the kidney to islets of separated and displaced renal tissue. Outlying portions of the mamm[illegible] occasi[illegible] gland[illegible] now a[illegible] is it [illegible] occur [illegible] they [illegible] present held that such sequestrated and encapsuled portions of the glands are the source of fibro adenomata, adenomata and small cystic tumours found in the liver, parotid, kidney, and other organs, as well as in the mammary glands.

By far the larger number of cartilaginous tumours appear near the epiphysial lines of the long bones where it is common for islands of embryonal cartilage to persist embedded in the bone tissue. Odontomes are believed to be due to misplaced and isolated buds or islands of embryonic tissue The vast majority of angeiomata and lymphangeiomata are now regarded as survivals of the embryonic vascular and lymphatic structures respectively and, as such, unquestionably [illegible]

[illegible] of the ovary, according to Waldeyer and [illegible] the majority of cases starts from an embryonic tubular matrix of Pflüger's [illegible]

[illegible] which are in reality adenomyomata—true tumours [illegible] partly of glandular but in greater part of muscular tissue—are [illegible]

(b) There is no lack of evidence, either, that tumours are formed from matrices of post-natal origin. We know that tumour germs arise as the outcome of surface epithelium, hair follicles, or portions of skin forced into the deeper tissues by punctured and other wounds. From such sequestrated fragments of tissue "implantation cysts" are formed—a group of small tumours allied in character to the sequestration dermoids derived from matrices of congenital origin. These "im- [illegible] material. Cysts of the iris following mechanical injury have been found to contain sebaceous matter and in one recorded case an eyelash. Cysts lined with layers of cells like those on the anterior surface of the conjunctiva have been known to form in the cornea after gunshot and other accidental wounds, as well as after operations for cataract, and are almost certainly derived from conjunctival epithelium forced into the deeper layers of the cornea.

[illegible] formed during the repair of wounds.

(c) It has been unquestionably proved that the "tumour germ" theory correctly accounts for the origin of many varieties of benign solid tumours and of dermoids and other cystic tumours, and we must now try to answer the question with which we are especially concerned: Does it not afford the true explanation of the etiology of malignant tumours also? In attempting to reply to this question it may first be pointed out that regions and organs in which embryonal inclusions are specially likely to occur are also common situations of primary malignant diseases. To realise the truth of this statement we have but to recall the frequency of sarcoma near the ends of long bones, the occurrence of myeloid and periosteal sarcoma and epithelioma in the mandible and upper jaw, of carcinoma of the uterus, œsophagus, stomach and rectum, and tongue and mouth. In the lip the commonest seat of origin of carcinoma is along the line of junction of the skin and mucous membrane. In the rectum the parts at or near the junction of the skin and mucous membrane, and those near the union of the proctodæum (cloaca) and the hind gut, are the *areas of the* greatest liability to carcinoma. In the stomach the pylorus and its immediate region are the chief seats of carcinoma, and it is here, as Cohnheim has pointed out, that the anatomical structure of the organ varies most; it is here also that there is the greatest liability to pathological changes and thus to the development of post-natal as well as of congenital matrices. Such anatomical areas as those just mentioned, like the cervix uteri, are zones of transitional epithelium and are provided with glands not always of normal functional perfection; in these so-called "cancer belts" we may expectantly look for "tumour germs" *in the form* of isolated congenital nests of embryonic cells.

In a thesis for the Doctorate of Toulouse in 1902 Guillaume Cargue has written on the occurrence of epithelioma in the old sites of osteomyelitis. Cargue quotes 44 *cases* collected from literature, together with five cases observed in the clinic of Professor Jeannel of Toulouse. In all these cases epithelioma of the bones was due to fragments of skin which became invaginated or to detached epidermis cells which became implanted in the bones. The carcinoma appeared either in a *diffuse form* or completely inclosed in the tissue of the bone. Cargue refers to other cases of primary epithelioma of bones after fractures and in connexion with necrosis. *He also quotes from* a communication on "Tumours of Bone" made to the Congress of Surgery in 1899 by Polosson and Bérard of Lyons to the effect that epithelioma *occurring* in the maxilla is always due to the proliferation of epithelial cells of the mucous membrane which have become included in the bones with the *dental* germs. *He refers* also to Nicoladoni's work on the formation of epitheliomata in sequestration wounds. Several observers are mentioned by Cargue as having contributed to medical literature cases of epithelioma which have developed in old scars, ulcers, *callosities*, fistulæ, and such like affections of the soft parts, and he concludes that the paucity of these and of similar recorded cases of primary epitheliomata in connexion with bones is due to surgeons not having recognised the real nature of the disease or of having failed to ascertain the actual seat of it.

Various *forms* of malignant tumours of the kidney are attributed to fœtal rests, such as adrenal inclusions and aberrant renal tubules, embedded in the capsule of the kidney and capable of being stimulated into epithelioma. Dr. Charles Creighton has described malignant tumours as arising in and near the mammæ, and in the axillæ from certain sweat glands situated under the skin, not usually in it, but between it and the axillary fascia. These sweat glands sometimes occur also along the lateral and anterior regions of the chest and as appendages of the milk sinuses scattered through the mammæ. They must be regarded as survivals or rudimentary organs, and as being subject to all the risks of such survivals or rudiments. Dr. Creighton also describes coiled tubular glands and a rudimentary mammary lobule consisting of a branched tube without real acini as being the starting points of carcinoma within the mammary gland, and he considers that the proper mammary structure takes really no part in the morbid growths of the organ. Volkmann described deep-seated primary carcinoma originating in the neck from the branchial clefts under the name of "carcinoma brancheogenes," and Guttmann refers to similar cases starting from accessory thyroids as "struma carcinomatosa accessoria." In the cases of multiple tumours in bones of the nature of thyroid tissue recorded by myself and others the conclusion was irresistible that the tumours were metastases from accessory thyroids or from matrices or "inclusions" within the substance of the thyroid gland itself. It is doubtless due to the fact that in these cases, as in some instances of carcinoma, the metastatic growths so far exceeded in size and conspicuousness the primary tumour that the nodule in the thyroid gland from which the tumour cells had migrated has been overlooked. I am indebted to Dr. E. F. Bashford for the details of a case recently published by von Oderfeld and Steinhaus which is a strong confirmation of this opinion. A nodule slightly differing from the normal thyroid tissue and surrounded by a connective-tissue capsule was found in the right lobe of the thyroid of a female, forming a primary tumour from which metastases in the cranial bones, the clavicle, and the sternum were derived. The pernicious growth of the chorion, known as deciduoma malignum, which occurs in the human uterus when the embryo is aborted or dies before the asexual generation has been suppressed, was pointed out by Marchand in 1895 to be of a carcinomatous character, and is quoted by Beard as affording "the key to the problem of the nature of cancer," and as making the cause of cancer "clear as the light of day."[11]

The remnant of ovarian tissue occasionally left behind after an ovariotomy may become pathologically active, serve as a post-natal matrix, and develop into malignant disease. Roger Williams[12] attributes the extraordinary frequency of malignant disease which follows the removal of one or both ovaries, and which in Spencer Wells's experience amounted to 36 per cent. of the known causes of death of those who had recovered from the operation, to the excessive formative activity aroused after the operation in the aberrant accessory ovarian structures which are so frequently present in the broad ligament and its vicinity.

Primary carcinoma originating in a situation where no epithelium normally exists sometimes springs from a previously undetected dermoid cyst or dermoid-cyst matrix. A displaced matrix of epithelial cells isolated from its own blastodermic tissue and buried in the mesoblast, if it becomes a tumour, will develop into one of an epithelial character. Tumour cells, like normal cells, always breed true. Connective-tissue cells cannot produce epithelial cells, and epithelial cells invariably produce their own kind and no other. Virchow when he met with a primary carcinoma in the tibia, not recognising this physiological law, believed the cells of the carcinoma were produced from the connective tissue at the spot where he found them and called them epithelioid. The knowledge of this law as applied to a carcinoma developed from a displaced or misplaced epiblastic matrix which has been roused into proliferative activity by some exciting agent corrects such a histological error and explains the occurrence of the heteroplastic tumour. It also explains how an "endothelioma," which resembles carcinoma in its characters, is developed as a primary new growth in serous membranes and lymphatic glands—structures which are of mesoblastic origin and in which, therefore, no epithelium normally exists; it likewise explains how a glioma, which in its anatomical and clinical characters is a sarcoma, can occur in the brain or retina which are derived from the epiblast.

6. We must next inquire whether the "tumour germ" theory can account for the transformation of a benign into a malignant new growth. We need not stop to inquire what evidence there is that this transformation ever takes place. The fact of its doing so is no longer, as formerly it was, disputed. Warts, moles, dermoids, fibromata of the skin, uterine myomata, and papillomata in various situations might be quoted in proof of benign tumours passing into malignant.

The change to malignancy may originate in a matrix of tissue derived from the organ or part affected and which has become sequestrated and inclosed within the structure of the benign tumour during the process of the growth of the tumour. Or in the process of its growth some of the daughter cells within the benign tumour itself may fail to attain the degree of differentiation of the parent cells and may subsequently develop on their own account into a malignant neoplasm. A woman under my care some years ago was the subject of an intramural uterine fibro-myoma which became the seat of colloid carcinoma. The case was published by Mr. W. Roger Williams[13] who mentions that a few cases of carcinoma originating in uterine fibroids had been recorded by Virchow and others. It is probable that in my case the carcinoma, which was clearly glandular, was developed from the deep extremity of one of the utricular glands sequestrated in the process of the growth of the fibro-myoma and which thus came to form an epithelial tumour germ—just as glandular elements have been observed in the analogous new growths of the prostate.

OTHER EVIDENCE IN FAVOUR OF THE "TUMOUR GERM" THEORY.

A. The matrix theory escapes equally the objections raised against the local and the constitutional theories of cancer.

We have only to suppose the presence in the same person of two or more matrices, or "tumour germs," of which there are many instances, and to bear in mind that these matrices are generally of congenital origin, and that other causes besides senility can both arouse into activity the cells of a matrix and weaken physiological resistance of the adjacent tissues, to dispose of the following chief objections to the local doctrine: (1) that malignant tumours occasionally occur simultaneously on the two sides of the body; (2) that malignant disease if it were really local ought to be completely cured by early and free excision; (3) that malignant disease frequently attacks several members of the same family; and (4) that carcinoma occurs in its most virulent forms in very early life before the tissues have become debilitat[illegible]

Again, [illegible] an exciting cause is necessary to arouse [illegible] to active cell proliferation, and that in th[illegible] stimulus the "tumour germ" will continue quiescent throughout life, the following objections against heredity are easily answered: (1) cancer, as a rule, shows no sign of development in the parent until after the birth of the offspring; (2) that it is not in accordance with the laws of heredity that a disease which, as a rule, does not show itself in the parent till long after the birth of the progeny should manifest itself in the progeny; and (3) that cancer is often seen in the offspring of parents who are still living and free from any cancerous disease.

Such objections as these to the constitutional theory are in reality rather quibbles than arguments. As to the third, I may here remark that I have known several instances of parents, themselves in good health at the time, losing a child from carcinoma, but subsequently one or other of them has likewise died from the disease. And as showing a ge[illegible] ritance of "tumour germs" we must all hav[illegible] lipoma, nævus, fibro-adenoma, dermoid, and [illegible] in the children of parents who have died from cancer or in parents who have lost a child or children from cancer.

B. The matrix theory enables us to understand the long intervals which occur after removal of cancer by operation before recurrence takes place, for just as the "tumour germ" of the primary growth remained for years unaroused, so a single cell or a few cells migrated to a lymph gland or duct or into the areolar tissue some distance away may continue quiescent owing to the efficiency of the physiological resistance of the surrounding tissue. The cell or cells are the "tumour germ" of the recurrent growth as the original matrix was of the primary, and are subject to the same kind of restraint and respond to the same kind of stimuli.

C. The "tumour germ" theory also explains the so-called recurrences, after either short or very long intervals, in parts or organs away from the original site and out of the line of direct lymphatic infection. It explains, too, the development in the same person of two malignant tumours of different blastodermic sources and of their existing simultaneously, or of one occurring after the other has been excised.

I will quote two instances in which the very early removal of a primary growth and the wide extent of its removal and the many years of freedom from any fresh outbreak of disease seem to make the idea of ordinary recurrence more than improbable. Two ladies of about

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[11] THE LANCET, June 21st, 1902, p. 1759.

[12] THE LANCET, Nov. 14th (p. 1393), and 28th (p. 1530), 1903.

[13] Transactions of the Pathological Society, 1886, vol. xxxvii., p. 354.

a widow and the mother
r left breasts removed for
w the operation was per-
month or five weeks after
perfectly well for over 11
they both returned to me

middle of the sternum and a year or more after the cutaneous carcinomatous nodule years from the date
of the primary ice began to increase
rapidly; in the in the upper cervical
vertebræ became ed quite suddenly (as
her friends and she might do) when

not obtain-
e reason for
case and the
currences in
the ordinary sense of the word; (2) that they originated from distinct congenital matrices which remained unaroused to tumour formation for many years after the mammary matrix had developed into carcinoma; and (3 that they were in all probability not of the same nature as the primary disease.

D. Lastly, the "tumour germ" theory affords a better explanation of the local extension of carcinoma than any other which has been put forward. It ascribes it to cell *proliferation of the margins of the matrix; the growth of* the tumour to the multiplication of the matrix cells, not to the "reversion" or conversion of the pre-existing mature epithelium into tumour tissue.

These cells penetrate *deeply beyond the basement membrane into*
opening them out by the
i then removing them by
We can thus understand
membrane besides spread
eneath and destroys the epithe-
extending *from epithelial cell to*
the surface like a cutaneous
erysipelas.

The foregoing are some of the reasons for regarding the "tumour germ" theory as the most, indeed in my opinion as the only, probably correct theory of cancer origin which has ever been put forward—as the only hypothesis which is consistent with all the known facts of cancer. Hitherto, what would seem to be the strongest evidence against the "*tumour germ*" theory is that which seems the strongest evidence in favour of the microbic theory—namely, the successful serial experiments upon mice with cancer tumour tissue which were carried out by Moran in 1893 and have been recently repeated by Jensen and Borrel But Borrel admits that his successful series was only obtained by treating at each "*passage*" a number of mice, varying from 12 to 15 This is of much importance, because many mice were found to be unaffected. The proportion of successes to the total number of animals experimented upon at each "*passage*" in the series ought to be given by each experimenter. The tendency to the development of cancer in mice would seem to be strong, judging from what is stated in Borrel's paper as to the frequency of cancer in certain caged mice not operated upon.

Up to the present time the microbic theory has not advanced our knowledge of the cause of cancer one iota in spite of all the talent and skill which have been employed upon it, whereas every year facts in support of the "tumour germ theory" are discovered almost without being sought for. Excepting for these aforesaid recently discovered facts our knowledge of the causation and nature of cancer would be no greater now than it was 30 years ago; indeed, the very facts about cancer which were recognised and established a generation ago are to day the strongest *a priori* arguments against the microbic origin of cancerous diseases. The truth is that for the last 10 or 15 years cancer research has been too exclusively directed to microbes and too little to cancer. The attention given to cancer research by many able workers has been too restricted to the search for the problematical "cancer organism" to allow of much thought being directed to the other factors in cancer. The "high power" lens and the fine adjustment—so to speak—have put into the background for the time being the binocular field-glass with its adaptability for focussing the various features of an extensive perspective It is, however, well that all these bacteriological observations and experiments have been made; indeed, others are still necessary if only to clear up certain difficulties respecting the nature of the so called "cancer bodies" and how they come to be present in the cancer cells. But what is wanted, also, is that some equally skilled research work should be directed to other questions—embryological, morphological, chemical, and functional—to such subjects, for example, as those to which Marshall drew attention *in his suggestive Morton* lecture, namely, the chemistry of cancer tissue, the structure and changes in the stroma, the minute anatomical relation of nerves to the cancer cells, and of the effect of the loss of control of the nerves over them. We want more information respecting the state of the arteries in cancerous new growths.

Thiersch called attention to degenerative changes in the arteries in cancer and Senn states that proliferative endarteritis was found as a rather *frequent accompaniment of carcinoma* where there was no indication of the coexistence of the same condition of the arteries in any other part of the body.

The arterial changes in cancer tumours have not so far been sufficiently studied. They may, however, prove to be of importance in connexion with treatment, with the clinical effects and histological results of the x rays upon cancer, and also in relation to the rate of growth and to the tendency to metastasis, to the various degenerations, and to ulceration and sloughing of cancerous tumours.

All questions of this kind possibly might be worked out in private or hospital laboratories, but there are numerous other important questions to be answered, *e.g.*, as to the agencies which excite into action the invariable and unconditional cause of cancer. These never yet have been properly investigated and they can only be so by some organised scheme such as that which has recently been undertaken by the two Royal Colleges. Questions as to the geographical and racial distribution of cancer, of climate, soil, articles of diet, occupations, cancer houses, and many others, can only be settled after statistical and other investigations have been made *and checked and cross checked, controlled* and *re-controlled* by each other. Such investigations are beyond the means and powers of individual science workers or of medical institutions; they need to be undertaken by an organised body with relays of workers and sufficient funds at its command to provide for the uninterrupted pursuit of the inquiries

Katz of Hamburg, whom I have previously quoted, remarked "it is to be deplored that Cohnheim's *doctrine has so long found an extended acceptance, for the further* development of cancer research would have, *through it, no* value A standstill would result from the fatalism which underlies this theory. The *same may be said with regard to* Ribbert's theory, which, though of far later date than Cohnheim's, is in pursuit *and continuation of it.*" But a theory if it has the evidence of truth must be minutely and impartially examined, even though it seems to lead to a conclusion which we might wish to escape. There is, however, no occasion for so pessimistic a view as that of Katz. The "tumour germ" theory, at least does this; it convinces us of the local origin of cancer and of the positive curability of it if removed quite early and completely. Of course, it does not guarantee one against the *formation* of another malignant new growth any more than the repair of a broken bone guarantees one against the occurrence of another *fracture.* It should also encourage the early and more frequent removal even of benign growths Future researches may *reveal a method whereby a special inhibitory* influence *may* be brought to bear upon the cells of the "tumour matrix" on the lines tried by Foulerton, or a restraining, *even a strangulating,* effect upon the tumour cells by the tumour matrix may be produced, as suggested by *Marshall. But in any* case we can reasonably hope and expect that the organised researches now commenced by the Royal Colleges will in time yield much information as to how to prevent cancer by teaching us what are the real agencies *which stimulate it into existence.*

In bringing these remarks to a conclusion I will borrow the *description recently* given by Mrs. Crawford of the mind *of the late* M Thiers and apply it to the theory founded by Durante and Cohnheim. "It has searchlight luminosity. Like *radium,* it keeps burning brightly without consuming itself." And I would add, it will not only remain active and *brilliant to the end* but it will, I believe, shed more and more light on the etiology of cancer with every fresh addition *made to the science of* embryology and to our tumours.

ANTITUBERCULOUS SERUM AND "VACCINE."[1]

By Dr. ALEXANDER MARMOREK.

As soon as tuberculin began to be practically known by its effects a question forcibly presented itself—namely, What is the rôle played by this toxic substance as regards the essence of the disease? Is it the real toxin, is it the poison particular to each microbe the action of which is the exclusive, or at least the principal, cause of the pathological lesions? In searching for an answer to these problems we were, above all things, struck by the singular inequalities which a similar dose of tuberculin produced when injected into different subjects—to wit, those who were healthy, those who were affected with tuberculosis in a moderate degree, and those who were practically being poisoned by the bacillus of Koch. In a case of tuberculosis of a mean intensity the explanation commonly given suffices eventually—that is to say, the animal becomes increasingly sensitive to the action of a toxin which it has been itself for some time previous producing in the lesions in its own body. But all the same this explanation leaves untouched the reason for the lighting up of the bacillary foci, which symptom constitutes the local reaction. But, further, it is almost impossible to apply this explanation to cases in which the typical symptoms are very feeble or even absent, as, for instance, after an injection of tuberculin in a cow which is simply stuffed with tubercles. In place of the reaction which the above-mentioned explanation would lead us to expect we see marked insensibility. We therefore have a right to ask why this sensibility (*sensibilisation*) disappears just at the moment when it should be most accentuated. The obscurity of the problem increases when we consider the very marked disproportion which exists between the violence of the reaction and the small dose of tuberculin on the one hand, and on the other hand the very slight degree of lesion existing in individuals so little affected by their chronic intoxication that they can hardly be considered to be ill. It is difficult to suppose that these few bacilli, finding themselves in a focus where the fires of infection are slumbering and almost imperceptible, can be sufficient to transform the indifference of a healthy organism to tuberculin into an almost excessive sensibility. But it is still less easy to understand how an organism which is thoroughly tuberculous, with its innumerable bacilli, all in full working order and of great activity, does not respond with greater energy to the stimulus of tuberculin than is seen, for instance, in the case of a bovine animal that has passed through all the stages of the formation and evolution of its infective centres, one in which everything testifies to a chronic intoxication and which is not sensible (*sensibilisé*) to the action of tuberculin. And yet, according to the above-mentioned theory, a poison should in such an animal have been in process of formation for a long time and the animal should therefore be markedly sensible to the injection.

Contradictions such as these forced us to conclude that the explanation given above must be erroneous or defective. There remained only to find a new explanation which should be more in accordance with observed facts and which would lead us to a new method of research. To attain this end let us consider the situation of the bacillus of Koch in its usual habitat. Surrounded by leucocytes or in the giant cells it apparently secretes so little toxin that the addition of an infinitesimal number of microbes brings about an appreciable change in the affected organism. All of a sudden we stimulate the bacilli by a minimal dose of injected tuberculin which disseminates itself through all the foci of infection. The tuberculous organism, which it is asserted is sensible to the effects of tuberculin, allows many hours to pass before exhibiting any new symptom. It is only after the lapse of a fairly long period of time that the foci of infection inflame and that the whole body resents the effects of the poisoning. Moreover, a tuberculous man after a time ceases to give the typical reaction and if the injections of tuberculin be continued the sensibility diminishes instead of increasing, as it should do were the above-mentioned theory correct. We refuse in face of such contradictions to admit that tuberculin can be the direct cause of the reaction brought about by its injection, that it is a substance identical with that which the bacilli principally form in the sick organism, or that in consequence it is the final chemical reason for the wasting and for the destructive march of the bacilli. But all these difficulties disappear if we replace the current theory by an hypothesis—viz., tuberculin would seem to be in truth a preparatory substance, a reagent which acting on the bacilli stimulates them and induces them to secrete in great abundance a toxin altogether different.

Let us now consider the facts in the light of this hypothesis. Reaction does not commence until a sufficient quantity of time has elapsed to allow a sufficient quantity of toxin to accumulate in a focus of infection. We are present (*assistons*), in fact, at the hatching of the local reaction. When at the end of some hours the toxin secreted by the bacilli begins to be reabsorbed into the circulation the intoxicated organism responds by exhibiting fever. We can formulate our idea as follows. The "tuberculin reaction" is due to the formation of a toxin which the bacillus secretes by reason of, and subsequently to, its stimulation by the tuberculin. It is easy to understand that by this specific effect of the tuberculin on the bacillus (it may almost be compared to a key opening its lock) the most deeply seated collections of tuberculous matter are transformed into a regular furnace for the production of toxin which can be made known by investigation. We can equally understand how it is that every little tubercle containing a few scattered bacillary units will react promptly to a dose of tuberculin which represents a thousandth part of the quantity which is without effect in a healthy individual or even less. We can also understand the almost mathematical accuracy of the axiom "tuberculin reaction means tuberculous focus" Moreover, all the other phenomena which the old theory left uncertain or doubtful to our understanding become perfectly clear.

This explanation of the part played by tuberculin is particularly useful when we consider the two extreme cases of perfectly healthy individuals and of individuals who are highly tuberculous. In the first case, the tolerance exhibited even to a very large dose of tuberculin is due to the absence of the bacilli which are the sole producers of the true toxin so that the presence of bacilli is indispensable to intoxication and from their absence arises the impossibility of the tuberculin being able to produce an effect. In the second case, take, for instance, a cow which is very deeply affected with tuberculosis. The whole sum of the toxins newly produced by the injection of Koch's reagent is quite a negligible quantity compared with the amount of the real toxin which has already accumulated in the many foci of infection and throughout the entire economy of the animal. The bacilli are already at work with extreme activity (do not let us forget that we are speaking of the case of tuberculosis which is very advanced) and are already practically soaked in the toxin. We may well ask ourselves if tuberculin is sometimes able to stimulate the work of the bacilli and to augment it, but in any case the increase of toxin, if indeed there is an increase produced by the tuberculin, is infinitesimal compared with that which has already been secreted owing to the natural evolution of the disease and it is by no means sufficient to cause a new intoxication which will betray itself by reaction. The result, therefore, is identical with the case of a healthy person. In neither case is there any reaction, but the reasons are diametrically opposed to one another.

Other facts which have been ascertained in the study of tuberculin reaction fall in well with our hypothetical explanation. For example, it is quite easy to understand that substances having a similar composition to tuberculin will equally stimulate the bacillus to its secretion. We know well the feeble reactions produced by an injection of extract of lymphatic glands and, on the other hand, it is easy to understand that an organism invaded by the bacillus of lepra, which is so similar to the bacillus of Koch, will give the reaction after injection of tuberculin and, finally, the treatment with tuberculin which was given to the world by the illustrious Koch finds its explanation so far as regards both the undoubted cures produced, and also the checks and the dangers of this method, in the true rôle of tuberculin—viz., the successive production of the true toxin which is poured *out from the bacillary foci into the general circulation.* By tacking carefully between the shoals of this general poisoning and the maintenance of the necessary intervals of time for the formation of an antitoxin which is destined to counterbalance the *intoxication we may sometimes* be able to modify favourably the morbid process, but we can easily see how risky and how prone to dangers is such a proceeding.

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[1] A paper read before the Paris Academy of Medicine on Nov. 17th, 1903.

Serums have been prepared by the aid of tuberculin and are still being so prepared. As, however, these *serums* attack a substance which only plays a fortuitous rôle, if not, indeed, one which has absolutely no effect in the pathology of tuberculosis, we must not be surprised if these serums, which are wrongly called antituberculous although they are simply antituberculinous, should have no influence upon either the lesions or the progress of the disease.

If our hypothesis is correct—and everything which has been previously said supports the idea that it is so—the principal part in tuberculosis belongs to the hypothetical toxin. Experiment, therefore, should furnish a positive proof both of its existence and of its action. It appeared to us that if the bacillus hitherto has not produced this toxin outside the organism when grown in vitro, it was because it was not grown under conditions which faithfully reproduced those which exist in its habitual environment in the body. We therefore arranged some experiments to reproduce these conditions as far as possible and we proceeded as follows.

In a small communication which I read before the [illegible] Medicine held at Paris in 1900, I [illegible] different phases of the life-history [illegible] bacillus. The young microbes which we designated under the name of "*primitifs*" having different colour reactions should also exhibit different biological *qualities. We then, however, lifted only a corner* of the veil which hid the matter. There appeared to us every indication to employ these young microbes, which are covered with a very delicate shell of a waxy or fatty substance, in the delicate work of producing a toxin, and another reason was that in liquid medium they produce only a very small quantity of tuberculin and that very slowly, for the presence of tuberculin could not be otherwise than disturbing in the research for another toxic matter. We soon saw that these *primitifs*, which within ten or 12 days almost completely covered the surface of the liquid medium in which they were sown, secrete no toxin in their ordinary culture mediums. It remained, therefore, to reproduce more natural conditions. As the bacilli undoubtedly form the substance for which we were searching in the organism—that is to say, within the interior of the leucocytes or after having come out from them—the idea struck us to put them in contact with freshly extracted white blood corpuscles. The experiments made in this direction were long and laborious but with no appreciable result. Convinced, *however, of the accuracy of our hypothesis we were slowly brought to find a proof of it by another* road. We thought, can it be possible that within the bacillary foci the leucocytes do their work not so much by being biological entities as by some substance which is derived from them? We therefore replaced the leucocytes in our experiments by a leucocytic serum obtained in the following manner. We injected into calves, whose receptivity of tuberculosis is well known, the leucocytes of a guinea-pig which is also an animal extremely sensitive to the action of the bacillus of Koch. To obtain these leucocytes was a very simple proceeding. From 10 to 15 cubic centimetres of peptonised bouillon were injected into the peritoneal cavity of a guinea-pig and 48 hours afterwards this was washed out with 20 cubic centimetres of normal salt solution (*eau physiologique*) which came out with a milky appearance, being full of leucocytes. This was injected as soon as possible into a calf. At least 30 injections have to be made, each containing the *leucocytes de* [illegible] *to bring* about the production o[illegible]ucotoxic properties. The primiti[illegible] medium with great difficulty, but [illegible] a process of patient selection and [illegible] quantity of glycerinated bouillon. The great object is to avoid for as long a time as possible the loss of the primitive character of the bacilli, for our observations have taught us that the secretion of tuberculin marches step by step with this transformation of the primitive bacillus which can be recognised by a change in the aspect of the waxy and transparent enveloping membrane, which becomes warty and opaque, and also by the appearance of a specific odour.

The filtrate made from cultures of bacilli grown in this leucotoxic serum medium does not contain tuberculin for a long time, but another toxic substance is discoverable in it. Contrary to what is found in the case of tuberculin, tuberculous animals were no more sensitive to this substance than were healthy ones. When this feebly toxic substance was injected into horses it produced general œdematous patches which in some cases were of considerable size. To increase *the toxic power of this* substance we tried all the culture mediums known and we have also experimented with some new substances, always mixing them with the serum, but without getting any result to satisfy us. One important point, however, was decided. The bacillus *can* be rendered more toxigenous and a more *active producer of true* toxin. Our task was therefore to keep the bacillus in its primitive stage as long as possible in order to permit it to secrete abundantly.

In the course of our researches one fact attracted our attention more and more strongly—viz., a certain degree of immunity which the liver possesses with regard to the invasion of the bacillus. We constantly observed that the animals in the laboratory which were attacked by general tuberculosis showed extreme slowness as regards the infection of the liver, and that very often the liver remained perfectly free from tubercles although all the other organs were stuffed with them. To explain this condition of resistance the anatomical conditions are certainly insufficient and we must, therefore, seek for causes of some chemical nature which are capable of arresting for a certain time the development of the bacillus. If then, we argued, we could force the bacilli to live and to grow in a culture medium containing liver substances it might be possible to obtain a strain of bacilli particularly fit to fight against these hinder*ing (empêchantes) substances. The struggle for life which* would be forced upon the bacillus would augment all its vital qualities and by so much the more would its toxigenous power be increased.

As might have been expected difficulties were at first experienced in accustoming the bacillus to an environment apparently unfavourable to its successful culture. But once we had succeeded we found that the bacillus grew more quickly and with greater freedom than in the control cultures and it remained "primitive" for a longer period. It also became markedly more virulent and when injected into animals rapidly brought about a generalised tuberculosis. Moreover, after passing the bacillus a certain number of times through this new culture medium we were struck by the absence of tuberculin, but we recognised the presence of another toxic substance *wanting the characters of the* Koch reagent. It would almost seem that these two substances *exclude each other from* the *same medium* and that the bacilli are incapable of producing one of them simultaneously with the other. It is possible that in this fact lies the *explanation* of the feeble and tardy appearance of tuberculin in those infected with bacilli (*bacillaires*). The toxin which is formed in the liver bouillon passes easily through a filter. *If a fairly* large dose, say from 12 to 14 cubic centimetres, be given it kills small animals, but this effect is not constant.

Each of the two new culture media which we have described favours the formation of toxin in small quantities. By mixing the leucotoxic serum with the glycerinated liver bouillon a great improvement is obtained. The toxin forms *more quickly and is much more virulent.* The smallest fatal dose for a guinea-pig weighing from 300 to 400 grammes was five cubic centimetres of the filtrate, but in general we prepare a toxin which will kill a rabbit or guinea-pig *of* mean size in eight days' time by a dose of from eight to ten cubic centimetres injected subcutaneously. Tuberculous animals injected with the same dose do not die so quickly and have a more defined power of resistance. This degree of toxic power does not resemble that of other known toxins. We do not disguise that the strength of ours is far from being satisfactory and all our efforts are towards bringing to perfection its preparation which we do not consider yet as definitely settled.

Two experimental courses are now open to us whereby we can prove that this substance is in truth the toxin so long sought. The first is that of immunising animals by means of this toxin against an ulterior bacillary infection. We have done this. From 25 to 30 cubic centimetres of actual toxin are required, given in several injections of from four to five cubic centimetres at proper intervals, to render guinea-pigs resistant to the subcutaneous injection of from one to two drops of a feebly opalescent emulsion of bacilli. This result is the most exact confirmation of the identity of our toxin with that which the bacillus secretes in a tubercle. But there is yet the other course which supplements this proceeding. By immunising animals with filtered cultures we obtain an antitoxic serum. We have experimented with horses in this direction. They reacted very strongly to the increasing injections of toxin. Large swellings were formed; the temperature mounted to 40° C. and more; the animals were very highly tested and the absorption of the swelling was slow. It is not easy to obtain tolerance of the toxin in horses. Every new injection is followed by the same symptoms though manifested with declining virulence and we must therefore allow at least seven or eight months for the preparation of an efficacious serum. It is with the serum of an immunised horse that we have attempted by neutralising the effects of the tuberculous toxin to treat at first with a view to prophylaxis laboratory animals, guinea-pigs, and rabbits. Such a serum prepared without any injection of bacillary bodies, but only by means of injections of the filtrate of the culture, is a new proof of the existence of the action of the tuberculous toxin.

Before giving the result of our experiments with this serum upon the laboratory animals and upon the tuberculous human subject we will return to the consideration of the bacillus rendered assimilable after having been subjected to the influence of leucotoxic serum. Hitherto we have not been able to inject an animal with the bacillus of Koch without causing an abscess. Even when exposed to high temperatures or destroyed by powerful antiseptics the bacilli were never digested by the leucocytes, although these would absorb (*englobent*) them at once. The result is quite different when bacilli are used which have been a long time in contact with the leucotoxic serum. The following is the process. The bacilli are submerged for from ten to 15 days in the leucotoxic serum, which is then replaced with normal salt solution (*eau physiologique*) and brought to a temperature of 100° C. The bacilli thus prepared were transferred to leucocytic serum first, some days later being placed in antituberculous serum. It is then seen that these bacilli injected in weak doses into animals disappear quickly without leaving any trace. Rarely a little infiltration remains but in no case does the inoculation cause any general infection.

As soon as we were able to prove the digestion of the tubercle bacilli the idea came into our minds that the bacillus truly assimilated would be able perhaps to confer a certain immunity on an animal. It is quite possible, in fact, that the absence of a stage of resistance in men or animals proceeds from the absence of digestion of the bacilli. Finally, when we were able to see guinea-pigs and rabbits tolerate without the formation of abscesses repeated injections of strong doses of bacilli thus prepared we inoculated them with living bacilli; and we have been able to prove that even some particularly dangerous inoculations, as, for example, abdominal injections in the guinea-pig and intravenous injections in the rabbit, had no effect, while grave lesions took place in the control animals. The
"vaccine" requires from forced seven days to that the
xplanation given above must be erroneous or defective.
'here remained only to find a new explanation which should
e more in accordance with observed facts and which would
ead us to a new method of research. To attain this end let
s consider the situation of the *bacillus of Koch* in its usual
abitat. Surrounded by leucocytes or in the giant cells it
pparently secretes so little toxin that the addition of an in-
nitesimal number of microbes brings about an appreciable
hange in the affected organism. All of a sudden we
timulate the bacilli by a minimal dose of injected tuber-
ulin which disseminates itself through all the foci of infec-
on. The tuberculous organism, which it is asserted is
ensible to the effects of tuberculin, allows many hours to
ass before exhibiting any new symptom. It is only after
e lapse of a fairly long period of time that the foci of
fection inflame and that the whole body resents the effects
f the poisoning. Moreover, a tuberculous man after a time

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[1] A paper read before the Paris Academy of Medicine on Nov. 17th,
03.

later because the immunisation of the horses was not pushed sufficiently far. For these reasons the earlier results are not comparable with those of to-day. The serum, moreover, is capable of improvement and in the future will be made more efficacious.

What can we learn from experiments upon the lower animals? At first we confined our attentions exclusively to guinea-pigs. These animals are extremely sensitive to Koch's bacillus and are difficult to immunise. Strong doses of serum are required to protect them against weak bacillary injections. And how are we to arrive at the measure of efficacity of the serum, allowing that its efficacity is not yet absolute? The test employed in acute diseases—the survival of the animal treated and the death of the control animal—is of no value here. The guinea-pigs display too great differences of individual sensitiveness: the cachexia and the duration of life vary so often in two animals which have been injected under identical conditions. The invariable factor is the regular sequence of anatomical lesions. These were our sole guide in proving the influence, even when slight, of the serum. For these reasons we prefer the rabbit for experiments. Certainly it is less sensitive but effects of injection are more constant. With the rabbit the serum acts in a definite manner upon the artificially produced condition, even at a moment, when its curative influence upon the guinea-pig is only slight. We always produced in the rabbit the severest form of infection by intravenous inoculation. The serum has both a preventive and a curative "action." From 15 to 20 cubic centimetres of serum injected three days before the infection definitely protect the rabbit.

The following oft-repeated experiment is still more interesting. Rabbits of a medium size receive from one to two drops of an emulsion, feebly opalescent, of virulent bacilli in the marginal vein of the ear. Some hours after the infection a group are injected with 20 cubic centimetres of our serum subcutaneously; the next day a second group similarly receive 25 cubic centimetres, and two days afterwards a third group are injected with the same dose. The last groups we inject once again with 20 cubic centimetres. We keep a fourth group for control. 20 days after the infection the control animals exhibit in the lungs countless tubercles as large as a pin's head. At the death of each control animal we kill an animal out of each group They are all found free from tubercle. Those that we do not kill survive in perfect health. For the preventive immunisation of guinea-pigs and rabbits we have proved it very useful to give many small doses, while for treatment we can content ourselves with one large dose. The doses for the two animals are always practically the same, the large size of the rabbit in comparison with the guinea-pig being compensated in the latter by its greater sensitiveness to the bacillus of Koch. A serum not sufficiently active to cure a guinea-pig, although arresting in it the progress of infection, can be efficacious for the rabbit, so it is with the rabbit that the use of the serum should be begun At present we have only the empirical method for testing the serum It is considered sufficiently active if it can prevent the tuberculous process of the lung in a rabbit infected by intravenous injection.

It thus experimentally proved to-day that the serum
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Other facts which have experiments repeated over and over
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a powerful toxic influence; among these are included patients having extensive pulmonary lesions (with cavity and persistent fever) and sufferers from meningitis. The second group comprise those affected with severe local tuberculosis which, however, did not seriously interfere with their general health. The order of this grouping corresponds also with the succession in relation to time of the cases treated.

We first treated a comatose child suffering from meningitis and administered small doses (two cubic centimetres) of serum. Even in the cases of meningitis which since that time we have treated with more appropriate doses of serum (40 cubic centimetres per day) the results were equally negative. Sometimes there was hope that the little patient might be saved. Some symptoms, as the increased pulse and respiration, improved distinctly, the paralysis seemed to diminish, the coma disappeared, the meningitis [illegible] this [illegible], was [illegible] veral [illegible] uberculous toxin, in like manner with that of tetanus, for example, is firmly established in the cerebral cells at the time of the manifestation of the definite symptoms, i[illegible] impossible to dislodge the toxin [illegible] act on the meningitis even with a [illegible]e which is now at our disposal. On the other hand, it must not be forgotten that we always appeared on the scene too late, for we were never asked to give injections of serum before the seventh or eighth day, even on the tenth and twelfth day, after the beginning of the illness when all the symptoms of meningitis were fully displayed. There is reason to suppose that treatment commenced much sooner, during the long period of incubation or at the very beginning of the attack, might in some cases have succeeded in averting the fatal result.

We continued our endeavours with very advanced forms of pulmonary tuberculosis presenting large cavities, hectic fever, very extensive infiltration, and histories of many years' duration. In this way proceeding from the most severe cases associated with secondary infections and going on to those which were less advanced, less complicated, and not as yet in the stage of irreparable destruction of tissue, we have passed in review all the forms of tuberculous infection. We soon formed the opinion that the duration of the malady was a feature of the greatest importance. The courtesy of the physicians and surgeons of the Paris hospitals provided us with patients—a favour for which we are deeply indebted to them—and in the course of treating these patients our observations on the influence of the serum led us to the conclusion that the area of the lesion is much less important than its duration. Other things being equal, a lesion which although extensive is recent may be recovered from more quickly and easily than one which is much smaller but of long standing. Almost all the cases of pulmonary tuberculosis which we had to treat were in an advanced stage, with profuse expectoration, with numerous bacilli, very often with feverishness and general ill-health, and sometimes even with cavities.

The forms of tuberculosis which appear to us to be the most appropriate for these trials of a new method of treatment are the forms with which the surgeons have to deal. Being at the outset almost free from troublesome mixed infections the combination of obvious symptoms which they present is such that the results are hardly controvertible. Moreover, these forms are exceptionally favourable for the continuous observation of the effects of the serum treatment, for although we have not had the opportunity of treating many cases in the first stage we consider that as regards the importance of the lesions relatively to the whole organism very advanced cases of surgical tuberculosis correspond fairly well to the initial manifestations of pulmonary and laryngeal tuberculosis. It is for this reason that we attach some value to the results obtained in tuberculosis of the bones, the joints, the glands, and the bladder. With few exceptions all the cases treated by us were of long standing and had for the most part been subjected to a variety of remedial measures. The recovery of such cases after the administration of injections of serum apart from any other form of treatment almost gives to each case the force of a scientific demonstration and an experimentally verified fact.

In several cases of advanced pulmonary tuberculosis which we have had under our care there occurred a manifest and favourable influence not only on the patient's general condition, which improved greatly under the new treatment, but also on the lesions themselves. The amount of the expectoration and the number of the bacilli decreased progressively, the dyspnœa disappeared, and auscultation and percussion revealed a diminution of the areas of infiltration and softening. These cases justified us in predicting that patients in a less advanced stage of pulmonary tuberculosis and treated more perseveringly than the time at our disposal permitted would benefit still more by the serum treatment. Some recoveries which have occurred since that time have proved that this is so. We shall not at present do more than merely mention the important subject of mixed infection in which the streptococcus plays a leading part and in which the prognosis is evidently much less favourable. We are now engaged in endeavouring to elucidate this question.

Pleuritic effusion is a form of bacterial infection which may be considered as intermediate between pulmonary tuberculosis and so-called surgical tuberculosis. This acute disease shows by unmistakable signs the influence of the treatment. In seven cases of this kind (two of which occurred in little children) we found in six cases a rapid diminution of the effused fluid accompanied by very marked diuresis. We think it may be said that in these patients the serum produced a rapid and obvious improvement.

It remains for us to give a concise summary of the permanent recoveries which we have obtained in surgical tuberculosis. We have succeeded in effecting a complete cure of several cases of Pott's disease complicated either with fistula, with abscess, with intestinal perforation, or with palsy of the lower limbs. We have been able to bring about progressive diminution of glandular masses in the neck, the groin, and the true pelvis, as well as to procure the closing of fistulæ which had been open for a long time. In several cases we have observed that the pus at the seat of caseation was re absorbed without any surgical treatment. Multiple granulomata (*gommes*) of the skin, refractory for years to every remedial measure, rapidly dried up and closed. Several times on the obstinate refusal of fistulæ to close we were able to diagnose the presence of a sequestrum as the only cause of the persistence of the suppuration after the cure of the tuberculous process. This diagnosis, based on circumstantial inferences, was always confirmed by the results of operation.

One word on the practical application of the new treatment. It must not be forgotten that this is the first time that a serum has been employed as a remedy for a chronic disease. The serum must be injected in a sufficient quantity divided into several doses. The highest number of injections administered was 52; the lowest was seven in a case of tuberculous glands in the neck and six in a case of sternal fistula. With respect to the occasional inconveniences incidental to serum treatment those due to our serum are the same as, and not more frequent than, those produced by any serum of whatever kind. In about 2000 injections we have only observed a local abscess three times. The serum does not ordinarily give rise to either pyrexia or any disturbance, local or general. On the contrary, the hectic fever, especially that form which is due principally to absorption of tuberculous toxin and in a less degree to mixed infection, declines after several injections of serum. Pyrexia is in no instance a contra-indication for its use. We have even sought out such cases for the purpose of demonstrating on them the antipyrexial action of the serum. As for technical details we propose to give a full account of them on a future occasion.

Such are in brief the results of our work. And here I ask the Academy to allow me to refer to a personal matter. Attached to the Pasteur Institute for many years I find myself in a scientific sense out of harmony with the official heads of the institute in respect of several points in these researches. In order, therefore, to relieve the Pasteur Institute I have felt it to be my duty to resign my position as *chef de laboratoire* so that I may be alone responsible, morally and scientifically, for my work. We are quite aware that for the giving of a definite opinion on the value of our serum experimental evidence on a far larger scale than ours will be required. Investigations in this direction are being carried on in many places, even in foreign countries, under the control of competent clinical observers and some very encouraging results will be published immediately. Taken together with those obtained by us in the laboratory and those observed in many of our patients during more than a year they may justify the presentation of this memoir.

Paris.

injections of from four to five cubic centimetres at proper intervals, *to render guinea-pigs resistant to the subcutaneous injection of from one to two drops of a feebly opalescent emulsion of bacilli.* This result is the most exact confirmation of the identity of our toxin with that which the bacillus secretes in a tubercle. But there is yet the other course which supplements this proceeding. By immunising animals with filtered cultures we obtain an antitoxic serum. We have experimented with horses in this direction. They reacted very strongly to the increasing injections of toxin. Large swellings were formed; the temperature mounted to 40° C. and more; the animals were very highly tested and the absorption of the swelling was slow. It is not easy to obtain tolerance of the toxin in horses. Every new injection is followed by the same symptoms though *manifested with declining virulence and we must therefore* allow at least seven or eight months for the preparation of an efficacious serum. It is with the serum of an immunised horse that we have attempted by neutralising the effects of the tuberculous toxin to treat at first with a view to prophylaxis laboratory animals, guinea-pigs, and rabbits. Such a serum prepared without any injection of bacillary bodies, but only by means of injections of the filtrate of the culture, is a new proof of the existence of the action of the tuberculous toxin.

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munity. Its effect is distinctly lasting. We have been able
to prove already that in the rabbit the resistant state pro-
duced by the injection of six to eight cubic centimetres of
"vaccine" lasts two months.
We do not yet know if the immunity thus acquired can be
prolonged beyond the period experimentally determined.
If it were possible to extend the period of immunity to a
year it would be very interesting to apply the "vaccine"
to cattle, which we propose to do. One point only is to be
remembered. As the identity of bovine and human tuber-
culosis no longer is in doubt it probably will be sufficient to
use for experiments the same "vaccine" that we have
employed for smaller animals and which was derived from
human bacilli. But nothing would be easier if it became
necessary than to prepare according to the same method a
"vaccine" derived from the bacilli of bovine tuberculosis.
We wish now to give an account of the effect of anti-
tuberculous serum upon animals and of the trials made with
it upon human subjects during more than a year. The first
samples of serum at our disposal were much less efficacious
than those which we employed during the last month. This
was because at first the serum was relatively inactive and

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[1] A paper read before the Paris Aca

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the worst state of the epidemic. These points are shown in Table V.:—

TABLE V.—*Showing in the 50 Villages the Period of the Epidemic when Inoculations were Performed.*

Months.	Number of villages declared infected.	Number of villages inoculated for the first time.	Number of inoculations performed.
October	5	0	0
November... ...	6	2	2386
December... ...	6	2	166
January	4	19	5363
February	17	22	3630
March	13	5	1341
Totals... ...	50	50	12,886

None of these villages had been declared to be free from *infection at the end of March, 1903. They have a total* [illegible] latest census returns of 44,760 [illegible] 1902, to March, 1903, inclusive [illegible] rformed, distributed as to time as shown in Table V.

Thus the total population may be divided into the two classes of uninoculated, numbering 31,874, and inoculated numbering 12,886, both classes living approximately under the same conditions as regards surroundings and risk of infection.

In Table VI. the relative behaviour of these two classes towards plague is set down.

TABLE VI.—*Showing the Relative Behaviour of Uninoculated and Inoculated Persons towards Plague.*

Classes	Number in each.	Cases of plague.	Attack-rate per cent.	Deaths.	Death-rate per cent.	Case mortality per cent.
A. Uninoculated	31,674	1457	4·5	659	2·06	45·2
B. Inoculated ..	12,886	171	1·3	29	0·22	16·9

The percentage of the inoculated to the total population was 28·7. *A slight error lies in the fact that some few persons* were inoculated twice; these were certainly under 1 per cent. of the whole. From this it is evident that Class B (the inoculated) have a decided advantage over Class A (the uninoculated. In Class B the attack-rate of plague is over one-third—nearly one-fourth—of the attack-rate in Class A, the death-rate is one-tenth, and the case mortality is reduced by nearly 30 per cent. In this series of cases the usefulness of the measure would appear to be established and as to its freedom from ill-effects it may be stated that in the whole number of 30,609 inoculations no serious consequences came to light. To speak more exactly abscesses developed in 16 cases at the site of inoculation. 15 of these were traced to one particular bottle of the prophylactic which had become contaminated in some unknown way. The remaining abscess was the only accidental one reported. It may be said with some safety that there were no others, as the people are not at all backward in reporting anything of the kind, and beyond these few septic complications, none of which were ever serious, there were no ill-effects known. The technique recommended by M. Haffkine was adopted throughout, with some little variations suggested by local circumstances, and the almost complete absence of communicated sepsis is, indeed, surprising as well as satisfactory when one considers the very unclean habits of the majority of the people dealt with. In estimating the amount of good done by the prophylactic it must always be assumed that a dose had been given sufficient to insure a good reaction. The utmost importance of this is a matter of firm belief with the writer. The mere inoculation of a number of people exposed to plague with an uncertain small dose of prophylactic gives no criterion of its usefulness. It must be given in a dose that may be reasonably expected to protect against possible infection. The only test of this is the production of a distinct reaction with a temperature of probably at least 102° F. in each individual inoculated. Stress is laid upon this owing to the small attention actually paid to it in the carrying out of the Punjab scheme. [illegible] recommen [illegible] personally [illegible] percentage of cases as possible—10, 20, and 30 hours after inoculation—with a preference to the ten-hour record and the future dose modified accordingly. This is undoubtedly the right course and all the more important in that the prophylactic itself can be only imperfectly standardised, but in my experience at least it was found impossible to carry it out except in a very limited way. This was always a matter of regret, but it was not possible to do more than was done with the allotted staff owing in large part to the number of inoculations performed and to the distance that had to be covered daily.

The plan followed by me to obtain approximate results for future guidance was to get personal reports from each village as to the general state of the people after inoculation. This method, though scientifically useless, was practically of great value in aiding the determination of a dose satisfactory in its reaction but still not powerful enough to make the people afraid of coming forward. It should be recognised how very important it is to educate the people not only to accept inoculation, but also to be dissatisfied with it unless it produces a pronounced reaction. Though the first point is being surely gained—true, in the writer's experience at least—the second is scarcely understood at all. The people come for inoculation, but naturally, in their ignorance, are glad to escape with the minimum of discomfort. This being so, and so long as the individual dose remains uncertain, just so long will Haffkine's prophylactic fail to give the very great protection against plague which it undoubtedly does give under proper circumstances. With perseverance in inoculation and common-sense methods of disinfection and segregation properly and correctly carried out the disease in India would be stayed. The curiously spasmodic and half-hearted measures unfortunately so common [illegible] ean failure. Acknow- [illegible] M.S., for access to his [illegible] to obtain the plague figures in Table VI.

Albion-road, N.

SOME OBSERVATIONS ON OVER 6000 INOCULATIONS AGAINST PLAGUE.

BY J. W. MILLER, M.D. VICT., D.P.H. CANTAB.,
LATE PLAGUE MEDICAL OFFICER, PUNJAB, INDIA.

THE above inoculations were done in the Punjab during 1902 and 1903. Haffkine's prophylactic was used throughout and was supplied in bottles containing 30 cubic centimetres, the maximum dose being from 5 to 7·5 cubic centimetres. A 20 cubic centimetre syringe was used and this as well as the needles used were first sterilised by drawing up oil heated to a temperature of 160° F. into the syringe and leaving the heated oil in contact for a few minutes; the oil was heated by a spirit lamp and this method of sterilisation was found to be very useful as it was rapid and did not take as long as disinfection by boiling. The needles were left in a vessel containing the heated oil for a few minutes; a little of the prophylactic was drawn up into the syringe to wash the oil away before filling it.

The left arm was chosen for inoculation for the sake of convenience and as causing less pain and inconvenience afterwards to the person inoculated. The arm could easily be kept at rest and did not necessitate the patient being kept in the recumbent position, which would have been the case had inoculation been performed in the abdomen or the groin. In some cases inoculation was performed in other situations at the request of the person to be inoculated, a common site being in the situation of the knee, the hip-joint, and shoulder-joint, the idea being that rheumatism and other pains would be cured, and there is no doubt that the counter-irritation produced by the inoculation does in many cases relieve pain. Before inoculation the upper and outer parts of the arm were washed with soap-and-water. This was especially necessary, as a large number of individuals came straight from their work in the fields to be the West Indies. Not only in children but even in adults toxæmic symptoms are not infrequently produced by the presence of these worms which, presumably from the large quantity present, sometimes die and putrefy in the bowels, giving rise to a condition of blood poisoning closely resembling the typhoid state. This condition of ascarides is extremely common in these parts in children varying between the ages of two and ten years. So, therefore, it is always wise in treating children to start by administering a worm powder even if the disease is recognised to be some other, for the presence of worms in the intestines contributes in no small degree to the great irritability to which patients of tender age are prone in all diseases. Round worms are not always easy to expel, for often the large number present are knotted together and not infrequently give rise to symptoms of slight obstruction; at other times they are deeply embedded in mucus and no amount of santonin can get at them, so that the bowels are required to be freely active before the worms can be exposed and acted on by the vermifuge. In reading the letters published in THE LANCET[1] concerning this matter I recalled to mind a case of ascarides once under my care, the notes of which I have by me.

The patient was a fairly well-nourished boy, aged eight years, who was admitted to a hospital on July 27th, 1897, for fever and "bad bowels." He was unconscious; his pupils were widely dilated and the conjunctival reflex was present. The eyes were protruded and deviated upwards and to the right; his teeth were clenched. His bowels were loose and the motions were extremely offensive. The surface of the body was cold. The breathing was free; no abnormal sounds could be detected in the lungs. The heart beats were rapid but otherwise normal. He had several fits and on admission there were noticed twitchings of the right side of the face, the right arm and leg, and the left side of the mouth. The abdomen was much swollen and tympanitic. The pulse was quick and regular. His temperature on admission was 102·6° F. A rectal tube was passed but no flatus came away; a calomel and santonin powder was given and turpentine stupes were applied to the abdomen. Later in the day he was given three grains of acetanilid. At 5 45 P.M. his temperature registered 100·6° and he rallied somewhat, the teeth being less clenched, while the abdominal walls seemed to have become softer, but he was still in a stuporous condition. At 8 P.M. he passed a foul motion and was perspiring freely. The bowels were then washed with weak Condy's fluid—half an ounce in a quart of water. Ice was applied to the head. On the 28th there was some improvement since the previous day. The stupes were discontinued. The pulse and respirations were respectively 160 and 60 per minute, the skin was moist, and the temperature was 100·4°. At 6 P.M. the temperature registered 101·4°. The boy was still unconscious. There were constant movements of the head from left to right. The abdomen was less distended. One-eighth of a grain of calomel with sugar of milk was given every quarter of an hour for eight doses. On the 29th the patient was conscious in the morning and his temperature was normal but he was still very weak. The pulse was 140 per minute and regular. He passed a large and very offensive motion. Another large motion, black in colour, was passed about 11 P.M. The abdomen was flat and no tympanites was present. His aspect was dazed, the lips were dry, and there were sordes on the tongue and the teeth; the left thigh was flexed on the abdomen. He vomited and showed some restlessness. On the 30th he had two dark loose motions and was very restless. On the 31st he was rather poorly in the morning; there were sordes on his lips and teeth and his temperature was 103·8°. He had occasional twitchings of the right half of the body at intervals of four or five minutes; there was spasm of the right arm, the right hand being brought constantly towards the right iliac fossa and vigorous scratching movements were made as if to remove some great irritation. He was given a mixture containing four grains of hydrochlorate of quinine, four grains of bromide of potassium, five minims of infusion of digitalis, and five minims of dilute phosphoric acid to one ounce of water every three hours. Stimulants were prohibited at this juncture. He never rallied but died at 1 A.M. on August 1st.

At the necropsy the body was found to be emaciated and there was peeling of the epidermis over the abdomen. The lungs were normal, as were all the abdominal organs. Round worms were found in the intestines two—were in the ileum, one was occupying the vermiform appendix like a gloved finger with the hind end projecting into the cæcum, and six dead ones were in the large bowel. The mucous membrane of the bowels was in no wise diseased. On examining the brain the meninges were found to be normal, there was the usual quantity of cerebro-spinal fluid, and no gross pathological lesion could be discovered anywhere in the brain substance. The case was at first taken to be one of acute meningitis and it is interesting inasmuch as no explanation could be found to account for the symptoms with the exception of worms found in the bowels. The twitchings of the right arm and the scratching movements which were so marked were suggestive of great discomfort in the region of the iliac fossa, a symptom which, I think, is fully explained by the round worm found occupying the vermiform appendix where the irritation must have been very considerable.

St. Lucia, West Indies.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

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DEFORMITY OF THE HEART IN THE MONGOLIAN IMBECILE.

By CHARLES H. FENNELL, M.A., M.D. OXON., M.R.C.P. LOND.,
ASSISTANT MEDICAL OFFICER, DARENTH ASYLUM.

IN a paper read before the Clinical Society of London in 1898 and published in vol. xxxii. of the Transactions Dr. Archibald Garrod described five cases of Mongolian imbecility in which evidence of congenital malformation of the heart was present. All the patients were under three years old and Dr. John Thomson's wide experience was quoted as not including a child of more advanced years showing cardiac deformity. The suggestion was made that Mongolian imbeciles thus affected probably died in very early years. I have therefore thought it of interest to record three cases, varying in age from nine to 27 years, met with in the detailed examination of 23 of these imbeciles at Darenth Asylum.

CASE 1.—Male, aged 27 years, a very definite specimen of the type. He is a low-grade imbecile, in good health, and not at all anæmic. The area of cardiac dulness extends one and a half fingers' breadth to the right of the sternum; on the left side it reaches the nipple line. A to-and-fro murmur is heard in the upper three intercostal spaces on each side of the sternum, but best in the second left space and better along the left sternal border than the right. There is no cyanosis or clubbing and the patient has had no syncopal attacks; his heart works adequately and he is a useful ward helper.

CASE 2.—Female, aged nine years, a low-grade imbecile of well-marked Mongolian type. She is in fair health but subject to catarrh. The area of cardiac dulness extends one and a half fingers' breadth to the right of the sternum; its left limit is half a finger's breadth inside the nipple line. There is a diastolic bruit at the left base, replacing the pulmonary second sound and best heard in the second left intercostal space. No systolic bruit is audible. The child shows no cyanosis or clubbing but the circulation in her extremities is poor. She is rather torpid and inactive and has shown no signs of cardiac failure.

CASE 3.—Male, aged 13 years, whose imbecility is definitely Mongolian in type. He is a medium-grade imbecile in good health. The area of cardiac dulness is not increased towards the right; on the left it extends beyond the nipple line by a finger's breadth. A double murmur is present at the base and is heard better on the left side. There is a loud apical systolic murmur heard also all over the left chest and to a less extent over the right chest also. A systolic thrill is felt at the apex. There is no cyanosis or clubbing and the heart acts well. The boy is a poor walker but is learning to make himself useful.

It is well known that the presence of malformation of the heart is often hard to determine during life. I have twice encountered it in necropsies on infant Mongolian imbeciles when it had not been suspected. Probably, therefore, it exists unrecognised in a larger percentage of adolescent cases than my figures would indicate.

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[1] THE LANCET, Sept. 26th (p. 898), and Oct. 3rd (p. 979), 10th (p. 1052) and 17th (p. 1119), 1903.

Darenth.

A CASE OF TRAUMATIC ANEURYSM OF THE FEMORAL ARTERY IN HUNTER'S CANAL.

BY JOHN CROPPER, M.D., B.C. CANTAB.

THE following case well illustrates many of the difficulties likely to be met with in a large traumatic aneurysm.

A man, aged 25 years, a peasant, was admitted to the English Hospital of the Church Missionary Society Medical Mission at Nablus, Palestine, on June 22nd, 1903, for traumatic aneurysm of the right femoral artery. It had been caused by a punctured wound inflicted four months before. The patient, who was considerably under five feet in height, was otherwise strong; though unable to do his work he had walked to the hospital from his village (Hawârah), several miles distant. He had a good deal of pain.

On admission the aneurysm was found to occupy the inner aspect of the middle third of the thigh; pulsation was well marked, a loud bruit was present, and thrill was easily felt. There was nothing to show whether the aneurysm arose from the main vessel or from a small branch in close contiguity with it. Chloroform having been administered an incision was made down to the sac through the cicatrix which was over the inner border of the sartorius, the sac was opened and clots of blood were turned out to the amount of about a pint. On exploration with the finger, the tourniquet being relaxed, the mouth of the sac could be felt to communicate directly with the main vessel under the muscle and hæmorrhage was easily controlled by the finger. A second incision was then made to the outer side of the sartorius, where by pushing up the sac from the former incision the femoral artery was with some difficulty made out owing to the matting of the tissues. The artery was of comparatively small size from establishment of the collateral circulation but it had the usual relations; it was tied in two places an inch apart, above and below the mouth of the sac, which latter was excised. On finally relaxing the tourniquet the vein was found to have been wounded and, being difficult to secure, hæmorrhage was controlled by firm packing with iodoform gauze. The sac was drained from below. At no time after the operation was there any coldness of the leg which was well raised during the first four or five hours and, indeed, until the patient complained of a good deal of discomfort. The temperature did not at any time exceed 99° F. On the fourth day, feeling quite well, he got up and walked to the lavatory when no one happened to be looking but in spite of this he made an uninterrupted recovery. The gauze was removed on the sixth day; there was then slight discharge from the sac but at no time was there any fever and he went home on the twenty-ninth day from the operation

Nablus, Palestine.

VENTILATION.—On Tuesday, Dec. 8th, the directors of Spiers and Pond, Limited, invited a numerous company to dinner at the Criterion Restaurant to inspect alterations and redecorations of certain of the rooms of the building, and more es[illegible] test the effect of the ventilation of the "[illegible] took place. The system [illegible] igned by Dr. T. Glover Ly[illegible] ready been fully described and commented on in our columns (see THE LANCET, March 1st, 1902). The result appeared to give general satisfaction, there being plenty of air diffused throughout the room during dinner, and although some 80 persons were present in a room 52 feet in length by 24 feet in width the after-dinner tobacco smoke was certainly very much less noticeable and aggressive than it would have been under ordinary conditions. The occasion was a pleasant one, the conjunction of an excellent dinner, a menu which declared in bold type "No speeches," and a well-ventilated room not being an every-day experience [illegible]

A Mirror
OF
HOSPITAL PRACTICE, BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ROYAL FREE HOSPITAL.

A CASE OF PYÆMIA (SEPTICÆMIA) SIMULATING ACUTE RHEUMATISM.

(Under the care of Dr. H. SAINSBURY.)

FOR the notes of the case we are indebted to Mr. John A. West.

A lad, aged 16 years, was admitted into the Royal Free Hospital on Jan. 13th, 1903, complaining of pain in the right knee and in the left side of the chest. He had been an out-patient since the 3rd with pains first in the right and then in the left knee. The pain subsequently disappeared from the left knee to return to the right. Before the 3rd he had been quite well. The pains had not been entirely confined to the joints but had extended somewhat along the limbs. There [illegible] history of chill and none of rheumatic fever. [illegible] 102·6° F.; the right knee [illegible] tenderness extending [illegible] the leg; the tongue was [illegible] urates. Examination of the chest gave no explanation for the pain complained of in the left side of the chest. There was a systolic bruit at the apex of the heart which was conducted into the axilla, but no evidence of dilatation or hypertrophy. There was no urethral discharge. In spite of salicylates (including aspirin) the fever persisted; it was very broken in type, remittent or intermittent, the maxima reaching from 102° to 103°, and on one occasion 104°. There were no rigors and no sweatings. Slowly the fever subsided, the temperature reaching the normal about the 31st. On Feb. 5th a recrudescence of the fever occurred, but at a lower level, except on the 5th when the temperature reached 105°. The left knee now became affected. Again the fever subsided till the 10th, when a fresh recrudescence appeared with a return of pain and swelling in the right knee. 14 days of irregular pyrexia followed, during which the left ankle became painful. From the 28th to March 9th the temperature was nearly normal. It then began to oscillate up to from 100·5° to 101°. Between March 10th and the 13th a swelling gradual[illegible] inner side of the right thigh [illegible] prolonged pyrexia, examinat[illegible] diazo reactions gave negative [illegible] blood gave no cultures. No enlargement of the spleen was detected. Mr. E. W. Roughton diagnosed an abscess under the muscles of the thigh and on opening it was able to trace it to a sequestrum in the lower end of the femur. After the operation the boy slowly recovered.

Remarks by Dr. SAINSBURY.—With so definite a local cause it is of interest to note the multiple and shifting arthritis (both knees and the left ankle), and to note, moreover, that the swelling in the left knee was quite as severe as that in the right. In each knee, indeed, the swelling was on occasion considerable with well-marked fluctuation. The diagnosis of acute rheumatism made on admission was strengthened by the presence of a systolic bruit at the apex, but the resistance to salicylates made one suspect that the case might prove to be septic. In the absence of a urethral discharge or of any obvious site of infection, in the absence also of a blood culture, it was impossible to make a more definite diagnosis. Quinine in full doses made no impression and the only treatment which seemed to influence the joints was blistering. This appeared on more than one occasion to lessen the pain and the swelling. The case resembles closely Dr. Moxon's case of pyæmia simulating acute rheumatism recorded in 1877 and described in Fagge's[1] and in relation to modern views as to the dependence of the rheumatic group on sepsis of one kind or another it is not without interest.

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[1] First edition, vol. II., p. 550.

ROYAL ALBERT HOSPITAL, DEVONPORT.

PAROVARIAN CYST WITH TWISTED PEDICLE.

(Under the care of Dr. ALONZO G. RIDER.)

FOR the notes of the case we are indebted to Mr. H. M. Major, assistant house surgeon.

The patient, a multipara, aged 40 years, was admitted into the Royal Albert Hospital, Devonport, on Oct. 29th, 1903, with the following history. About 2 A.M. on this date she was suddenly seized with violent pain in the right iliac region, accompanied by bilious vomiting and faintness. She was sent to the hospital and on admission her temperature was 101° F. The pain was paroxysmal, starting in the right iliac region, spreading over the lower part of the abdomen, and extending into the right groin over the hip and down the outer part of the thigh. Vomiting ceased soon after admission. Examination revealed a globular swelling situated a little to the right of the median line evidently containing fluid and reaching a finger's breadth above the umbilicus (it simulated exactly a distended urinary bladder). Vaginal examination showed that the uterus was drawn up and that the swelling sprang from the neighbourhood of the right tube.

Three years previously the patient had noticed some enlargement of the abdomen on the right side and tenderness over a similar area. About three weeks later, while at her house work, she had a sudden attack of pain in the right side which lasted two or three days. There was no vomiting and the bowels were regular in their action. Since then there had been several similar attacks at various intervals but with increasing severity and frequency. The attacks did not coincide with menstruation. In May, 1902, an attack occurred of much greater severity which lasted seven days. Frequent vomiting occurred during the attack. In the following June she was delivered at term of a child—a breech presentation. She had another severe attack in November, 1902. In April, 1903, she had another child at term, again with a breech presentation.

On opening the abdomen through the right rectus a quantity of blood-stained fluid escaped from the peritoneal cavity. The peritoneum showed signs of old inflammation and was very much thickened. The cyst was emptied of about one and a half pints of bloody fluid. On tracing it down to its pedicle it was found to be twisted twice (the rotation having taken place from left to right). The right tube and ovary were lying on its anterior surface at the lower portion. The tube was filled with recent clot and the fimbriæ were glued to the cyst wall by a large clot. There was a considerable clot of recent blood in the right mesometrium. The cyst was unilocular and its wall, which was over one third of an inch in thickness, was composed of laminated blood clot. Microscopic examination of the wall showed it to be (according to the report of the Clinical Research Association) "chiefly composed of blood clot which is undergoing organisation on one side and has a fibrous capsule on the opposite side. There are no traces of ovarian tissue or of unstriped muscle." Dr. G. F. Blacker, University College Hospital, London, very kindly examined the specimen and reported it as "an interesting case of parovarian cyst with twisted pedicle—a rare thing." The abdominal wound healed by first intention and the patient made an uninterrupted recovery.

ROYAL ALBERT HOSPITAL, DEVONPORT.—The annual meeting of the governors of the Royal Albert Hospital, Devonport, was held on Oct. 30th, under the presidency of Admiral Sir E Seymour. The annual report stated that for the 12 months ended Sept. 30th 659 in-patients had been admitted, an excess of 60 compared with the preceding year. The average daily number of patients was 42·64 There were 85 women treated in the lock ward up to May 1st, on which date the ward was closed, as the Admiralty declined to continue further their contribution to its support 164 patients and nurses had been sent to the Pearn Convalescent Home. The financial statement showed that the total cost of maintenance was £4389 compared with £5240 in the previous year, and the unfavourable balance of £1866 with which the year commenced had been reduced to £537.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Artificial Respiration in the Human Subject.

A MEETING of this society was held on Dec. 8th, Mr. A. WILLETT, the President, being in the chair.

In Professor E. A. SCHÄFER'S absence the secretary read a description of a Simple and Efficient Method of performing Artificial Respiration in the Human Subject, especially in cases of Drowning, to which were appended instructions for the treatment of the apparently drowned. The mechanical methods of performing artificial respiration in the human subject which had been most in use up to the present time were: (1) the Marshall Hall method, which consisted in placing the subject upon his side and rolling the body alternately into the prone and back again into the lateral or latero-supine position; (2) the Silvester method, in which the capacity of the chest was increased by raising the arms above the head and thus dragging upon and elevating the ribs, the chest being emptied by placing the arms against the sides of the chest and exerting lateral pressure on the thorax; the subject was throughout in the supine position; and (3) the Howard method, which consisted in emptying the thorax by forcibly compressing the lower part of the chest with a slight upward push so as to raise the lower ribs; on relaxing the pressure the chest again filled with air. The subject was throughout in the supine position. It had been shown that all these methods were efficacious in effecting a normal amount of air exchange in the healthy living human subject, but each one of them was attended by certain disadvantages which became accentuated when the subject was in an asphyxiated condition and especially when the asphyxia was due to drowning. For in these circumstances all the muscles were in a limp relaxed condition; when the head was thrown back, as when the subject was supine, there was a tendency for the tongue to fall back into, and to block, the pharynx; there might be water in the air passages, and an abundance of mucus was usually secreted, which becoming churned up into a froth with the air and water tended to block the air passages. There was also an enormous congestion and swelling of the liver, combined with, and caused by, great distension of the heart, especially of the right cavities This last-named circumstance—viz., the congestion of the liver—rendered the application of the Howard method extremely dangerous in cases of drowning, since forcible pressure upon the lower chest under these conditions was apt to produce rupture of the liver, an accident which occurred on several occasions in the dogs experimented upon by Dr. Herring and Professor Schäfer in their investigations into this subject for the committee of the Royal Medical and Chirurgical Society. The supine position was strongly contraindicated (1) on account of the tendency which there was in this position for the tongue to fall back, and (2) because this position did not facilitate but rather hindered the escape of the water, mucus, and froth from the air passages, throat, and mouth. The Marshall Hall method had not these disadvantages but it involved a large amount of physical labour, and the rolling of a heavy inert body over upon hard ground or upon the planks of a boat might easily produce bruising and superficial injuries which it should be their endeavour to avoid. The Silvester method, besides the objection that it involved the supine position, an objection which was peculiarly applicable to drowning cases, also demanded a considerable amount of physical exertion, and the dragging upon the humero-thoracic muscles tended to strain and otherwise to injure them. From the physiological point of view there was a fundamental difference between the Silvester method on the one hand and the Howard method on the other, since the Silvester method was active in producing inspiration while expiration was passive, whilst in the Howard and other pressure methods expiration was produced actively and inspiration was passive. Since the former appeared more exactly to imitate the normal conditions of respiration it might at first sight be supposed on that account to be preferable, but there was another element to take into consideration—*viz.*, the part which was played by the nervous centre of respiration. For it had been shown (by Herring and Brener and by Head) that a main factor in exciting inspiration was the emptying and concomitant collapse of the lungs, so that if they were mechanically caused to collapse the inspiratory centre was stimulated through fibres of the vagus nerves distributed to the lungs and when the centre was acting a normal inspiration was the result of such stimulation. On the other hand, mechanical inflation of the lungs had a tendency to inhibit inspiration and to depress the activity of the respiratory centre. During complete asphyxia the activity of that centre was in abeyance, but as the subject began to pass out of the asphyxial condition it tended to resume its functions and it was therefore clearly preferable to employ a method of artificial respiration which would stimulate the centre to activity rather than one which would depress its activity. Hence any pressure method was on physiological grounds to be preferred to a traction method—apart altogether from the greater simplicity of manipulation. Further, for the reasons above given, the prone position was to be preferred to the supine, especially in cases of drowning. The method about to be described presented none of the disadvantages which had been enumerated in considering the older methods. It was safe, efficient, and involved a minimum amount of labour on the part of the operator. It consisted in laying the subject in the prone posture, preferably on the ground, with a thick folded garment underneath the chest and the arms laid forward. The operator put himself in a position athwart the subject, facing his head and kneeling upon one knee with the other knee and hip flexed, and placed his hands on each side over the lower part of the back of the chest. He then slowly threw the weight of his body forward to bear upon his own arms and thus pressed upon the thorax of the subject and forced air out of the lungs. This being effected he gradually relaxed the pressure by bringing his own body up again to a more erect position but without moving the hands; as he did this air was drawn, by the removal of pressure from the chest walls and by their elastic reaction, into the lungs. This process was repeated quite regularly and without manifest intervals between the movements at least once every five seconds—i.e., not less often than 12 times a minute; it might be done somewhat more rapidly, but 15 times a minute would in any case be sufficient. By this means it was easily possible in an average man to effect an exchange of nearly 500 cubic centimetres per respiration—an amount which was more than enough to maintain complete aeration of the blood. The advantages of this method might be thus enumerated: 1. The ease with which the physical operations necessary to carry on artificial respiration might be performed; hardly any muscular exertion was required. 2. The efficiency of the gaseous exchange produced by it between the outside air and the air in the lungs. 3 The extreme simplicity of the procedure; no complex manipulations were required. 4 The impossibility of the air passages being blocked by the falling back of the tongue into the pharynx. 5. In cases of drowning the readiness with which water and mucus were expelled from the air passages through the mouth and nostrils. 6. It involved no risk of injury to the congested liver or to any other organ. The following instructions for the treatment of the apparently drowned were given. Immediately on removal from the water, place the patient face downwards on the ground with a folded coat under the lower part of the chest. Not a moment must be wasted by removing clothing If respiration has ceased artificial respiration is to be commenced at once; every instant of delay is serious To effect artificial respiration put yourself athwart the patient's body in a half-kneeling posture and facing his head. Place your hands flat over the lower part of the back of the chest, one on each side and gradually throw the weight of your body forward on to them so as to produce firm pressure—which must not be violent—upon the patient's chest. By this means the air and water are driven out of the patient's lungs. Immediately thereafter raise your body slowly so as to remove the pressure but leaving your hands in position. Repeat this forward and backward movement (pressure and relaxation of pressure) about every five seconds. In other words, sway your body slowly forwards and backwards upon your arms about 12 times a minute, without any marked pause between the movements. This course must be pursued for at least half an hour, or until the natural respirations are resumed. (If they are resumed and, as sometimes happens, again tend to fail, the process of artificial respiration must be again resorted to as before.) Whilst one person is carrying out artificial respiration in this way others may, if there be opportunity, busy themselves with applying hot flannels to the body and limbs and hot bottles to the feet; but no attempt should be made to remove the wet clothing or to give any restoratives by the mouth until natural breathing has commenced.

Dr. R L. **Bowles** regretted Professor Schäfer's absence. He said that there were but few points in which he did not agree, for the method which Professor Schäfer described was almost exactly that which he (Dr. Bowles) had advocated for the last 45 years and had been described as the Marshall Hall method. He only took exception to the method because it was not sufficient and it was necessary in many cases to supplement it by turning the patient into the position which he had described—viz., on to one side, and it was important that the patient should always be rotated on to the same side. To emphasise the importance of this point he said that in cases of apoplexy he had found that the lung on the side on which the patient was lying might present all the signs of consolidation and that when the patient was turned on to the opposite side an alarming increase of the dyspnœa had resulted, and it was only by turning the patient again on to the same side that a fatal issue was averted. He had noticed the same condition in hæmorrhage from the lungs. After the first and second movements had been repeated in succession for ten minutes it was advisable to pass to the third movement in which each time the patient was rolled from the stomach on to the right side; the uppermost arm was raised above the head in a line with the body. The movement expanded the chest and allowed more air to enter the uppermost lung. He thought that there was considerable danger in treating patients in the supine position Professor Schäfer's method was good but it was not sufficient.

Dr. H R. **Silvester** said that the method advocated and described by the author as 'simple and efficient" had the merit of being extremely ancient, having been practised in principle from time immemorial down to the eighteenth century and might be called the simple compression method. Before the importance of the function of respiration was fully appreciated it was probable that the object sought was the removal of the water from the body of the drowned person which was believed to be the cause of danger, and there was no doubt that water when swallowed could be by this simple means removed from the stomach, although not from the lungs, which seldom or never contained any great amount. Dr. Silvester then quoted the earliest recorded cases in which the rolling method was used. With regard to respiration he said that the directions given by Professor Schafer would generally be admitted to be faulty in principle, for expiration was made to precede inspiration, whereas expiration was second in order and not the primary act. In stillborn infants whose lungs had never been inflated, forced expiration at first was impossible and a similar remark might be applied to the Marshall Hall method. With regard to inspiration, after quoting the instructions given by Professor Schafer, he said that the natural expansion of the chest was dependent on little more than the elasticity of the costal tissues and could only take place feebly and inefficiently unless it received some active mechanical aid, but when the unconscious patient was lying with the weight of a heavy body resting on the most mobile part of the thorax he was under the most serious disadvantage. In order to avoid this the plan of rolling was to be preferred, for by rolling the patient backwards the natural resiliency of the ribs was allowed full play and air was drawn into the lungs. The rolling method was, therefore, in this particular decidedly preferable, but the advantage of the rolling method was unfortunately somewhat neutralised by the danger of fracturing the cervical vertebræ and the fatigue of turning the almost lifeless body alternately on the chest and on the back 15 times in a minute for some hours. The congested condition of the heart and thoracic viscera also rendered the pressure of the prone position quite inadmissible in the treatment of asphyxia. Free elevation of the ribs in the supine position and the consequent tendency to a vacuum was much more calculated to remove the state of congestion. The next point considered was the amount of air respired by this method. It was found that the amount of air inspired was exceedingly small and compared very unfavourably with the amount obtained in the Silvester method. With regard to the amount of pressure likely to be exerted in following out the instructions given by Professor Schäfer when carried out by a seafaring population he said that the pressure on the patient's chest would not be less than from 30 to 40 pounds. He thought that another great objection to this form of treatment was that it could not be carried out in a hot bath. In conclusion, he said that the disadvantages of the suggested treatment were: first, that expiration was made to precede inspiration when the condition of the chest was already in a state of expiration; secondly, that inspiration was opposed by the weight of the patient resting on the front of his chest when every encouragement should be given to the re-establishment of the respiratory functions; thirdly, that pressure on the thorax must be injurious when the heart and thoracic viscera were already in a state of congestion; fourthly, that the prone position was objectionable on account of its limiting the expansion of the chest and also by allowing the contents of the stomach to pass into the wind pipe; fifthly, that the amount of air inspired was much smaller than by other methods; sixthly, that a dangerous pressure might be exerted on the costal parietes; and seventhly, that the employment of the hot bath was impossible.

Mr. J. WARRINGTON HAWARD said that there were certain advantages and certain disadvantages in the various methods which had been advocated, but by a combination of the various methods in the manner suggested by Dr. Bowles he thought that the greatest advantage could be obtained. He thought that the patient in the first instance should be placed in the prone position, for it was of no use to draw air into the lungs until the fluid had been expelled as it formed an obstruction to the entrance of air. The position which was suitable for a person drowned was not suitable for a patient under an anæsthetic. The prone position placed pressure on the thoracic viscera, as Dr. Silvester had pointed out, and this was certainly an objection to the maintenance of the position. He emphasised the importance of keeping one lung clear and stated that no attempt should be made to relieve the congestion of the lower lung by turning the patient on to the opposite side. He considered that the method suggested by Dr. Bowles was to be preferred to any other and was of opinion that the society should now come to some definite conclusions on the subject and should publish the result of those conclusions.

Dr. F. W. HEWITT said that in cases of asphyxia arising from anæsthesia he considered it bad treatment to place the patient into a prone position and he had frequently noticed that faulty positions such as had sometimes to be assumed in operations embarrassed respiration. He referred to the case of a child, aged two years, to whom he had given an anæsthetic and during recovery breathing became difficult. He had compressed the chest and with each compression the inspiration became less and less till at the fifth compression no air entered the chest. It seemed that air was forced out but the mucus acted as a kind of valve and prevented the ingress of air. He thought that inspiration should be at once assisted and not only expiration.

Dr. M. S. PEMBREY said that he did not think that the experiments of Hering and Breuer could be used by Professor Schäfer in support of his view, since in the case of a person drowned the nerve centres were in complete abeyance. Respiration would go on after section of both vagi and the important factors in the mechanism were the deficiency of oxygen and the excess of carbon dioxide. He considered that respiration was of especial importance, as it favoured the circulation of the blood through the lungs and hence the centres in the medulla would be better supplied and the distension of the right side of the heart would be relieved. He considered that the method advocated by Professor Schäfer was absolutely useless in the case of an infant and suggested that the method of blowing air into the chest would be more effective. He then dealt with the difficulty met with in artificial respiration in patients with a rigid thorax. He considered that warmth was of great importance, since cold depressed the activity of the nervous centres.

Dr. NEWTON PITT alluded to the statement made that rupture of the liver might be produced by the use of Howard's method. He thought that it would be of great importance that any such case should be put on record.

The PRESIDENT said that the matter had been most thoroughly investigated by the committee and the society had now reached a stage when it would be possible to formulate rules for the treatment of the apparently drowned.

OBSTETRICAL SOCIETY OF LONDON.

Hydatidiform Mole.—Fate of the Ovum and Graafian Follicle in Premenstrual Ages.—Exhibition of Specimens.

A MEETING of this society was held on Dec. 2nd, Dr. EDWARD MALINS, the President, being in the chair.

Mr. J. D. MALCOLM and Dr. R. HAMILTON BELL contributed a paper on a case of Hydatidiform Mole with Bilateral Cystic Disease of the Ovaries and invasion of the muscular wall of the uterus by chorio-epithelioma, the patient being quite well two years after removal of the parts. The patient came under the care of Dr. Malcolm Mackintosh on April 10th, 1901. She had a rapidly enlarging uterus, from which there were free hæmorrhages on April 9th, 14th, and 19th. The patient asserted that if pregnant she must have conceived on Feb. 17th. Mr. Malcolm saw her in consultation on April 29th and she was admitted to the Samaritan Free Hospital on the 30th. The first diagnosis was that the patient had a soft rapidly growing fibroid tumour. Subsequently it was thought that the condition might be one of ordinary pregnancy. Dr. Bell suggested that there might be a hydatidiform mole. Delivery of the uterine contents being imminent on May 8th Dr. Bell, after a consultation, emptied and curetted the uterus, the fundus of which was above the navel. A large quantity of hydatidiform material was evacuated. The uterus was again curetted on May 12th. On the 29th the conditions were unsatisfactory and the diagnosis was uncertain. Mr. Malcolm opened the abdomen and removed two ovarian tumours, the right one having a twisted pedicle. The condition of the uterus did not seem normal and it also was removed, the cervix being taken with it. The patient recovered and had remained well.—Dr. CUTHBERT H. J. LOCKYER said that the pathological interest of this specimen lay, first, in the discovery of two metastatic deposits of chorio epithelioma in the muscular wall of the uterus three weeks after the removal of a hydatidiform mole; secondly, in the concurrence of bilateral ovarian cysts and malignant vesicular disease of the chorion; and thirdly, in the type of cystic ovarian disease. In regard to the latter point the question whether the cysts arose from corpora lutea had not yet been definitely settled. No lutein cells had been discovered in the walls of the few loculi examined, but it was Dr. Lockyer's intention to extend this investigation to other loculi before excluding the possibility of corpora lutea being the source of origin of the cysts. The literature bearing on the etiology of vesicular mole was referred to, Marchand's view being that cystic ovarian disease might influence the development of the ovum, whilst Veit regarded the endometrium as accountable for ovular degeneration and Findlay disallowed an etiological association between ovarian degeneration and vesicular mole. Other instances where vesicular mole and chorio-epithelioma had been associated with bilateral or single ovarian cysts were mentioned, some of these cases being recorded in full.—Dr. PETER HORROCKS congratulated Mr. Malcolm and all those concerned in the happy issue of the case and laid stress on the great superiority of the finger over the curette in the removal of a hydatid mole.—Dr. HERBERT R. SPENCER agreed with Dr. Horrocks that curetting was a dangerous method of removing a mole and thought from an examination of one of the specimens that the growth had been insulated by the curette. He did not approve of Mr. Malcolm's intention to remove the uterus by the supravaginal amputation. Whatever views might be held as to the relative advantages of amputation and total hysterectomy in the case of fibroids he thought that in suspected malignant disease, and especially in chorion-epithelioma, in which growths were known to occur in the cervix, total hysterectomy should be performed.—Mrs. SCHARLIEB gave a short account of a case of vesicular mole complicated with double multilocular ovarian cysts.—Dr. BELL, in reply, admitted that the use of the curette was not usually advisable in cases of hydatidiform mole and in the only other two cases which had come under his own care he had been able to evacuate the uterus with the ovum forceps and the finger. This case, however, was exceptional. After removing the bulk of the tumour with the ovum forceps he put in a finger to scrape away the rest but it proved very tough. The hæmorrhage was considerable and the condition of the woman, bad before the operation began, was now very serious. It was in these circumstances that it was determined to use the flushing curette which checked the hæmorrhage and was more expeditious. The special circumstances of the case, he thought, had not been made sufficiently plain in the paper and it had appeared as if he advocated the use of the curette in all cases. This was not the case and after the remarks of Dr. Horrocks and Dr. Spencer he would probably hesitate still more in the future than he had done on this occasion.—Mr. MALCOLM supported Dr. Bell's view that in this particular case it was impossible to remove all the hydatidiform material with the finger; indeed, it was thought that at the first operation all the disease was not removed by the [illegible] was not likely that the new [illegible] digital examination because [illegible] eply placed in the uterine muscle. The suggestion that a wound made by the curette might have allowed the disease to gain access to the tissues might be correct but it did not seem necessary to assume the existence of a wound if a new growth were adherent to the interior of the uterus. As regarded the removal of the body of the uterus first and the cervix afterwards it would have been better to remove both at once, but the removal of the body was undertaken rather as a precaution than on account [illegible] and the cervix had always [illegible] spicious parts were observed [illegible] he cervix also, and this was done.

Dr. T. G. STEVENS gave a lantern demonstration on the Fate of the Ovum and Graafian Follicle in Premenstrual Ages.—Dr. T. W. EDEN said, in expressing admiration for Dr. Stevens's work, that the latter could claim the credit of being a pioneer. The most interesting part of the demonstration consisted in the method by which the ovum was disposed of in the contracting follicles. If Dr. Stevens's view were correct, the normal protective and nutritive functions of the cells of the membrana granulosa became suddenly suspended when the follicle had reached a certain stage of development and destructive functions were exercised by the same cells instead. This reversal of the direction of physiological activity was, to say the least, very remarkable and it had no analogue in any other part of the body. He felt bound to say that he was not absolutely convinced that the destructive cells were really cells of the membrana granulosa. He thought it possible, notwithstanding Dr. Stevens's arguments, that they might be leucocytes. The weak point in Dr. Stevens's case consisted in the fact that his material was all post-mortem material. No importance could therefore be rightly attached to the absence of signs of diapedesis; this was a vital [illegible] not be studied in dead tissues. [illegible] that the staining reactions of [illegible] entirely different if they could be obtained in the living state.—Dr. HORROCKS, who congratulated Dr. Stevens on the scientific spirit and admirable manner of his address, asked if the slides as shown on the screen represented not merely different degrees of development of the ovum, but also different ages of the children from whom the ovaries had been taken? Thus, was the most fully developed ovum from the oldest child and the most immature from the youngest? He thought it very strange if Dr. Stevens's observations were correct that the ovaries should develop ova up to a certain degree of maturity and then develop cells to devour them. It would be of great scientific value if Dr. Stevens would continue his researches into the condition of the ova developing in ovaries of girls right up to the establishment of puberty.—Dr. C. HUBERT ROBERTS having added his testimony to the excellence of the paper, asked for further information with regard to the origin of the liquor folliculi. He did not think Dr. Stevens had made it at all clear what was the exact [illegible] membrana granulosa and that the [illegible] phagocytosis to a considerable degree.—Dr. G. F. BLACKER thought that there were several difficulties in the way of accepting Dr. Stevens's views as to the part played by the cells of the membrana granulosa in the destruction of the ovum, and the phagocytic action which he wished to assign to them. Nagel in his work on the ovum had held that the zona radiata was really a part of the innermost layer of the cells of the membrana granulosa. If this was so then the theory that the cells of the membrana granulosa burst through the zona radiata and then invaded the ovum could hardly be correct. Further than this these cells were degenerating and such cells did not as a rule take on such important functions as phagocytosis. He thought that the cells found lying within the ovum were probably more of the nature of cell inclusions.—Dr. W. F. V. BONNEY thought that Dr. Stevens's specimens showed very clearly that in premenstrual life the cells of the tunica granulosa retrograded *pari passu* with the ovum, whilst in adult sexual life they continued to grow after dehiscence of the follicle and formed the lutein layer of the corpus luteum. He had examined Dr. Stevens's specimens attentively and could find in them nothing at all resembling a lutein layer. Seeing that much recent work by various observers tended towards a conception which allotted to the luteum layer the function of producing the internal secretion of the ovary, and seeing further that the most striking point of difference between the generative organs of the child and adult respectively lay in the fact of the latter possessing a corpus luteum and the former not possessing it, he thought that Dr. Stevens's work suggested strongly that it was to the persistence and continued growth of the cells of the tunica granulosa after the disappearance of the ovum from the follicle by dehiscence that we owed that development of sexual characteristics which marked puberty.—Dr. STEVENS replied.

Dr. BONNEY *showed a specimen of a Myoma undergoing* Red Degeneration.

Dr. H. RUSSELL ANDREWS exhibited a Specimen of Bilateral Extra-uterine Pregnancy; (1) Lithopædion, full *term, which had been eight years in the abdomen; and* (2) a fresh Three Months Fœtus.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Patients and Specimens.—Gout.—Radium.—Open air Treatment of Broncho pneumonia in Whooping-cough.—Bennett's Fracture of the Thumb.

A MEETING of this society was held on Dec. 2nd, Professor JOHN CHIENE, the President, being in the chair.

Patients and specimens were shown by Dr. DAWSON F. D TURNER, Dr. W. ALLAN JAMIESON, Mr. J. W. STRUTHERS with Mr A. MILES, Dr. G A. GIBSON, Mr. DAVID WALLACE and Dr. A HILL BUCHAN.

Dr. D. CHALMERS WATSON gave a demonstration on the Comparative Pathology of Gout. The tissues were taken from a young adult fowl which had succumbed after a short illness to naturally acquired gout. Such cases were rare in the records of the disease and, so far as Dr. Watson was aware, no cases had been submitted to a complete histological investigation. The naked eye appearances found at the post-[illegible] the synovia to a cream-[illegible] eaction, deposit of uric [illegible] cular tissues round the [illegible] idespread thrombosis, and smaller [illegible] Microscopic examination areas of [illegible] exudation blocking the showed [illegible] catarrh,' especially in pancrea [illegible] in the large intestine; the ile [illegible], (3) the collecting tubules of the kidney filled with granular leucocytes; (4) pronounced congestion of the liver, the spleen, and the kidneys; and (5) a localised deposit of urate of soda in a lymphatic gland. The appearances were regarded as characteristic of bacterial infection and Dr. Watson emphasised the importance of further attention being devoted to comparative pathology as the line of investigation most likely to advance [illegible] knowledge of the disease; it was specially important to [illegible] but at an earlier period, [illegible] eriological examination of [illegible] d in the intestine recalled [illegible] old-time theory of gout as [illegible] infection which was revived [illegible] pearances in the pancreatic [illegible] having significance in con-[illegible] symptom—gouty glycosuria. [illegible]—Dr. G. L. GULLAND and Dr. T. F S. CAVERHILL made some remarks and Dr. WATSON replied.

Dr. DAWSON TURNER read a paper on Radium. After recalling the steps which led to the discovery of radium he said that the forms of radiation which had been more or less recently made use of in medicine and surgery might be divided into five groups: (1) radiant heat rays; (2) ordinary light; (3) ultra-violet light; (4) Roentgen rays; and (5) radium emanations and rays. The *effluve* or brush discharge produced by high-frequency currents or by static electricity combined some of the properties of the last two. Dr. Turner then described the properties of Finsen and ultra-violet light and Roentgen rays. Radium gave off three kinds of rays as well as a radio-active emanation. It maintained itself constantly at a higher temperature than its surroundings and constantly emitted heat at an estimated rate of about 100 calories per gramme per hour, and was thus in its behaviour in outstanding antagonism to some of the fundamental physical laws. The emanation was of the nature of a luminous gas which could be condensed by intense cold and which imparted radio activity to objects in its path. More than two-thirds of the heating effect of radium were due to this self-produced emanation and one cubic centimetre of it would probably instantly melt down the glass tube which contained it. Pfeiffer and Friedberger had made experiments to determine the germicidal activity of radium. A three days' exposure to 25 milligrammes of radium bromide killed the organisms of cholera, typhoid fever, and anthrax. Though such result was not very encouraging it must be remembered that the Roentgen rays had no bactericidal effect though their beneficial effects in certain diseases could not be doubted. Dr. Turner then referred to the strong action which radium rays had on the human body and to the intractable ulcers which they produced. E. S. London has tested the effect of the rays on mice. Reddening of the ears and blinking of the eyes appeared on the third day; general torpor and paralysis followed with death on the fourth or fifth day. The skin and brain were the parts most affected. The chief physiological effects of radium, so far as at present known, might be arranged in three groups: (1) effects on the skin, producing inflammations and ulcers; (2) effects on the nervous system, producing paralysis and death; and (3) luminous effects produced in the partially blind. The radiations of radium had been tried in various diseases (chiefly those in which the Roentgen rays or Finsen light had been found useful)—e.g., cancer, rodent ulcer, and with distinct benefit in certain cases. The effects produced appeared to be similar to those produced by the Roentgen rays. If it could be obtained in larger quantities it might be employed in practical medicine and so do away with the bulky and costly x-ray installations; patients would be provided with a fragment of radium sealed in a tube which they could themselves apply to the affected part as directed. Radiographs of the teeth or bony walls of cavities could be taken by introducing a fragment of radium inside and placing the negatives outside. Deeply seated growths could be attacked by introducing into them by operation a small tube with the radio-active substance. A few grammes of radium would light up an x-ray screen brilliantly through an inch or more of lead. Dr. Turner also indicated how in many other ways radium might be employed and hoped that further investigation might result in great benefit to mankind. Several photographs taken by the radium rays were shown and specimens of radio-active pitch-blende and bromide of radium were exhibited.

Dr. C. B. KER read a communication on the Open-air Treatment of Broncho-pneumonia complicating Whooping-cough. He said that when he first took charge of the Edinburgh City Hospital seven years ago Sir Henry D. Littlejohn had drawn his attention to the very large death-rate from whooping-cough both in the city and in the hospital, and had expressed the hope that something might be done to reduce it. From that time Dr. Ker had had this object steadily in view and although he had not attained the success that might be desired he had at least had the satisfaction of making a considerable reduction in the death-rate of this most serious complication. Those who only saw whooping-cough in good general practice might not realise how serious it was liable to be in the children of the poor. For the five years ending 1900 the mortality in Edinburgh was 0 48 per 1000 persons living, or, in fact, nearly one-third of the whole zymotic death-rate was due to this disease and was chiefly confined to the lower classes. To endeavour to reduce the death-rate, however, the practical point was to find some method of successfully treating the broncho-pneumonia. It was obvious that in the treatment of an acute or subacute pulmonary inflammation, due almost certainly to the action of micro-organisms and in which toxæmia played a prominent part, everything should be done to maintain the patient's strength and to secure rest. In whooping-cough this was the great difficulty. Dr. Ker had at first tried nearly every remedy in whooping-cough. Belladonna was the only drug which he had much faith in and when pushed freely he thought it of great value in both ordinary and complicated cases of whooping-cough. Inhalations of creasote or eucalyptus he had found to be very disappointing. As regarded the broncho-pneumonia itself leeches were of undoubted value in cases with bad cyanosis. The ultimate routine was to rub the chest with stimulant oils and to apply a jacket of Gamgee tissue. In simple cases a little ipecacuanha wine was given and to the worst belladonna was administered freely. Under such treatment the death-rate still remained appallingly high and roughly speaking two children out of three who developed broncho-pneumonia died. The death-rate of broncho-pneumonia was 71 per cent. in the Edinburgh City Hospital and compared favourably with that of Glasgow—76 per cent. When the idea of putting the patients as far as possible in the open air occurred to Dr. Ker two facts influenced him. One was that he had often seen children who had struggled through a broncho-pneumonia succumb to phthisis or acute tuberculosis, and the other was that a certain number of patients used to contract broncho-pneumonia after admission. He had every reason to believe that the disease was infectious and to put the patients in the open air could hardly increase the death-rate. It would, indeed, probably diminish it by preventing the occurrence of pulmonary tubercle and also by lessening the number of cases which developed in hospital. Although he knew well that many, especially continental, writers had recommended the open air for children with pertussis, the occurrence of a pulmonary complication had been stated to be a special contra-indication of this treatment. Dr. Ker, however, decided to risk this method of treatment and he started with four cots which were placed in a sheltered position but completely uncovered and near the whooping-cough wards. The children were carried out and left for about six hours daily provided it did not rain. The cases were selected from the worst in the wards and indeed were regarded as hopeless. No bad results were noted and there was a very marked improvement in some of them. These cases had been under treatment for some time previously and so had not the advantage of the open air from the start. They therefore did not show the same recovery-rate that was reached later. At a subsequent period Dr. Ker was able to get all the cases in the wards out into the open air for several hours daily and cases admitted with broncho-pneumonia had the benefit of the new treatment from the time of admission. There was no contra-indication to the treatment except convulsions, but these latter patients were seldom kept indoors more than one or two days. The children were warmly covered and the chest was carefully protected with cotton-wool. Screens protected the windward side of the cots which were otherwise well sheltered. The main effects of the treatment were briefly as follows. The whoops were unaffected in number or severity. The appetite was ravenous, the general strength was much improved, and the children slept much better. If from wet weather they were kept indoors for one or two days (which seldom happened) they rapidly lost both appetite and sleep. Convulsions did not markedly decrease, but the whole nervous tone of the children seemed better and they were much less irritable. The temperature was not affected so rapidly as might have been imagined but there was usually a steady improvement in all the symptoms from the day they were first taken out. The improvement was very gradual but both temperature and respirations were considerably lower after a week's treatment. A minor advantage was the rest given to the wards for several hours daily so allowing them to be thoroughly ventilated. Lastly, notwithstanding that one patient developed broncho-pneumonia though out daily and that several had relapses it might be said broadly that broncho-pneumonia of hospital origin became extinct and tuberculous patients did better. The first trials of the treatment commenced in May, 1901, and were continued until Nov. 15th when, although the patients did not suffer, the nurses did on account of the continual dampness. To continue the treatment the sashes of all the windows in a ward of six beds were removed and several new windows were made so that two sides of the room were practically open. In this ward, heated by a good stove, most of the cases of broncho-pneumonia were treated during the winter. During the next summer this formed a convenient room for the worst cases to sleep in, the patients being carried daily into the open air. This treatment was continued till the late autumn of 1902 and again resumed in the summer of 1903. Dr. Ker then gave statistics as to cases and death-rate during the period under review and concluded by saying that of all those treated in the open air of 63 cases death occurred in 19, the percentage rate being 31·1, a great contrast to the 71 per cent. with which the treatment was started. The conclusion arrived at was that whereas two out of three of the patients used to die, now in the open-air treatment two out of three were saved.—Dr. JAMES CARMICHAEL, Dr. CAVERHILL, and Dr. H. HARVEY LITTLEJOHN having spoken, Dr. KER replied.

Mr. MILES and Mr. STRUTHERS contributed a paper entitled "Bennett's Fracture of the Base of the Metacarpal Bone of the Thumb" They stated that it was in 1881 that Professor E. H Bennett of Dublin had directed attention to this common form of injury to the thumb and he maintained that this was the most common simple fracture of the metacarpus. When the end of the thumb was struck the force was transmitted along the phalanges and metacarpal bone and the base of the latter was driven against the trapezium. Inspection of the metacarpal bone showed that there was a marked palmar projection at the base of the bone which carried a large part of the articular surface An antero posterior section through the joint between the metacarpal and the trapezium showed that the articular surface of the metacarpal did not bear equally in the whole extent on the trapezium. In full extension the metacarpal bore on the dorsal part of its articular surface while in full flexion it bore on the palmar part. Further, as the articular surface of the trapezium was convex from before backwards, a force acting in the long axis of the metacarpal would tend to drive the bone on to the back of the trapezium. When, therefore, the metacarpal was driven forcibly against the trapezium, as in a fall on to the point of the thumb, strain must be thrown on the prominent palmar basal projection The trapezium was firmly supported by the scaphoid, trapezoid, and second metacarpal bones and they in their turn by the radius, &c. Consequently the anterior basal projection of the metacarpal bone being relatively weak and badly supported, broke off when a fracturing force was applied in the long axis of the thumb. A continuance of the force would drive the metacarpal on to the back of the trapezium, leaving the anterior fragment with the portion of the articular surface which it carried *in situ*. The signs and symptoms of the injury were: (1) pain along the metacarpal of the thumb, most marked at the base; (2) swelling round the base of the bone and along the shaft, filling the hollow between the extensor tendons of the thumb; (3) very marked limitation of the range and strength of movement of the thumb, complete abduction and complete opposition being impossible; (4) a characteristic abnormal prominence at the base of the metacarpal bone of the thumb posteriorly; and (5) in recent cases the deformity could be readily reduced by extending and abducting the thumb while pressing the base of the metacarpal towards the palm. There was usually marked crepitus associated with this reduction. The deformity returned at once when extension and pressure were removed. In old-standing cases complete reduction might be impossible but grating was often felt due to irregularities in the articular surface. When seen early, or even in old-standing cases when possible, reduction must be effected and the thumb fixed in the reduced position for two or three weeks. A poroplastic splint moulded to the wrist and thumb might be applied for this purpose or the spécial splint recommended by Professor Bennett. Passive movement should be carried out very carefully at first and caution must be given to the patient not to put any strain on the thumb as the anterior fragment might very easily be detached. Manual workers should be forbidden to use the thumb for five or six weeks from the date of the accident. When efficient treatment was carried out early complete recovery was to be expected. Deformity must always remain when patients did not present themselves for some weeks after receipt of the injury. The ultimate results as regards power and range of movement of the thumb, even in cases where considerable deformity remained, were good, though, perhaps, the grip of the affected hand was slightly weaker than was that of the sound side. Mr. Miles and Mr. Struthers recorded 14 cases in all, two being in females and 12 in males; the ages varied from 19 to 60 years. In six of the cases the left thumb was affected, in seven the right, and in one case the side was not stated. Seven cases were due to falls against the thumb, two to striking blows while fighting, one to striking the thumb against a wall in a struggle, one to striking the thumb against a door in the dark, one to heavy bags of sugar falling on the thumb, while in two the cause was not stated. Numerous specimens of the fracture were shown as well as radiograms of the cases exhibited earlier in the evening.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN —A meeting of this society was held on Nov. 20th, Dr. H R. Hutton (Manchester) being in the chair.—Dr. James Taylor showed an anomalous case of Diplegia. A child, aged four years, soon after an operation for an abscess on the right side of the neck, became altered mentally and lost the power of walking Additional symptoms found on examination were occasional regurgitation of fluids through the nose, squinting, absence of knee-jerks, and marked incoördination. Most of the symptoms had passed off under treatment but the degree of intelligence was not yet quite up to the normal standard. The diagnosis made at first was one of diphtheritic paralysis, although there was no history of sore throat. He was now inclined to look on the condition as some other form of toxæmia which had led to alterations in the cerebral cortex.—Dr. G. E Shuttleworth had never seen mental deterioration follow immediately on diphtheria but he recalled one case in which an attack of diphtheritic paralysis was said to be the precursor of mental impairment In the present case he thought that some previous mental weakness had been aggravated by the acute illness —Dr Fletcher Beach regarded the case as one of cerebral diplegia rather than diphtheritic paralysis —Mr. Francis Jaffrey showed a child, aged 18 months, suffering from Multiple Subcutaneous Tuberculous Nodules. The history of the case was that these nodules first appeared when the child was vaccinated at the age of three months. Several of the nodules had softened and burst. He found that vaccination was usually assigned as the cause of these nodules by mothers and therefore advised the postponement of vaccination if any nodules were present. —Dr. C W. Chapman had had a case of similar nodules in an adult which was completely cured by the internal administration of iodoform.—Dr E Cantley recalled a case in a baby ten months old, who died ten weeks later from tuberculous meningitis —Mr. J. P. Lockhart Mummery suggested the excision of one of the nodules to determine whether it was a pure tuberculous affection or a mixed one. —Dr. G E C. Pritchard had seen a case in a woman which had lasted for two years and which was finally cured by arsenic.—Dr. G. A Sutherland showed twin sisters, aged five years, who were the subjects of Idioglossia.—Dr. Leonard G. Guthrie remarked on the strong family likeness which such cases showed, although the particular defects were not the same —Dr. F. Parkes Weber referred to a case under his own care where idioglossia had followed on brain disease in early life. He thought that certainly the motor centres had been affected.—Dr. Henry Ashby (Manchester) did not like the word "idioglossia" and preferred to describe the condition simply as defective speech. Such a condition was common in the special schools for backward children. He thought that one factor which was present was want of attention and that this was coupled with a certain amount of mental backwardness. —Dr. Shuttleworth agreed with the last speaker as to the frequency of defects of speech in backward children. There was an element of laziness about the condition.—Dr. Hutton thought that the trouble was due to defective hearing and defective observation, coupled with a general lack of energy.—Dr. George Carpenter showed: (1) a case of Premature Greyness of the Hair in a female child, aged 11 years; the condition was not inherited and she was in other respects a perfectly healthy child; and (2) a case of General Paralysis of the Insane in a girl, aged 11 years The symptoms dated back more than a year.—Dr. Fletcher Beach had collected notes of 200 cases of this affection and in the majority of these syphilis was present. In children general paralysis usually developed at the time of the second dentition.—Dr. Taylor said that in his experience such cases commenced with gradual dementia and had associated fits, tremors, inactive pupils, and excessive or absent knee jerks. In the majority there was the definite association with hereditary syphilis. The physical conditions in children were the same as in adults but the mental conditions were different—namely, simple dementia in the former without delusions of grandeur.—Mr. Douglas Drew gave an account of three cases of Sarcomata operated on.—Dr. Pritchard showed an infant, aged five months, suffering from congenital heart disease with dysphagia. The difficulty in swallowing appeared to be due to incoördination of the muscles of deglutition. The child was gradually sinking into a marasmic condition although the cardiac murmur was diminishing.—Dr. Cautley read a paper on an Unusual Case of Congenital Hypertrophic Stenosis of the Pylorus. The patient died at the age of 14 weeks and the pylorus presented the usual characteristics but both small and large intestines contained a considerable quantity of normal fœces. While under observation he had gained 13 ounces in weight during one period of two weeks and six ounces during another period of one week. During life peristalsis was noted on one occasion only, the pylorus was palpable, the stomach was moderately dilated, and vomiting was present but was not characteristic. There was not marked constipation and even eight days before death a large almost normal stool was passed. Dr. Cautley pointed out the difficulties of diagnosis in a case of this nature and thought that many such were overlooked. Operation might have saved the child's life but the case was regarded as a somewhat mild form of the condition and later the acute diarrhœa rendered operative interference inadvisable. He thought that the absence of characteristic vomiting in this instance might be urged as an argument against the view that the hypertrophy was due to spasm.—Mr. Clinton T. Dent related two cases of the same disease successfully treated by pyloroplasty —Dr. Alexander Morison showed the Stomach of a Child, aged two months, in which hypertrophic stenosis had been diagnosed and the patient had been admitted for operation. While under observation very little vomiting occurred and only occasionally was gastric peristalsis exhibited. Operation was deferred and the patient was discharged but returned five days later in a collapsed condition with a temperature of 90° F. and died soon afterwards. At the necropsy the pylorus was found to be large, long, and hard.—Mr. J. Howell Evans and Dr. G. de B. Turtle also gave accounts of similar cases which had come under their notice.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Nov. 25th, Dr. J. Nigel Stark, the President, being in the chair.—After an exhibition of specimens a discussion upon Accouchement Forcé, with special reference to the instrument of Bossi, was opened by Dr. Robert Jardine and Dr. T. M. Munro Kerr. Dr. Jardine remarked that the operation accouchement forcé was almost entirely done in the interests of the mother save when the cord prolapsed very early in the course of labour, when the membranes ruptured before labour began and the pressure was detrimental to the child. The operation was most frequently done in the interests of the mother for eclampsia. In pernicious vomiting, heart disease, chorea, and insanity it might be necessary. In cases of complete occlusion of the os Dr. Jardine had performed it upon five or six occasions. The methods of performing the operation were then discussed. The extraction of the child was not touched upon but only the dilatation of the cervix. It was noted that when the cervix was not taken up but retained its full length it was more difficult to dilate than when it was so taken up as found in those who had about reached term, and especially in those where labour had begun. The dilatation might be carried out forcibly or by the aid of incisions. Digital dilatation was mentioned as being the oldest method. If the cervix was soft and yielding full dilatation could be obtained in 15 or 20 minutes. The strictest aseptic precautions had to be observed. A continuous hot douche during the process was beneficial. Chloroform should be administered not only to prevent pain but to assist the relaxation of the cervix. Though the lithotomy position was the more suitable the lateral was also convenient. After dilatation delivery was completed in a variety of ways according to the nature of the case. With regard to dilatation by means of instruments, in some cases if the cervix was very soft hydrostatic bags might be used. This was a slower method and where time was of great importance the method was not very suitable Hegar's dilators were useful to begin the operation with when a finger could not be inserted. Expanding dilators were the most useful and of these Bossi's or a modification was the best. (The various varieties of the instrument were shown.) The eight-pronged instrument of Frommer was recommended. The dilatation must be continuous and slow. From 20 to 30 minutes were required for the full dilatation of the cervix. If carefully used there was very little tearing of the cervix. Dr. Jardine then related the histories of several cases in illustration. The incision method was next reviewed. Dr. Jardine had done this operation quite a number of times in cases of eclampsia. He had practised the making of four incisions in the cervix, further dilatation being obtained by the hand. In some cases the cervix had been subsequently stitched, while in others where there was no hæmorrhage the cervix was left alone; the after results had been quite as good in the latter. In conclusion, Dr. Jardine stated that he thought Bossi's dilator a most useful instrument, but in a case where the cervix was extremely rigid he would prefer the incision method as causing less shock.—Dr. Kerr limited himself to considering the methods of forcibly enlarging the cervical canal. He described briefly the methods of manual dilatation, giving his opinion that by this method safely to dilate and to extract a child when the cervix was not taken up required on an average 40 minutes in a multipara and 60 minutes in a primipara. It was on the whole the safest but certainly was the slowest method. As regards dilatation with Bossi's or Frommer's dilator, he came to the following conclusions: (1) when the cervix was obliterated and the os would admit the dilator without difficulty dilatation could be carried out in about 25 minutes and there would be little or no laceration of the cervix; (2) in cases where the pregnancy had advanced to or near term, even although the cervix was not obliterated, dilatation might be accomplished with comparative safety to the cervix provided care, time, and patience were expended in the operation; and (3) in cases of early pregnancy with the cervix unobliterated there was decided risk of extensive lacerations even although the greatest care was taken. Dr. Kerr then considered the methods of enlarging the canal by making deep incisions and gave examples to show that the child could be extracted in four minutes. He also described a case of Cæsarean section upon Dührssen's method performed with success at the fifth month of pregnancy.—Dr. W. L. Reid had met with few cases where manual dilatation had failed but the method was not rapid.—Dr. W. B. Armstrong, Dr. J. W. Russell, and Dr. G. Scott MacGregor having spoken, Dr. A. MacLennan mentioned that though he had had no experience of the Bossi instrument he had performed Dührssen's operation upon a primipara at full term for a rigid cervix. The suturing of the anterior incision had been readily performed without assistance in a private house.—Dr. Gardiner thought that the general practitioner would prefer to use Bossi's dilator to performing vaginal Cæsarean section, and the President having remarked that there was a danger in these days of midwifery becoming too meddlesome Dr. Jardine and Dr. Kerr replied.

THERAPEUTICAL SOCIETY.—A meeting of this society was held in the Apothecaries' Hall, Blackfriars, on Nov 24th, Sir William Thiselton-Dyer, the President, being in the chair.—Dr. R. B. Wild of Manchester read a paper on the Pharmacology of the Saponins, illustrated by diagrams and tracings, and said that the saponins were bodies found in several drugs, as senega, sarsaparilla, digitalis, and quillaia bark. They had the property of forming emulsions with water but were poisonous hypodermically. Even in very diluted doses they caused decided contraction of the blood-vessels and a frog's heart gave small, quick, regular beats without becoming thoroughly relaxed, but with a stronger solution it stopped quickly in a contracted state. First, it was believed that quillaia bark was often used to form an emulsion, even when not prescribed, but if there was any lesion of the stomach or intestines this might become dangerous; secondly, it was possible that all these drugs containing saponins might, like sarsaparilla, be useful in tertiary syphilis, but there was reason to believe that sarsaparilla deteriorated rapidly by keeping and old samples might be entirely inert; and thirdly, saponins were not antagonistic to digitalis, but resembled it in their power of contracting the blood-vessels and the cardiac muscle, but they did not cause the slowing of the beats and the prolongation of the systole as did digitalis.—Dr. Soper said that, from this most interesting paper, it would appear that saponin acted similarly to adrenalin.—Dr. Sainsbury thought that saponin was similar in its action to digitalis and might be useful in heart disease but that it certainly ought not to be used as a mere emulsifying agent.—Dr. Wild, in reply, said that saponin had not the local action of adrenalin and it differed from digitalis inasmuch as the blood pressure was actually diminished after its use from the heart becoming weaker, although the blood-vessels were contracted by it.—The President thanked Dr. Wild for his most interesting and important paper and said that the toxic properties of the saponins had not been fully appreciated or drugs containing them would not be so often employed as emulsifying agents.—Professor Wyndham Dunstan, F.R.S., gave an account of the chemical investigations now proceeding at the Imperial Institute at the instance of the Government of India of the various Indian Aconites and their Alkaloids. The properties of the three distinct alkaloids which had been isolated from the three characteristic aconites known in European medicine were first noticed: aconitine from aconitum napellus, japaconitine from aconitum japonicum or Fischeri, and pseudaconitine from the aconitum ferox usually found in European medicine. These three alkaloids, though chemically different, belonged to the same type and exerted a physiological action which only differed in degree. The Indian aconites, varieties of aconitum napellus and aconitum ferox, which had so far been examined by Professor Dunstan and Mr. Andrews, had furnished pseudaconitine and two new alkaloids which had been named indaconitine and bikhaconitine. In chemical properties and in physiological action and toxicity the new alkaloids closely resembled pseudaconitine. The botany of these aconites had been studied at Kew by Dr. O. Stapf and the physiological action of the alkaloids had been obtained from them by Professor Cash. The aconitum palmatum of India has furnished a new non-poisonous alkaloid to which the name of palmatisine had been given. It was closely allied to the alkaloid atisine derived from another Indian species, the aconitum heterophyllum.—Dr. Stapf of the Royal Gardens, Kew, said that the aconites had long been known as most powerful poisons, but the plants had not been accurately determined till quite recently, when Professor Dunstan found that different alkaloids [illegible] aconite all called aco[illegible] ascertained that the [illegible] Sikkim were deri[illegible] from Kumaon were [illegible] and those from Garhwal from the aconitum elcinorrhizum; the aconitum spicatum yielded bikhaconitine, the other two species pseudaconitine. In the Punjab the aconite roots were brought from the mountains north of Peshawar and these were derived from the aconitum chassnanthum, giving a new alkaloid, indaconitine. The aconitum napellus had not been found in India. Dr. Stapf further said that a non-poisonous aconite gave the Judwar Kutai, the zedoary of the ancients, the tubers of which closely resembled those of aconitum heterophylloides found in East Nepaul, but there were at least 20 species of aconites in India.

GLASGOW SOUTHERN MEDICAL SOCIETY.—A meeting of this society took place on Nov. 26th, Mr. Thomas Richmond, the President, being in the chair.—Mr. John Carswell read a paper on Alcohol and Preventive Medicine. Mr. Carswell referred to the diminution of the death-rate in Glasgow during the last 30 years. This diminution, he said, had occurred in every district with the exception of two—viz., Brownfield and Cowcaddens. The three worst districts 30 years ago were Bridgegate and the Wynds, High-street and the closes east of High-street, and High-street and the closes west of that thoroughfare. These three districts had largely diminished in population since, while the populations of Cowcaddens and Brownfield had not diminished. Comparing these five districts Mr. Carswell pointed out that the character of the population had improved in all the districts which showed a lower death-rate and had declined in the [illegible] death-rate. He pointed to [illegible] death-rate which followed [illegible] gate and clearing out of the "rookeries." The saving of life from zymotic diseases was, he said, but a small part of the work resulting from proper sanitary control and he pointed to the death-rates of 1891 and 1900 which showed a reduction of 0·318 per 1000 from zymotic diseases, while the reduction in the death rate from respiratory diseases had amounted to 2·372 per 1000. Referring to the persistently insanitary districts of Glasgow Mr. Carswell considered that there was some reason for their lack of improvement which required elucidation. [illegible] which kept the poor together; [illegible] habits of the people or it m[illegible] which induced them to huddle together. They were forced into the worst districts, having been ejected from better localities either from inability to pay the rent demanded or on account of disorderliness. He believed the crux of the position lay in the one word—poverty. He recognised two classes of poverty (1) primary poverty, in which there was absolute insufficiency of means, and (2) secondary poverty, which was induced by misfortune, ignorance, drink, and vice. Speaking on the part alcohol played in the matter, Mr. Carswell was very optimistic; acknowledging that drunkenness caused poverty, failure of nutrition, and serious disorganisation of mind and character, he did not believe that the craving for alcohol was inherited or that alcoholism in the mother could produce serious mischief in the unborn infant. He considered that the doctrine that the nutritional defect in the child was caused by alcoholism in the parents was very disheartening and he did not believe that acquired vices were transmitted to the offspring. He instanced the improvement of the children of alcoholics by better environment. Proper care in childhood was, he believed, a factor in checking the degeneracy of manhood. Reduction in the death-rate had not, he thought, favoured an increase in adolescent insanity. He advocated increased interest in the care of children and would favour the establishment of a "child welfare society." He pointed with satisfaction to the good effect of supplying children of the poor with food while attending school. Mr. Carswell deplored the "blank apathy" in the lives of the poor and hailed with delight the advent of any demagogue with power to awaken conscience in the poverty stricken. He thought that this was the way by which the poor might be made to abandon drink and to awaken to fresh interests, their own included.—Considerable discussion followed and was taken part in by Dr. A. K. Chalmers, Mr. A. Miller, Dr. D. Macgilvray, and Dr. T. Forrest.—Mr. J. V. Wallace thought that the improvement in the condition of the people was due not so much to sanitary science as to the spread of education.—Dr. Carstairs C. Douglas failed to see how any amount of erudition could conduce to longevity when there was a cesspool under the floor of the living room.—On the motion of the President, Mr. Carswell was thanked for his address.

LIVERPOOL MEDICAL INSTITUTION.—A meeting of this society was held on Dec. 3rd, Dr. W. Macfie Campbell being in the chair.—Mr. F. W. Bailey read a note on the History of the Stethoscope and showed an example of Laennec's instrument.—Dr. K. A. Grossmann gave a communication on the Occurrence of Double Focus in the Human Lens as found by him in five patients during the last two years. The lens was divided by a sharp line into two areas of different refraction, in four out of the [illegible] The nature of this hitherto unde[illegible]hods employed in examining it [illegible] by a number of diagrams and lantern slides; two of the patients were shown, a man, aged 20 years, and a female, aged 45 years. Dr. Grossmann also demonstrated a patient in whose left eye the ocular conjunctiva was the seat of a number of large papillomata without any catarrhal or other discharge.—Mr. G. P. Newbolt read notes on Osteotomy of the Upper End of the Femur, illustrating his remarks by lantern slides. He laid stress upon the following points: (1) all cases of marked tuberculous disease of the hip should be treated on an abductor frame in order to avoid the adductor deformity almost invariably present; (2) in all cases of ankylosis or of short strong fibrous union with deformity osteotomy of the upper end of the femur should be performed; (3) Adams's operation of sawing through the neck of the femur, when present, was to be recommended, when absent transtrochanteric osteotomy might be done; Gant's operation—infratrochanteric osteotomy—was not so good though it avoided sawing through a big mass of bone; and (4) open incision with removal of the upper end of the bone was sometimes necessary; tenotomy or rupture of the adductors was often needed in addition. Septic sinuses about the hip offered no bar to osteotomies in their neighbourhood.—Dr. J. C. M. Given reported a case of Hyoscin Poisoning.—Dr. C. A. Hill read a note upon Enlargement of the Thyroid at Puberty. Two cases were narrated in which pressure symptoms arose. Both improved under the exhibition of thyroglandin.—The various communications were commented upon by Dr. Campbell, Mr. Newbolt, Mr. T. C. Litler Jones, Dr. W. B. Warrington, Dr. Given, Dr. A. S. F. Grünbaum, and Dr. J. J. O'Hagan.

ABERDEEN UNIVERSITY MEDICAL SOCIETY.—A meeting of this society was held on Dec. 4th.—Mr. F. Anderson read a paper on Diabetes. After discussing the various causes he came to the conclusion that the only satisfactory explanation was that diabetes was due to pancreatic disease. An apparently normal pancreas showed on microscopic examination degeneration of the islands of Langerhans in a good many cases. In treatment diet was of the utmost importance and for the first few days ought to be directed to the removal of glycogen from the liver. Thereafter on a special diet in which milk largely predominated the patient's urine should show no increase in sugar. Exercise of all sorts was necessary in suitable cases to keep the patient "fit" or massage might be resorted to were exercise not permissible. The best drug was liquor morphinæ hydrochloratis in big doses of 110 minims three times a day. In one case 150 minims three times a day had been given. Uranium nitrate had also some reputation.—Mr. J. S. Gray followed with a paper on Blood-letting. Beginning by a rapid survey of its employment in ancient times he went on to its applications at the present day. Its uses now were mainly limited to relieving local inflammation, mitral incompetence, acute pneumonia, and the exanthematous fevers, but probably at no distant date a wider field of application would be found for it.—Interesting discussions followed each paper.

EDINBURGH ROYAL MEDICAL SOCIETY.—A meeting of this society was held on Dec. 4th, Dr. H. D. Shepherd being in the chair.—A dissertation on Puerperal Eclampsia was read by Dr. B. P. Watson. He described the clinical varieties of the condition and briefly discussed the differential diagnosis, the causes of death, and the post-mortem appearances On the question of etiology he mentioned as inadequate the theories that uræmia, cerebral anæmia, and mere nervous excitability were the causes of the disease. The most plausible theories were those of Bouchard and Nicholson, that of Bouchard being that the disease was really an auto-intoxication, while Nicholson believed that inadequacy of the thyroid secretion was the primary cause of the disease. This latter theory, Dr. Watson held, would explain the symptoms in at least some of the cases; and he laid stress on the use of thyroid extract for prophylaxis and treatment.—Dr. D. C. L. Fitzwilliams read notes of a case operated on for Gall-stones on which a subsequent gastro-enterostomy was performed.

ROCHDALE AND DISTRICT MEDICAL SOCIETY.—A meeting of this society was held on Dec 3rd.—Dr. Charles H. Melland gave a lantern demonstration of micro-photographs illustrating the Characters of the Blood in Health and Disease. The first series of slides showed the elements of normal blood. These were followed by the various types of anæmia and in this connexion the progress towards recovery in pernicious anæmia was demonstrated. Leucocytosis and the different varieties of leucocythæmia and finally the parasite of malaria were shown.—Mr. G. W. Malim and Mr. W. Stanwell expressed the thanks of the society to Dr. Melland for his demonstration and congratulated him on the beauty of his preparations.

Reviews and Notices of Books.

Laboratory Studies in Tropical Medicine. By C. W. DANIELS, M B Cantab., late Medical Superintendent of the London School of Tropical Medicine, Director of the Institute for Medical Research, Federated Malay States. London: John Bale, Sons, and Danielsson, Limited. 1903 Pp. 384. Price 15*s*. net.

"THE object of this work is to assist practitioners in the tropics in the application of simple laboratory methods to the practice of medicine." The author of the treatise brings to the fulfilment of the task that he has thus set before him the special qualification of a far-reaching experience gathered from several tropical countries. How well he has succeeded will be gathered from this brief review. The worker in the tropics, unless he resides, perchance, in the one or two presidency towns, will have no equipped laboratory to resort to, but Dr. Daniels in his opening chapter tells how this deficiency can be remedied. Minute details as to the working of the microscope are laid down; even such minutiæ as, for instance, the proper treatment of cover glasses are not forgotten. Next we find the various methods for the preparation of blood films, fæces, mosquitoes, and bacteriological material adequately described. The points with regard to post-mortem examinations that are peculiar to the tropics are narrated; minute directions as to the preparation for the examination of mosquitoes are then given, whilst it is well pointed out with regard to stains and other reagents that these should after importation in solid or concentrated form be kept previously to use in these conditions.

We next come to the investigation of the blood, the most important subject of all in the tropics. The methods of examination of fresh blood are fully set forth, that of dried films and their fixation is detailed, and the best method of staining is pointed out. Dr. Daniels next passes on to the detailed examination of the various parasites found in the blood, such as the protozoa of malaria, the trypanosomes, the bilharzia, and the filaria. With regard to malaria, it may safely be said that no clearer or more lucid exposition of this subject is extant, whilst the same thoroughness and exposition of detail characterise the account of the examination of the other parasites, the whole subject being completed by the information given as to the methods for demonstration of the presence or absence of the specific agglutinins causing the agglutination of the corresponding micro-organism. Dr. Daniels has enlisted the services of Mr. Theobald in the description of the various diptera; the reader is taught next how to prepare the mosquito for demonstration, whilst its anatomy and the methods of its dissection are minutely given. The next chapter deals with the demonstration of the development of malaria parasites in mosquitoes. Their eggs and larvæ are detailed and the subject is concluded with an account of the excellent mosquito-box devised by Dr. Louis Sambon for transmission of infected mosquitoes.

The matter of pigmentary deposits is fully entered into, as are also the subjects of "cloudy swelling," "fatty degeneration" (so important a factor in many tropical diseases, such as yellow fever and ankylostomiasis), "amyloid degeneration," and "fibrous degeneration." The examination of the fæces receives complete notice and especially valuable is the description of the various ova of parasites; some excellent differentiating points of the various species met with are given. In the next chapter the facts relating to the examination of the urine are dealt with. A very useful exposition follows on the subject of bacteriology in the tropics and in this chapter we find the difficulties experienced by workers in those regions on this subject lessened as much as possible. The practical experience of the author is well shown by his statement concerning the difficulty attending the making of nutrient broth in the tropics and he recommends meat extracts as efficient substitutes. The whole of this part of the subject is treated in a manner which will be found of great value to anyone engaged in investigating bacteria in hot climates. The concluding chapter of the work is taken up with the means of measuring the various eggs, parasites, and normal and subnormal cells. A useful appendix of the instruments and reagents necessary for laboratory work completes the volume. Finally we may draw attention to the excellent plates illustrating the quartan and tertian parasites, the various corpuscles of the blood, the trypanosomata, the spirillum, and the amœba coli.

We consider this work a most valuable addition to medical literature. There is no "padding" in its pages but each chapter reveals the large experience of the author in the subjects of which he treats. The London School of Tropical Medicine sustained a great loss when Dr. Daniels left it to take up the post of director of the Institute for Medical Research in the Federated Malay States. In this case most assuredly what was the loss of the school was the gain of Malay.

Post-mortem Pathology: A Manual of Post-mortem Examinations and the Interpretations to be drawn therefrom. By HENRY W. CATTELL, A.M., M.D With 612 Illustrations. London and Philadelphia: J. B. Lippincott Company. 1903 Pp. 372.

THIS work is a practical treatise on the methods of performing post-mortem examinations and includes some account of the morbid conditions of the organs usually found. The author in his preface states that it has been written "for those who ought to make autopsies but do not, and for those of whom such investigations are required, as medical students, hospital interns, and coroners' physicians." It is obviously the outcome of a very large practical experience of post-mortem work and those sections of the book dealing with instruments, technique, the removal of organs, and the preparation of specimens are useful, practical, and clear. The general methods recommended and described are those used by most German and English pathologists, and the author acknowledges his indebtedness to Orth's "Pathologisch-Anatomische Diagnostik" and to Nauwerck's "Sections-Technik." The descriptions of routine incisions and manipulations are full and lucid and are most lavishly illustrated; thus there are nine large illustrations of the method of removal of the brain and seven of removal of the spinal cord. The author insists on the importance of systematic examination of organs and of descriptive records of the appearances observed, and we quite agree with him that printed forms are cramping to description, though often useful. The chapter devoted to the description of post-mortem instruments and the methods of using them is good, while that dealing with the care of the hands and the treatment of post-mortem wounds contains some useful hints and warnings. In the chapter on the examination of the exterior of the body the author suggests that when surgeons remove organs from patients they should tattoo on the skin near their incision the initial letter of the part removed followed by the sign minus, for the information of other surgeons under whose care the patient may subsequently pass, or, perhaps, of the pathologist—a suggestion which we imagine will hardly commend itself to surgeons or to their patients. There is a chapter on comparative post-mortem examinations, with directions as to the methods of examining the viscera of horses, oxen, swine, dogs, and cats.

The chapters dealing with the pathological conditions of the organs are disappointing when compared with those devoted to methods. The descriptions are in nearly all cases brief and scanty, and in many comprise little more than mere lists of the conditions affecting the organ under consideration. There are no illustrations of morbid organs and we cannot but feel that some of the illustrations so lavishly allotted to the methods might with great advantage have been used for this purpose. Moreover, at the commencement of the account of each morbid condition is given a numbered list of causes considered rather from the clinical than from the pathological standpoint, which seems somewhat unnecessary in a work of this kind. The brevity of description of diseased organs seriously detracts from the value of the book. Thus, for example, only one page is devoted to the description of all the varieties of pulmonary tuberculosis, and from too much conciseness incomplete and misleading statements arise; for instance, in the description of lobar pneumonia we find, "Lobar pneumonia occurs in adult life, in males, in infectious diseases, in alcoholism after exposure to cold and wet"; and again: "Usually the right lung is affected, the process being confined to the lower lobe," from which it might be concluded that pneumonia was unknown in women and children and never attacked the apices.

The literary style cannot be commended and the book shows evidence of hasty preparation. Repetition often occurs, sentences are frequently clipped to mere phrases, and misstatements or misprints are not uncommon, among which may be mentioned "the secretion of the thymus," "caput of Medusa," and "chronic involvement of the stomach" for what is presumably "chronic engorgement." "Secant" for pathologist is new to us, while the frequent use of the word "posted" to indicate the performance of a post-mortem examination, though possibly a convenient colloquialism, as the author avers, is not elegant and, to say the least, is ambiguous.

The illustrations are good and it is to be regretted that the descriptive sections of the book are not up to the excellent level of those devoted to pathological methods.

LIBRARY TABLE.

Aids to Physiology. By PEYTON T. B. BEALE, F.R.C.S. Eng. London: Baillière, Tindall, and Cox. 1903. *Pp.* 239. Price 3*s* 6*d*.—This little book is founded on the "Aids" written many years ago by Professor B. Thompson Lowne whose work though, like the present one, small in compass contained in a compressed form a considerable quantity of information. Mr. Beale has made many minor additions in nearly every chapter but especially in that devoted to the nervous system, making it more in harmony with recent advances but not materially altering the character of the work which will be found a useful reminder of many facts to the student who has diligently attended the lectures and the demonstrations that are now given in every medical school. It should only be used as a reminder and should not be regarded as a book from which physiology can be learned even for an examination.

Twentieth Century Free Trade: A Non-political View of the Question. By E. H. SKRINE, B.A. Oxon., Planter, Trader, and Agriculturist. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1903. *Pp.* 27. *Price* 6*d*.—The author of this pamphlet, which, he states, has reached a second edition, calls our attention especially to the portions dealing with his censorship of tea. He deprecates the over taxation of a "necessary beverage—tea" and thinks that the Government should have appointed "one or two" tea experts as censors with a free hand to examine any lots of tea of suspected quality imported and to veto the landing of them if pronounced unfit for consumption, so that the medical outcry against tea might have become "devoid of foundation." Whether tea is a "necessary beverage" is questionable, but we are of opinion that all foodstuffs intended for human consumption and unfit for it should be effectively condemned as soon as possible. Thus we are mainly in accord with Mr. Skrine but we think that some of his other statements require modification. For instance, he states that "tea as an industry is practically limited to India and Ceylon." With this we cannot agree. So far as the United Kingdom is concerned, of the six pounds per head per annum consumed little more than one-third of a pound is Chinese; nevertheless, there are many persons to whose taste the delicate and distinctive flavour and quality of China teas appeal. In a report to the House of Commons in 1818 it was stated that millions of pounds' weight of sloe, liquorice, and ash-tree leaves were every year mixed with Chinese teas in England, but *tempora mutantur nos et mutamur in illis*. We may digress to say that Mr. Skrine advocates the establishment of a revised and equitable schedule of food taxes which shall remain unaltered but, as we have said, times change and necessities change, and we would ask the author his own question, "Is not this world one continuous change and revival?" The author states that "excess of wealth without specific duties to employ that wealth on becomes in the hands of a weak or idle man as much a disease as fat in the body is a disease." But then we are not willing to allow that fat in the body is always a disease. A writer in Quain's dictionary says, "It is an excellent packing material in the body, being light, soft, and elastic." We can perhaps guess what Mr. Skrine means but in a discussion of this kind terms should be carefully chosen to avoid confusion. For instance, Mr. Skrine also asks on p. 10, "Has the last remnant of protection been banished from our fiscal system when we have just seen reimposed and again withdrawn a war tax on the bread of the people?" On p. 13 he says, "The late Boer war duty did not affect the price of the loaf at all." It is difficult therefore for us to see how it taxed the "bread of the people." Reverting to the subject of tea, we will not say, however, that a discussion of the duty on tea is unimportant as it was the duty imposed on tea in America in 1767 which was one of the causes of the revolutionary war which ended in the independence of the United States.

Knowledge Diary and Scientific Handbook for 1904. London: *Knowledge* Office. Price 3*s.* net.—This excellent diary and scientific handbook is now in its fourth year of publication and will be found of great use by students and workers in almost any branch of science. The size of the book is six inches by nine inches and a blank page is apportioned to each day of the year. Space is provided for monthly notes, letters received and despatched, cash account, and memoranda, as well as for an index to the diary. The letterpress consists of practical articles by competent writers on astronomy, microscopy, natural history, meteorology, and optics. Celestial phenomena are adequately dealt with and there are a number of maps showing the night sky for each month of the year and the paths of the planets, with a descriptive account of the constellations and the principal stars. Not the least useful part of the book consists of the tables relating to money, measures, specific gravity, and such like things, items which the busy man sometimes forgets for the moment. A photoprint of Charles Darwin forms a frontispiece.

Diaries for 1904. John Walker and Company, Limited, Farringdon House, Warwick-lane, E.C.—These well-known
diaries are an *édition de luxe* without being expensive.
the diffse for 1904 are quite up to the usual high standard of
parasite oance. The Golfer's Diary is likely to be useful to
Mr. W. Stan·ho take an interest in this popular pastime. It
Melland for hi a concise form the rules and etiquette of the
beauty of his pr particulars of the varieties and prices of the
ucluded in the list of "Books, etc., received,"
r of Dec 5th, p. 1627.

Reviews Anal *Pocket-book or Daily and Hourly*
for 1904. Rudall, Carte, and Co., 23,
Laboratory Studies in This useful diary is constructed accord-
DANIELS, M B Cantab., late Sir Julius Benedict and has what
the London School of Tro "a week in an o ning." The
Institute for Medical Reseao seven columns each headed with
London: John Bale, Sons, in of each page the hours from
1903 Pp. 384. Price 15*s.* ne l. The diary for the year is
"THE object of this work is to a of which can be inset into a
tropics in the application of simpl l. This diary is particularly
the practice of medicine." The sional engagements and we
brings to the fulfilment of the task tself to every professional
before him the special qualification of and methodical in all
ence gathered from several tropical
he has succeeded will be gathered fr

JOURNALS AND MAGAZINES.

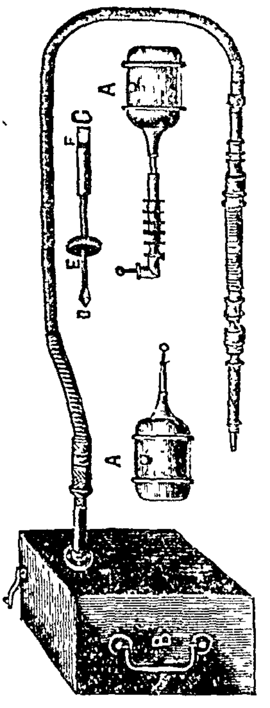
The Practitioner.—The December number of this magazine starts with a most attractive contribution from the pen of Dr. G. H. Savage. This is a lecture on the Mental Disorders associated with Decay and, like everything that Dr. Savage writes, it is full of interesting and *apropos* cases and anecdotes. Dr. Savage has the rare gift of presenting lightly the teachings that have only been gained by long and deep experience. His readers are nearly as much entertained as they are instructed. The *Practitioner* this month has other admirable articles. Mr. B. G. A. Moynihan discusses the question of Operation in Cancer of the Stomach. He quotes many foreign statistics. The conclusion arrived at is that ten months' longer life may be expected from gastrectomy than from gastro-jejunostomy. Articles by Dr. G. F. Still upon Diseases of Children, Dr. A. S. F. Grünbaum on Immunity, and Mr. Herbert S. French upon Clinical Examination of Gastric Contents are all worthy of perusal.

Pall Mall Magazine.—The Christmas number of the *Pall Mall Magazine* contains a great deal of readable matter if no particularly striking contributions. "Blue Roses," by Netta Syrett, is a pretty and humorous fairy story, with excellent illustrations by G. N. Sime. The Rebuilding of London, by "C. M.," illustrated by H. Fitton, forms an interesting lament over the hourly increasing destruction of old London, while the description of Lansdowne House, by E. M. Jessop, reveals the interior, with the agency of good photographs, of one of the stateliest of English domestic palaces. A causerie by W. L. Alden and stories by Fielding Hall and A. A. Vachell make for entertainment, but stories by G. B. Burgin and H. B. Marriott-Watson are not so happy.

New Inventions.

A NEW PERFORATOR FOR SURGICAL AND DENTAL OPERATIONS.

THE instrument of which we append an illustration was invented by M. S. Bercut who is surgeon-dentist to the École Polytechnique, Paris, in collaboration with M. A. Donat who was formerly a pupil at the School of Horology at Cluses. It was exhibited at one of the November meetings of the Society of Sciences in Paris by M. Lannelongue. The essential parts of the apparatus are a metallic box containing a clock-work movement which is made in two forms A and B, A being the smaller and more portable. To this can be adapted a stem C which will carry drills of various kinds, one of which is shown at D, fitted to a stem, E F, a small saw, polishing brushes, or discs. The form B being larger and more powerful than A carries an elastic adapter to which the drill or other tool can be fitted. So rapid is the rotation and so powerful is the action of the drill that the mastoid cavity, the frontal sinus, or the maxillary sinus can be opened in two seconds, while the cranial cavity can be opened in six seconds. Owing to this rapidity no anæsthetic other than a purely local one is necessary, while the extreme portability of the apparatus makes it easy for the dentist or the surgeon to operate at the patient's own house.



THE LANCET.

LONDON: SATURDAY, DECEMBER 12, 1903.

Medical Science and Imperial Responsibility.

To the man who thinks, to the man who reads the lesson of the world's growth aright, conquest means something more than the din of war, the fall of cities, and the guerdons of victory. The processes by which a civilised state makes for itself "the bounds of empire wider still," he knows to imply not merely the organisation of armies, the exposition of military genius, or even the successful propagation of religious creeds or the arrangement of advantageous political and commercial conditions. He feels that conquest means more, much more, than all these things. The acquired territories can only be brought into moral and material line with the central government if the new citizens can be helped to enjoy the natural gifts of their soil by being helped to combat its natural drawbacks. Capture must be made of more than cities. The expansion of territorial limits, the subjugation of hostile or savage states, is only part of the enlightened man's ideal of conquest. Capture and subjugation must be attempted of the physical conditions of the annexed land.

Three addresses have been recently delivered to important audiences in which this broad conception of conquest is well illustrated. Sir PATRICK MANSON, at the London School of Tropical Medicine; Professor RONALD ROSS, at the opening of the winter session of the Medical School of Anderson's College, Glasgow; and Dr. F. C. E. TRIBE, at the Egyptian Government School of Medicine, Cairo, all spoke with eloquent appreciation of the true meaning of empire. Professor ROSS, on the fostering ground of DAVID LIVINGSTONE and WILLIAM MACGREGOR, delivered an address worthy of their examples, his words being directly calculated to quicken the enthusiasm of his audience whether he was appealing to the unlearned imagination of medical students or to the deliberate consideration of mature practitioners. He claimed good reason for regarding the relation of medical science to the spread of empire as the paramount medical theme of the moment and he justified his claim by cogent argument. We are at a stage in the world's affairs when the great civilised nations, feeling the effects of crowding throughout the temperate regions of the earth, are overflowing into others. The current draws with it a large number of medical men whose duty and concern it is to study the novel conditions of life. They have to point the way in which perils of environment, menacing existence itself, may be overcome so that life may be rendered in the first place possible, next safe, and lastly comfortable. The new country, where the first and the second of these two things have been accomplished, may be considered to be conquered in the fullest sense, which is another way of saying that if science does not lend her helping hand the skill of the general, the tact of the diplomatist, and the energy of the trader will all fail to result in effective empire. The thing is so obvious and yet so little, so very little, realised by the world. What is the most powerful enemy of armies? With the episodes of the South African campaign fresh in our memories, a campaign in which not a few lives were lost by regrettable incidents in the field, we need scarcely ask the question. Even with the comparatively enlightened medical measures of to-day the proportion of victims claimed by disease makes destruction at the hands of a human enemy trivial. To take a still broader view, what is it that has kept the tropical zone of the world, comparatively speaking, barbarous? Why are tropical America, tropical Africa, and much of tropical Asia not open to the advent or the benefits of civilisation? Africa, with a trade wind to its very shores, with valuable natural resources, and with gigantic fertile areas to set against its sands and morasses, long ere this, said Professor ROSS, should have been a second India. The prosperity of India is not, we fear, enormously in evidence, but at any rate there is no doubt that Central Africa, instead of being the darkest land on the face of the earth, would have been peopled, cultivated, and civilised up to something approaching the standards of other countries had it not been found impossible for the white man to live there in comfort and safety and very often impossible for him to live there at all. Disease has kept back the clock of progress. The condition of Egypt illustrates the reverse of this story and affords a signal proof of the fact that unless science aids the conqueror their labour is but lost who annex new lands. Of course, Egypt is not truly tropical or a naturally unhealthy country, but it is, to put it mildly, a hot district where till lately sanitation was not practised. Dr. TRIBE, in his address at the Egyptian Government School of Medicine, was able to speak forcibly of the results that had followed in the land of the PHARAOHS from attention to the principles of medical science. In Egypt medicine is seen to be the recognised support of progress. The spying out the land for its physical and medical disabilities has been done, the advance work necessary to render existence possible for the main armies of civilisation has been carried out, and in Egypt we find science, especially medical science, maintaining these armies by reducing the losses inflicted upon them by epidemic disease. Cholera and small-pox rather than malaria and yellow fever are the foes to be feared, and science has proved its ability to offer effective resistance.

The third address, which brings before us the full responsibility of our imperial system, is that which was delivered at the London School of Tropical Medicine on Monday last by Sir PATRICK MANSON. In summarising the achievements of the school Sir PATRICK MANSON showed that the education of a large band of eager students in the problems of tropical pathology has had already a powerful influence upon the position of the mother country in relation to her colonies. "Where two or three men," he said, "took a languid interest in tropical disease some five or six years ago, a whole army of eager investigators has arisen, mainly composed of men educated or inspired by the London and Liverpool schools of tropical medicine." Taking grave risks, and inspired by love of humanity as well as by honourable personal ambition, these students have gone forth into all parts of the world, spreading with zeal the knowledge that they have and acquiring with greed more knowledge as they go. We have recorded from time to time their successes, and proofs of their arduous work can be found in many places in our columns this week. It is not easy, in fact or imagination, to set a bound to the value of such labours, and the medical profession as a whole has seen with pleasure that the nation is beginning to appreciate these labours at their right price. The public is now alive to the part that is played by scientific medicine in welding together the empire.

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Natural Science and the Medical Profession.

THE question which for the last two or three years has been debated between the General Medical Council and some of the licensing corporations—the question, that is to say, of the amount of preliminary scientific training required by medical students, and of the stringency of the examinations by which the consequent attainments should be tested—is no doubt one of great importance in relation to the subsequent acquirement and application of distinctively medical or surgical knowledge; and it is chiefly from this point of view that it has so far been considered. The Council, in our opinion rightly, regards both the accepted modes of instruction and the accepted standards of proficiency as altogether insufficient, and the corporations, in the face of the reports recently made to the Council by its appointed inspectors, can hardly dispute the soundness of this conclusion. The difficulty of so acting upon it as to bring about an effective reform seems to depend mainly upon the tendency of the corporations to resist what they regard as the dictation of the Council, and to assert their own right to decide upon the conditions under which their qualifications shall be granted. The Council, on the other hand, conceives that its statutory right of reporting an insufficient examination to the Privy Council is one that should be exercised on fitting occasions, even if only to obtain relief from the responsibility of yielding a tacit assent to conditions of which it disapproves. On the question whether the present occasion was a fitting one, whether, that is to say, the Council should ignore the expressed intention of the corporations to improve the impugned examinations, and should deal according to statute with the defects shown to be existing, or should wait to see to what extent the promised improvements were of practical utility, the Council was so equally divided that the amendment in favour of waiting was only carried by 16 votes to 12, with two absentees, and was only carried as a substantive motion by 14 votes to 13, with three absentees. It may fairly be inferred that the patience of the Council is nearly exhausted, and that, unless the promised reforms, both in the examinations and in the methods of instruction leading up to them, prove both speedy and effective, we shall witness the deplorable spectacle of litigation before the Privy Council in respect of alleged deficiencies in the conduct of medical education or, more correctly, in the conduct of certain preliminary studies, the value of which the public is becoming year by year more and more abl correctly to appreciate.

The controversy so far has turned in great measure upon the assumed or asserted rights of the chief parties to it, but it is, nevertheless, of a much deeper and more permanent interest in relation to the position of the profession in the estimation of the public. We once knew a clergyman who, after residing many years as a Fellow of his college, at last accepted a living in the country. On taking possession he found that his predecessor had let off most of the glebe to a neighbouring farmer, but had retained in his own hands a small portion, for the cultivation of which this same farmer was accustomed to supply implements and labour. The farmer called upon the new rector and obtained his consent to the continuance of the described arrangement; but having done so he still lingered, after the fashion of one burdened by thoughts which he hesitates to impart. At last, taking his courage in both hands, he announced that WILLUM DICKER would come next morning to plough the four-acre close, and thus continued his discourse: "WILLUM will be very proud if your reverence were to go through the close and pass the time o' day; but whatever you do, sir, don'tee say nothin' to WILLUM about ploughin' or sowin'. You see, sir, he hath bin ploughin' and sowin' all his life, and he do know all about it, and if your reverence was to say a word he'd see in a minute as you know nothin' about it, and if WILLUM once gets to think as you know nothin' about ploughin' or sowin' he'll never take heed to your sermons." *Mutato nomine de medico fabula narratur.*

In respect of scientific knowledge the present generation has witnessed a change which might almost be described as a revolution; and it is very doubtful how far the character and extent of this change have as yet been realised either by the medical corporations or by medical practitioners. Only a few years ago medical men were pre-eminently the scientific members of the community and were possibly sometimes credited with even more profound knowledge than they possessed. They constituted the only scientific profession, the clergy, as a rule, being eminently unscientific, and the bar being opposed to any science which might for the moment be hostile to the interests of a client. Within the memories of men of scarcely more than middle age, the applications of chemistry to agriculture and to manufactures, and the applications of electricity to telegraphy, to lighting, and to locomotion, have called into existence large classes of non-medical persons who are accomplished in these branches of science, and among whom the speech of a smatterer would betray him. The medical profession could fall into no more fatal error than to neglect the change in its relative position which the upspringing of these new professions has brought about, unless it were that of remaining content with a slight and superficial knowledge of matters bearing upon their proper pursuits, and concerning which many of their patients would be competently instructed. In so far as the art of healing rests upon the judicious application of physical science to the conditions of the sick, or in so far as the doctrines of physiology rest upon the control of vital operations by physical forces, the medical practitioner, if he is to hold his own among the members of the many new scientific callings which have sprung into existence around him, must have sufficient knowledge to be able to discuss physical questions in the light of the latest discoveries and to display a clear comprehension of physical phenomena. If he be called upon to speak of the chemistry of digestion in the house of a chemist, or of electrical treatment in the house of an electrician, it is necessary for him to be sufficiently at home in either subject to be able to command the confidence of the skilled persons among whom he is thrown. Superficiality of acquaintance with the matter in hand would not only be detected, but would be likely to lead to distrust of his capacity in matters beyond their ken. The "WILLUM" of our anecdote is, after all, a type of human nature, and most people are prone to gauge the capacities of others by the measure of their own. A competent electrician, for example, would regard a medical man who prescribed or discussed electrical treatment, and who at the same time manifested imperfect acquaintance with the principles of the science, very much as he would regard an artisan who was capable of hanging an electric bell by rule of thumb but who could not safely be relied upon for any work in which a knowledge of principles was required. He would be likely also to measure the quality of his medical and surgical knowledge by the standard of his electrical knowledge, and to extend to him for the future a very modified form of confidence. On such grounds as these, and even apart from the important practical bearings of the physical sciences upon the prevention and cure of disease, we would urge upon licensing bodies the pre-eminent necessity of so conducting medical education that the practitioners of the future may be adjusted to what is practically a new environment of learning and may be able to sustain the banner of their calling amid the press. A reputation for contentment with a smattering of science would be fatal to the status of the medical profession, and no regard to the apparent temporary interests of a corporation should be permitted to lead up to such a catastrophe.

The Revision of the British Pharmacopœia.

IT is now more than five years since the present Pharmacopœia was issued, and the time seems fully ripe for taking cognisance of the various criticisms that have been made and of the numerous researches which have been conducted to test the accuracy of the various statements therein or to suggest improved methods. Notices of these criticisms and researches have hitherto appeared in various contemporaries but they have necessarily been somewhat scattered and were not therefore readily accessible. Many researches have been made at the instigation of the Pharmacopœia Committee by workers selected on account of their special acquaintance with the subjects upon which information was desired; other large groups of researches have been conducted in the research laboratory of the Pharmaceutical Society at the suggestion of a joint conference of representatives of the Pharmacopœia Committee of the General Medical Council and representatives of the Pharmaceutical Societies of Great Britain and Ireland; other researches have been made by numerous persons interested in chemistry and pharmacy. Many valuable reports have therefore been in the hands of the Pharmacopœia Committee, ready for consideration or adoption when the task of revision was commenced, but others which appeared in the columns of various journals were in danger of being overlooked unless some serious effort was made to focus all information relating to the Pharmacopœia in some convenient form. Realising this danger, and also the importance of intrusting the compilation to an independent chemist or pharmacist, the Pharmacopœia Committee of the General Medical Council instructed Mr. WILLIAM CHATTAWAY of the Society of Apothecaries to collect and to abstract those published criticisms, researches, and suggestions which he deemed worthy of serious consideration. This Digest has now been published, and will probably facilitate not only the labours of the Pharmacopœia Committee but also those of all who are interested in the progress of pharmacy, since in the brief space of 72 pages we find summarised all really important suggestions, while in each case careful reference to the source of the original papers is given. An alphabetical arrangement has been adopted in harmony with that in the British Pharmacopœia; hence anyone conducting original researches can ascertain at a glance what progress has already been made or what modifications of official statements have hitherto been suggested.

Many criticisms which appeared very shortly after the appearance of the Pharmacopœia were inevitably based upon a conservative spirit which resented innovations; some, indeed, betrayed indications of hasty judgment or even of rapid and faulty observation, and these were dealt with in a report by Professor JOHN ATTFIELD who had edited the Pharmacopœia and who noted and rectified any minor misprints or errors to which attention had been directed. The greater part of the serious investigations dates from the beginning of the year 1899 and this has therefore been selected as the earlier limit of the Digest. Mr. CHATTAWAY, in his preface, states that the criticisms bear mainly upon the composition and assay of drugs and galenicals, while the criticisms dealing with the botanical features of drugs are remarkably few. Both these things were to be anticipated, since the responsibility for the accuracy of botanical features in the Pharmacopœia was intrusted to Sir W. T. THISELTON-DYER, director of the Royal Botanical Gardens, Kew, and to Mr. E. M. HOLMES, curator of the Pharmaceutical Society of Great Britain. On the other hand, although the composition and assay of drugs were largely the result of suggestions from a committee appointed by the Pharmaceutical Society of Great Britain, and therefore presumably represented accurately the state of knowledge in 1898, these subjects are more continuously liable to modifications, due to improvements in pharmaceutical processes and the minute daily researches to which they are submitted. It is evident from consideration of the Digest that it contains much information in a form immediately available for inclusion whenever the revision of the Pharmacopœia is undertaken, but it is also clear that some of the criticisms and suggestions will need verification and that certain new investigations must be initiated before the present authoritative statements can be set aside or amended. Inasmuch as the majority of the criticisms are evidently the result of private enterprise, it may be hoped that the publication of this digest will further stimulate private research towards their confirmation or refutation. The progress of pharmacy has everything to gain from such private work when conducted with obvious care and attention to detail, and it is probable that the researches will be best conducted by those who feel personal interest sufficient to prompt them to select their own subjects of investigation. Some few criticisms, however, must necessitate research in well-appointed laboratories fully equipped with apparatus and with assistants who can devote their whole time and energy to the work, and since a large part of the expense of these must fall upon the General Medical Council it is to be feared that, unless great care is exercised, they may be so costly as ultimately to involve an increase in the price of the Pharmacopœia. Happily the need of such expensive researches does not seem to be very great to judge from the digest at present before us; minor errors can be readily amended, matters of opinion can be referred to competent authorities, and numerous suggestions apply to drugs or galenicals which, it is to be hoped, will be excluded from the next Pharmacopœia.

While Mr. CHATTAWAY is to be congratulated upon the restraint and brevity with which he has accomplished the arduous task of collating and compressing into such small space so much valuable information, further congratulations are due to those responsible for the British Pharmacopœia upon the labour which must have been expended in producing a volume which, published "by authority," has so successfully withstood the numerous assaults provoked by all authoritative statements.

Longevity.

To be truly interesting a lecturer should always draw largely from observation. That he should be well-equipped in the literature of his subject is an essential but unless the facts previously recorded are to fall flat when again passed through the revivifying process of redelivery they must be illumined with apt illustrations drawn from the speaker's experience, and the interest is intensified when this experience is personal instead of being derived from observation of others. For these reasons Sir HERMANN WEBER'S lecture recently delivered before the Royal College of Physicians of London on Means for the Prolongation of Life merits special attention, although, as was to be expected, it disclosed no new royal road which would infallibly solve all difficulties. Quite early in the lecture Sir HERMANN WEBER instanced his own case as an example of the defeat of hereditary tendencies and it is therefore legitimate to remind our readers that he obtained his medical degree so far back as 1848. Sir HERMANN WEBER'S parents both died before they attained the age of 60 years, so that he spoke at any rate as one who had discounted any influences of heredity towards short life. These personal details are mentioned for the consolation of those who might be depressed by his remarks on the advantage of belonging to a long-lived family and the power of influencing heredity. Well-selected marriages, from which so much has been hoped by certain writers, must always fail to be consolatory to the individual who has to take his parents as he finds them, while a parent must be sanguine if he hopes to influence the marriages of his offspring by prudential considerations. Still, the tendency to vascular degenerations and to surrender to the invasion of certain bacilli must be regarded as hereditary, and there was some solace in finding that in the lecturer's experience such dangers may be evaded by personal care.

It is to the rising generation that Sir HERMANN WEBER'S cheery optimism will mainly be welcome since he laid so much stress upon the importance of exercise, of the week-end holiday, and of the summer holiday, a point of view which he shares with all healthy minded students. The chief exercise extolled was that of walking, and he advocated this in all weathers; but almost equal importance was attached to artificial respiratory exercises; and although as years advance these may be carried out with due solemnity in accordance with instructions given at some length, youth will hinder their earlier adoption so long as natural respiratory exercises can be obtained in football and in cricket. The question of the amount of food which may judiciously be taken was one upon which many quotations were made all tending in the general direction of moderation, the avoidance of excess, and the reduction of meat and flesh food. Similar restrictions were placed upon alcohol, "the most frequent cause of crimes and of the ruin of many families," though a quotation admitted that a "few hard drinkers were amongst the long-lived." Tea, coffee, and cocoa were upon the whole kindly treated, their power of disturbing digestion under some conditions was recognised, while their benefits were extolled. Similarly with regard to tobacco, very little guidance was afforded and no hard-and-fast line was drawn. Tobacco was said to be a means of enjoyment, to soothe nervous irritability, to make men look more contentedly on their troubles, and in excess to produce bad effects. This we hold to be common experience, although so judicial an attitude may have been unacceptable to many who anticipated that tobacco might be condemned. The avoidance of constipation by modifications of diet occupied a great deal of attention and the comparatively simple measures by which discomforts might frequently be minimised without resorting to drugs formed also an important part of the address. The most interesting part of the lecture was, however, that devoted to the nervous system in its influence upon the body generally. Sir HERMANN WEBER said that degeneration of the vessels of the brain, in spite of hereditary tendencies, can be retarded or even avoided by judiciously arranged mental work and occupation, in conjunction with great moderation in food and stimulants and with regular physical exercise. He supported his contention by several instances from his own experience and encouraged the cultivation of cheerfulness and a happy and placid mind. The amount of sleep he allowed would scarcely satisfy the instinctive craving, and still less in accord with custom was his recommendation to get up at the same hour daily, even after exceptionally late hours of work or a poor night's rest. Here we believe his advice to be sound generally; but idiosyncracy plays a great part in the hours of rest required by an individual, and we are certain that his dictum could not always be followed with advantage.

While expressing concurrence with the principles laid down by Sir HERMANN WEBER there are still a few uneasy questions left unsolved. He assumed that the prolongation of life is to be desired and he emphatically expressed his conviction that it is a mistake to consider that ordinary work wears out the organs sooner than idleness or great restriction in work. He supported his contention by numerous examples of hard workers who have retained unimpaired intellectual faculties to very advanced ages. He even quoted CICERO who held that "the intellectual powers remain in the old provided study and application are kept up, and old age need not be inactive, indolent, and drowsy." Still, we venture to question whether the majority who have witnessed many death-bed scenes so often preceded by painful circumstances really desire to live to a great age. If afforded the power to choose would not many prefer, to instance examples from the lecture, to die near the age of 60 years from apoplexy rather than to live on to 70 or more to struggle with heart disease and pneumonia? The former mode of death is less painful, more merciful. We have to deal with generalisations rather than with exceptional instances and unhappily at present there is still a lurking feeling that the last scene of all is usually

> "Second childishness and mere oblivion;
> Sans teeth, sans eyes, sans taste, sans—everything."

Sir HERMANN WEBER thinks it need not be anything of the sort and his rules of life forcibly recall those long since playfully-formulated in "Alice in Wonderland." Exercise of the brain and of the limbs and due development of the muscular strength of the jaws formed the main secrets of longevity imparted by the evergreen sage to the inquisitive youth in LEWIS CARROLL'S delightful rhyme. Sir HERMANN WEBER has added to the old man's list in serious scientific terms but his conclusions might almost be summarised in three words—moderation, cheerfulness, and exercise.

Annotations.

"Ne quid nimis."

A STANDARD FOR LEAD GLAZES.

MORE than two years ago Lord James of Hereford was appointed arbiter to decide between the views of the Home Office in regard to protecting the lives and health of the workpeople in the pottery trade and the representations of the manufacturers. The proceedings were brought to a somewhat sudden termination in November, 1901, by Lord James declaring that as it was shown that lead poisoning had greatly decreased under the last rules of the Home Office there was no need to impose fresh ones, at all events for the moment, as to the use of "fritted" lead or as to the examination of adults. These questions he considered might be postponed for 18 months and would be then again postponed if necessary. While we were aware that any determination then and there to enforce the use of standard lead "fritts" would have been a source of temporary inconvenience to the industry, yet we expressed the opinion that in the face of the conclusions to which the Government experts, Dr. T. Oliver and Dr. T. E. Thorpe, had come, the adoption of definitely "fritted" lead should not be delayed and that no time should be lost in affording protection to those engaged in pottery manufacture. We now learn that Lord James has recently signed his final award in which a standard for "fritts" is definitely laid down. It is generally provided in a new rule (2) in this award that after Feb. 1st, 1904, no glaze shall be used which yields to a dilute solution of hydrochloric acid more than 5 per cent. of its dry weight of a soluble lead compound calculated as lead monoxide when determined in the manner prescribed by the rule. In the original standard of insolubility proposed by Dr. Thorpe and Dr. Oliver, a maximum of 2 per cent. of soluble lead was suggested as a criterion of safety upon which glazes might be judged. The use of a glaze, however, which does not conform to a 5 per cent limit is to be permitted after due notice has been given to the inspector of the district. This permission, be it remarked, is subject to the adoption by the manufacturer of a new schedule of compensation to employés who may be suspended on being certified as suffering from lead poisoning, and subject also to periodic examination of the employés by the certifying surgeon. China scouring is excluded from the processes dealt with by these regulations. Lord James, we think, has been very painstaking and impartial in dealing with this matter, for at the outset while he made up his mind not to interfere hastily with trade considerations yet he felt that his prime concern related to the particular questions of life and health involved in the inquiry. Certainly the manufacturers have had ample warning that legislation would sooner or later be directed towards enforcing the use of a lead compound of a definitely modified character, that in other words there would be a limit placed upon its solubility, and the limit suggested—namely, 5 per cent.—is a compromise between the views of the Home Office experts and those of the masters in the trade. The prescribed method of testing the solubility of the glaze is quite simple and such as can be easily conducted by any person possessing an average amount of intelligence. It is enjoined that "a weighed quantity of dried material is to be continuously shaken for one hour at the common temperature with a thousand times its weight of an aqueous solution of hydrochloric acid containing 0.25 per cent. of pure acid. This solution is thereafter to be allowed to stand for one hour and to be passed through a filter. The lead salt contained in an aliquot portion of the clear filtrate is then to be precipitated as lead sulphide and weighed as lead sulphate." This method is practically in a line with that adopted by some of the expert members of a committee appointed to inquire into the subject on behalf of the Home Office several years ago.

THE REBUILDING OF ST. BARTHOLOMEW'S HOSPITAL.

IN our issue of Dec. 5th we wrote in a leading article to the effect that it is absolutely necessary that the scheme for the rebuilding of St. Bartholomew's Hospital should be one which might be final. We pointed out that it was certain that the ordinary citizen would not subscribe to a scheme which was imperfect. In confirmation of our opinion there appeared in the *Times* of Dec. 7th a letter dated Dec. 1st from Mr. Andrew Motion, a life governor of the hospital and the chairman of the Cannon Brewery. In it he says: "My pen and my purse will be used to frustrate St. Bartholomew's Hospital being ruined for all time. Should it, on the other hand, be decided to rebuild on Sir H. Burdett's plan or a similar one my firm will subscribe £5000, but if the patchwork and tinkered scheme be adopted not a sixpence." This sentence shows the opinion of one large business firm and we are certain that the other large firms in the City will take the same view. We may say here that we have received a letter from Messrs. Hubbard and Moore, architects, of Gresham-street, pointing out that according to modern views no hospital should have more than 50 beds per acre and they estimate that on this scale 700 beds would require 13½ acres and would cost in all £1,612,000, a sum which would be financial ruin. They therefore propose that the hospital should be rebuilt in two portions, one on the present site and the other in the country, the lately acquired one and a half acres being sold to provide land and buildings for the latter. We cannot agree with this suggestion. Our own advice is once again to appeal to the Lord Mayor and to the governors of St. Bartholomew's Hospital to lay before the citizens at the forthcoming meeting on Jan. 26th, 1904, a large and generous scheme. Let the citizens at least be asked to procure a sum of from £800,000 to £1,000,000, and let the Lord Mayor assure the meeting that if the money be raised additional land will be bought and St. Bartholomew's Hospital rebuilt in a manner consonant with its traditions and with the history and traditions of the heart of the empire, and we cannot but think that the sum will be forthcoming.

THE VALUE OF SYMPTOMS IN DIAGNOSIS.

Dr. J. Rose Bradford, in delivering the Purvis oration before the West Kent Medico-Chirurgical Society at the Royal Kent Dispensary, Greenwich, on Dec. 4th, took as his subject the Value of Symptoms in Diagnosis. After discussing the importance of the diagnosis of disease, Dr. Bradford went on to point out that it was essential in the treatment and in the prevention of disease for the malady to be recognised in its early stages and in what might be called its mild varieties. The accurate diagnosis of disease was essential for another reason—namely, it not uncommonly happened that under a given clinical description there were included a variety of separate pathological processes, and Dr. Bradford quoted ulcerative endocarditis as an example. The great majority of the many difficulties and uncertainties in the practice of medicine arose from imperfect or inaccurate diagnosis which very often depended on the present imperfect state of the knowledge of medicine but in some instances on a want of appreciation of the symptoms presented by disease. Many practitioners had become so impressed with the value of physical signs that it was not uncommon for a diagnosis to be made entirely from physical signs, the symptoms being almost neglected. Physical signs, as a rule, only gave information as regarded the anatomical seat of the lesion—they did not give necessarily information concerning its pathological nature, and many errors of diagnosis in disease arose from confusing those two distinct phenomena. The importance of the thorough study of symptoms must be at once granted when it was remembered that in a large number of functional diseases symptoms only were present. In many functional diseases the remarkable character of the subjective sensations complained of by the patient afforded a clue to the differentiation of the malady from organic diseases with which at first sight it might be confounded. One of the most important functional diseases of the nervous system in which the diagnosis had to be made in most cases entirely on the symptoms was epilepsy and more especially the anomalous form of epilepsy in which convulsions were absent, particularly *petit mal* Continuing, Dr. Bradford pointed out that some of the most serious gross organic diseases might reach a very high stage of development and yet produce few, if any, physical signs. These diseases might be revealed only by the occurrence of symptoms which in some of the more fatal of them might be misinterpreted. The lecturer quoted hepatic cirrhosis as an example and observed that that disease might proceed to a very high degree of development and yet symptoms only might be present and these might not uncommonly be found to be referred to the stomach rather than to the liver. Further instances of maladies in the same category were gastric ulcer, affections of the cerebral arteries, and Addison's disease. Proceeding to the next class of disease illustrating his contention, Dr. Bradford quoted renal and biliary colic as affording good instances of organic diseases in which symptoms only might be present and where the differential diagnosis had often to be made almost entirely on the symptoms. The next point commented on by the lecturer was that of the onset of complications and in this connexion he observed that one of the most important subjects concerned with the study of symptoms was the information which they afforded of the onset of complications in gross organic disease. In many instances, doubtless, those complications were necessarily fatal but in others the only chance of saving a patient depended on the prompt recognition of the nature and cause of those symptoms. He gave as familiar illustrations of his contention the occurrence of perforation in enteric fever and in appendicitis where, if treatment were delayed until all the characteristic signs of the presence of gas in large amount in the peritoneum were present, the chances of successful interference would be very greatly diminished. Passing on to the discussion of symptoms as a clue to diagnosis of the nature of a lesion, Dr. Bradford gave the common occurrence of vomiting in cases of cerebral hæmorrhage as an illustration. The sudden onset of hemiplegia almost always raised the question as to whether a lesion was thrombotic, embolic, or due to hæmorrhage, and in a great many cases the history of the first symptoms, and especially, perhaps, the occurrence of vomiting, afforded conclusive evidence of the presence of cerebral hæmorrhage. Another symptom often throwing unexpected light on the diagnosis of disease was the numbness and tingling of the extremities so characteristic of neuritis and occurring as a very early symptom in that disorder. Dr. Bradford then entered in detail into the value of pain as a symptom and, after commenting on the significance of delirium, mentioned how dyspnœa in its varied forms was often of great assistance in arriving at a correct judgment. Dr. Bradford concluded an interesting oration by describing how the occurrence of symptoms might afford valuable indications for treatment, at the same time being in some cases the only means of making the diagnosis. So whether medicine was regarded from the point of view of diagnosis, prognosis, or treatment it was most important in all cases to pay great attention to the study of symptoms if success was to be achieved.

NATIONAL PHYSIQUE AND THE EDUCATIONAL AUTHORITIES.

WE commend the attention of our readers to the thoughtful article which appears under this title in the current number of the *Guardian* from the pen of the Right Hon Sir John Gorst. It will be remembered that Sir William Taylor, the Director General of the Army Medical Service, having presented a memorandum to Parliament calling attention to the deterioration in the health and physique of the men offering themselves as recruits for the army, a committee was appointed to advise the Government as to the propriety of appointing a Royal Commission to investigate the physical condition of the British population. Sir John Gorst points out that much information could be obtained from one source without awaiting the lengthened deliberations of a Royal Commission. Four-fifths of the child population of Great Britain come under the daily observation of public authorities and concerning these children the following two questions can be asked and answered: (1) What is their physical condition ? and (2) What can be done by public authority to improve it? The Board of Education, the local education authorities, and the teachers could give, Sir John Gorst thinks, a complete answer to the first and a practical if incomplete answer to the second question. There is no reason, says Sir John Gorst, why it should not be the duty of every class-teacher to make a daily inspection of the children in the class and to record and to report anything abnormal, such as hunger, nakedness, dirt, and disease. This daily inspection could be *periodically supplemented and checked by the visit of a* trained nurse and by such means it is suggested that we should soon learn whether we were degenerating or improving. With much of Sir John Gorst's words we fully agree, but we question whether the teacher is, as a rule, capable of giving the systematic help that is thus expected of him. He could report about clothing and to a great extent about personal hygiene; he could inquire about feeding; but disease would be beyond him save in its grosser manifestations. Medical examination of all school children upon some pre arranged plan would be necessary before the information to be *obtained from school authorities could be relied upon.* If all teachers of the young were themselves instructed in physiology the position would be different. An address delivered at the University of St. Andrews by Dr. D. Fraser Harris at the beginning of the week and referred to briefly by one of our Scotch correspondents urged the necessity of the schoolmaster being familiar with at least the groundwork of physiology and Sir John Gorst's excellent paper teaches a similar lesson.

CHRISTMAS ENTERTAINMENTS AND THEIR DANGERS: A WARNING.

FAR be it *from us to detract in the smallest degree from the joys and amusements which are commonly indulged in* at Christmas time for the sake chiefly of the little people. But previous experience has taught us unhappily that Christmas time is prone to bring a sad chapter of accidents (much sadder than usual because of their occurrence at a peculiarly joyous time) which with a little forethought might have been avoided. Perhaps it is in connexion with domestic theatricals that the worst accidents have arisen. Children and adults alike have been dressed up, for example, and almost buried in a profusion of cotton-wool intended to represent snow without the least regard having been paid *to the ready inflammability of the material and* without any precautions to keep it from coming into contact with a naked flame. Some most heart-rending scenes have resulted from this want of care and a very sad sequel to happy moments has been the consequence. It cannot be too well known that cotton-wool burns with the fierceness of spirit and that the flame is very hot and very difficult to extinguish. Great caution should also be exercised in regard to the drapery used for scenic purposes which *should* consist *so far as possible, if not entirely,* of non-inflammable or of not easily ignited material. There is again a similar danger connected with celluloid ornaments and toys. The celluloid ball is fiercely and easily inflammable and if it does not ignite something else and lead to an alarming conflagration it may itself inflict severe burns and injury. This warning is all the more needed, it seems to us, as so many toys are now made of this highly combustible material. The festive season is associated with *many things bright and pretty in which* danger may easily lurk. The painted doll may be pigmented with poison, the coloured candles on the Christmas tree have been known to be a source of arsenical poisoning at Christmas parties, while the sweets may not be above suspicion. We cheerfully admit, however, that there never was a time when colouring materials were as a rule so innocent in character as at the present, thanks maybe to the publicity given in our own columns *to the practice at one time in evidence of using* poisonous materials for this purpose. If to be forewarned is to be forearmed this little note may not be written in vain. We feel strongly that a warning of this kind is timely and we issue it not with the slightest desire to cast a wet blanket over a promised joyous time but in the sincere hope that this Christmas may not be marred by those sad occurrences which have occasionally marked previous festivals and which could have been avoided by taking care and by the application of ordinary intelligence as to the possibilities of danger.

THE BALLACHULISH QUARRIES.

FURTHER proof reaches us during the week that the Ballachulish quarriers are determined not to yield on the question of their medical officer, and it seems clear that the mass of them, unless the directors of the company revise their opinion, will seek permanent employment elsewhere. The persecution, for it is nothing else of Dr. Lachlan Grant will not be endorsed by the men whom he has served well and whom he is desirous of serving further, nor are the men prepared to accept *dictation as to what medical man they* shall employ while the payment of the medical man is made by themselves.

5000 MIDWIFERY CASES IN GENERAL PRACTICE.

A NOTE on 5000 midwifery cases in private practice has reached us from a contributor who desires to affix only the initials "G. P." to his work. The note commences with an analysis of the cases as follows: cases attended, 5000; twins, 50, or 1 per cent.; triplets, 2, or 0 04 per cent; transverse presentations, 74, or 1·48 per cent.; face presentations, 7, or 0·14 per cent.; placenta prævia, 17, or *0 34 per cent.; puerperal eclampsia, 6, or 0 12 per cent.;* puerperal mania, 2, or 0 04 per cent; ruptured uterus, 2, or 0 04 per cent; version, 66, or 1·32 per cent.; forceps, 326, or 6 52 per cent.; craniotomy, 1, or 0·02 per cent.; 306, or 6·12 per cent, paid no fees. Deaths occurred as follows: acute septicæmia, 2, or 0 04 per cent.; influenza (?), 2, or 0·04 per cent.; pyæmia, 1, or 0·02 per cent.; shock after craniotomy, 1, or 0·02 per cent.; ruptured uterus, 2, or 0·04 per cent.; puerperal eclampsia, 3, or *0·06 per cent.; post-partum* hæmorrhage, 1, or 0 02 per cent.; total, 12, or 0·24 per cent. Other deaths not directly due to parturition: acute bronchitis, 2, or 0·04 per cent.; phthisis, 2, or 0 04 per cent.; cerebral hæmorrhage, 1, or 0·02 per cent.; puerperal mania and phthisis, 1, or 0·02 per cent.; total, 6, or 0·12 per cent; total number of deaths, 18, or 0·36 per cent. All these cases were attended in the East-end of London and *do not include* those in which help was given to other practitioners or midwives. The number of cases of placenta prævia is small. In cases where the fœtus was not viable they would have been looked upon as miscarriages. Abortions and miscarriages in the East-end of London are too numerous to mention. The two deaths attributed to influenza occurred as follows. Both were attended by A one afternoon. In the evening he was prostrate with a sharp attack of influenza. *Both cases ran a similar course.* On the second day the patients were feverish, with pains in the back and the limbs; no rigors were present. On the third day the temperature rose to 104° F. and there were abdominal tenderness and sleeplessness. There was no milk and the lochia were scanty. The symptoms continued till the seventh day but the temperature dropped. One case was then seen by a specialist *in gynæcology, who found* no uterine, pulmonary, or cardiac physical signs. The diagnosis was influenza and the prognosis was favourable. That evening vomiting and delirium came on and continued till the eighth day, when death occurred. In the three deaths from eclampsia convulsions took place in one case three hours post partum, in the second 11 hours post partum, and in the third before the os had begun to dilate. The patient who died from post-partum hæmorrhage was delivered by forceps at 8 P.M. She had had difficult labours previously and had always lost blood considerably. At 6 A.M. her friends sent to say that she was dead. There had been a good deal of hæmorrhage externally and the uterus was distended with blood. In the following series of monsters in each case the husband and wife were cousins: (1) miscarriage; (2) anencephalous monster; (3) living, normal; (4) hernia cerebri, five fingers and six toes on each hand and foot, double talipes varus, cleft lip and palate; (5) normal, living; (6) normal, living; (7) anencephalous monster; (8) has left the district and is said to have had "another monster." Besides the 306 who did not pay anything a large number paid only a part of their fees. When "twelve good men and true" are so ready to censure a practitioner who demands his fee before turning out from his bed they should bear this in mind. Seeing the conditions under which many of these cases are attended—the rooms, the bed, the skirt, worn during labour, which has swept the streets for months—the practitioner can only be thankful that there is such a thing as the vis medicatrix naturæ.

NURSING STAFF TROUBLES.

THERE are few positions in which correct, judicious, and considerate conduct is more difficult of attainment than it is in the case of the matron of a large hospital. The position of an autocrat is a difficult one, even when he is a man among men; when the autocrat is a woman among women great indeed are the merits of her who pleases both those whom and those for whom she rules. Governing bodies generally and wisely interfere but little in the direct control of the nurses by the matron. Very great, therefore, is the credit due to the ladies whose rule in these difficult positions seldom gives rise to complaint, to friction, or to insubordination. Many of our readers no doubt are aware that there has lately been some difficulty in connexion with the nursing staff at Charing Cross Hospital. If we may trust the account given in the general press the matron, as representing and as acting for the supreme authority in the institution, seems to have behaved with perfect openness and justice. In her opinion the retirement of certain sisters was advisable. The hospital authorities gave these ladies the opportunity of retiring in a convenient and graceful manner. Here, it seems to us, the matter should end.

QUARANTINE WORK IN THE PHILIPPINE ISLANDS.

THE annual report for the period ended July 31st last, of Captain V. G. Heiser, United States Public Health and Marine Hospital Service, chief quarantine officer of the Philippine islands, has just been made public. From a perusal of the summary of a year's quarantine work in the Philippine Archipelago it is gathered that there are now on duty in the Philippines four commissioned officers at Manila and Mariveles, one each at Cebu, Iloilo, and Jolo, one pharmacist at Manila, and 70 attendants who act in the capacity of clerks, launch crews, quarantine employés, and so on. 207 vessels were fumigated with sulphur. 105 vessels infected with cholera were disinfected. Seven vessels with small-pox aboard and two with plague cases were disinfected. In addition there were 119 vessels disinfected because they came from infected ports. The report states that with the possible exception of Tor, Egypt, there is probably more disinfection accomplished at the Mariveles quarantine station than at any other plant in the world. Cholera was the disease with which the quarantine officers in the Philippines had chiefly to deal. 68 vessels with cholera on board arrived at the port of Manila and on 37 vessels cholera appeared during the time they were serving their outgoing quarantine. Captain Heiser is a strong advocate of strict quarantine regulations and says: "It is a matter for congratulation that the practice prescribed by the quarantine laws and regulations has been so thoroughly vindicated by practical experience. Of the 105 cholera-infected vessels that were disinfected at the Manila station only one developed the disease after being released from quarantine and then nine days after disinfection." With regard to the plague the report states that it is particularly creditable to the officers on duty in China and Japan that notwithstanding the fact that plague has been epidemic at Hong-Kong and Amoy during the year and present at other ports in those countries not a single case of this disease found in Manila could be traced to infection from without. The destruction of rats, other vermin, and cockroaches on board vessels at ports in the Philippine islands has been carried on with energy and much success during the period covered by the report. A few cases of leprosy were detected on vessels visiting Manila during the year. According to the report, the endeavour to prevent the occurrence of quarantinable diseases in the Philippine islands after those now present have been stamped out will require the strict observance of the quarantine laws and regulations at the ports of entry. As some of these ports are less than 48 hours by steamer from countries in which diseases like cholera are endemic the problem will be a difficult one and perhaps more than can be expected of the quarantine service alone, but it is hoped that with the assistance of an intelligent, energetic Board of Health it will not be impossible.

THE AFTERMATH OF BAYLISS *v.* COLERIDGE.

WE deal in another column with the purely legal aspects of the libel case of Bayliss *v.* Coleridge which was recently decided in the law courts. We had hoped that with the finding of the jury the matter would have been allowed to drop. But events have happened and are happening which tend to prolong a useless controversy and which do not show the morality of an antivivisection society in a very favourable light. Mr. Coleridge was compelled by the verdict of the jury to pay a sum of £2000 damages and also to pay the costs. He thereupon, according to a statement made by his solicitor which appeared in the *Times* of Dec. 2nd, paid over from his private account a cheque for £2000, which cheque was duly sent to the plaintiff's solicitors on Nov. 19th. A paragraph afterwards appeared in the *Manchester Daily Dispatch* to the effect that the National Antivivisection Society had paid Mr. Coleridge's damages and costs. This was the statement which Mr. Coleridge's solicitor wrote to contradict. He added: "Mr. Coleridge also requests me to state that he has no intention of asking the society to contribute in any way to the payment of the damages or any of the legal expenses." As was to be expected, the London correspondent of the *Manchester Daily Dispatch* was not going to allow this traversing of his statement to pass unnoticed and accordingly in the *Times* of Dec. 7th appeared a letter from him inclosing for the information of the editor of the *Times* a circular sent out from the National Antivivisection Society under date Dec. 1st appealing for subscriptions to defray Mr. Coleridge's expenses and damages. The society also wrote on Dec. 2nd to the correspondent of the *Manchester Daily Dispatch* asking him to contradict a statement in which there was no word of truth and stating, moreover, that not only had the society not paid the costs and damages but that it had no intention of doing so. Mr. Coleridge may not have asked his society to pay his damages and costs but it is quite evident either that the society is as a whole ignorant of what its presidents and vice presidents, together with its chairman of committee, are about or that it is telling untruths A circular is issued by the society dated Dec 1st appealing for subscriptions to *defray Mr Coleridge's very heavy expenses*, while on Dec. 2nd the same society writes a letter *to say that it has* neither paid the expenses nor is it going to do so In one point the London correspondent of the *Manchester Daily Dispatch* is in error—namely, where he says that the society had paid the expenses It has not yet, but by its own circular it is asking for money to do so If this is not intention, what is it? Mr Coleridge's solicitor, writing in the *Times* of Dec 8th, argues that the National Antivivisection Society is not going to pay but that it is merely asking its subscribers to contribute *money for such* a purpose The difference between a society and the members of a society seems to us so small as to be negligible and the argument employed—namely, that the *members of* the society are being asked to pay but that the society itself is not going to pay—is a piece of casuistry

ENTERIC FEVER SPREAD BY WATER-CRESS

DURING the month of June there was noticed to be an unusual increase in the number of cases of enteric fever reported in the metropolitan borough of Hackney Dr J King Warry, the medical officer of health of the borough who has recently sent in his report of the outbreak to the public health committee of Hackney was so struck by this incidence that he was led to suspect that some special agent was responsible His report, which lies before us, reminds those to whom it is addressed that June is as a rule the month in which enteric fever is at its lowest point and the seasonal prevalence of the disease does not generally set in until August But on June 6th two cases were reported, on June 13th six cases were reported, on June 20th 14 cases were reported, and on June 27th there were eight cases Thenceforward the number of cases reported weekly remained at a number below eight until August 1st when they rose to 11 In the following week there was a drop but during the three following weeks the numbers were 15, 16 and 16 respectively There were thus two waves of disease the first covering a period of eight weeks from the second week of June to the week ending July 25th and including 48 cases almost all located within an area represented by a circle of one third of a mile in radius, the centre being situated in the Clarence road Wave No 2 included 62 cases notified within nine weeks, mostly located within a circle of half a mile radius, the centre of which was situated near Orchard street Dr Warry investigated all the usual sources of the infection of enteric fever, such as water, milk ice creams, and shell fish, and could not satisfy himself that any one was in fault He was struck, however with the fact that of the cases forming wave No 1 no less than 64 4 per cent had partaken of water cress during the three weeks prior to the origin of the illness Of the second set of cases 55 3 per cent had eaten water cress during the same period Dr Warry therefore caused 17 samples of water cress taken from places where the patients marketed to be examined and six of these samples came from the beds at West Ham All the samples showed sewage organisms and a sample of water from the West Ham beds contained at least 50 bacilli coli communes in every cubic centimetre It therefore appeared evident that the cause of the outbreak was the consumption of water cress grown in beds fed with sewage Dr Warry suggests that as a result of his inquiry "(1) an extended inquiry should be made as to the conditions under which water cress supplied to the metropolis is cultivated, (2) representations should be made by the borough council to the county borough of West Ham, pointing out the conditions under which water cress is cultivated in that borough, and asking them to take such steps as may be needful to ensure in future that water cress grown in that borough shall be free from pollution" Water cress when *clean is an excellent* and wholesome vegetable food and every effort should be made by the health authorities of London to see that it is supplied free from sewage contamination

THE MEDICAL GRADUATES' COLLEGE AND POLYCLINIC

MR JAMES CANTLIE presided at the fifth annual dinner of the members and friends of the Medical Graduates' College and Polyclinic held on Dec 3rd at the Trocadéro Restaurant, Piccadilly circus, London, and in the course of proposing the toast of "The Polyclinic" said that the primary object of the institution was to better the equipment of the medical practitioner in battling with disease and in that way the Polyclinic deserved the support of the public in working for the health of the community He reminded his hearers that medical men from all parts of the world had availed themselves of the benefits to be derived from the teaching at the college and they had attended in numbers beyond the anticipation of the most optimistic The number of attendances of medical practitioners since 1900 had steadily increased and in 1903 they were well over 15 000 He did not pretend that post graduate teaching had its commencement in the foundation of the Polyclinic but he asserted that never before in any institution in this or in any other country had such a plurality of distinguished teachers been collected together in one building The teachers at the Polyclinic were drawn from Dingwall to Portsmouth, from Ireland and from Wales from Canada from Australia, from the United States and from the length and the breadth of the continent of Europe *For those reasons he claimed* that the institution was a true Polyclinic He contended that it was impossible for any single medical school to carry on *satisfactorily true post graduate teaching, for* the education at the medical schools was not final Men learnt at those centres the means of commencing the medical profession but in the Polyclinic they had something which stood to the medical schools in the same relation as the universities stood to the public schools It had to be remembered that in medicine progress proceeded apace and the truths of their youthful days were in many cases no longer above criticism In commenting on the considerable opposition that had been offered to the Polyclinic Mr Cantlie observed that it was not to be wondered at because no great idea had ever been introduced without exciting antagonism Huxley had been preached at from the pulpit obloquy had been thrown on Darwin, Ferrier had to appear in Bow street police court for investigating the functions of the human brain, and even Lister had been met by the opposition of some great surgeons in London who had tried to stem the advancing tide of surgical truths. Mr Cantlie, continuing, said that the initial jealousy against which the Polyclinic had struggled had now passed away and the difficulties in its onward progress had vanished The practice of the Polyclinic in drawing their teachers from so vast a field might well be followed with advantage in some medical schools Men got so bound up in their own schools that they imagined nothing was going on beyond their walls Mr Cantlie said that Mr Watson Cheyne had been telling him of a scheme for a true university by which a man might take out a ticket at the University of London and then go to any medical school he pleased Loyalty to one's own medical school was to be applauded but loyalty to the medical profession was a higher duty which also demanded obedience. Those who came to and in the third before the os had begun to dilate. The patient who died from post-partum hæmorrhage was delivered by forceps at 8 P.M. She had had difficult labours previously and had always lost blood considerably. At 6 A.M. her friends sent to say that she was dead. There had been a good deal of hæmorrhage externally and the uterus was distended with blood. In the following series of monsters in each case the husband and wife were cousins: (1) miscarriage; (2) anencephalous monster; (3) living, normal; (4) hernia cerebri, five fingers and six toes on each hand and foot, double talipes varus, cleft lip and palate; (5) normal, living; (6) normal, living; (7) anencephalous monster; (8) has left the district and is said to have had "another monster." Besides the 306 who did not pay anything a large number paid only a part of their fees. When "twelve good men and true" are so ready to censure a practitioner who demands his fee before turning out from his bed they should bear this in mind. Seeing the conditions under which many of these cases are attended—the rooms, the bed, the skirt, worn during labour, which has swept the streets for months—the practitioner can only be thankful that there is such a thing as the vis medicatrix naturæ.

NURSING STAFF TROUBLES.

THERE are few positions in which correct, judicious, and considerate conduct is more difficult of attainment than it is in the case of the matron of a large hospital. The position of an autocrat is a difficult one, even when he is a man among men; when the autocrat is a woman among women great indeed are the merits of her who pleases both those whom and those for whom she rules. Governing bodies generally and wisely interfere but little in the direct control of the nurses by the matron. Very great, therefore, is the credit due to the ladies whose rule in these difficult positions seldom gives rise to complaint, to friction, or to insubordination. Many of our readers no doubt are aware that there has lately been some difficulty in connexion with the nursing staff at Charing Cross Hospital. If we may trust the account given in the general press the matron, as representing and as acting for the supreme authority in the institution, seems to have behaved with perfect openness and justice. In her opinion the retirement of certain sisters was advisable. The hospital authorities gave these ladies the opportunity of retiring in a convenient and graceful manner. Here, it seems to us, the matter should end.

QUARANTINE WORK IN THE PHILIPPINE ISLANDS.

THE annual report for the period ended July 31st last, of Captain V. G. Heiser, United States Public Health and Marine Hospital Service, chief quarantine officer of the Philippine islands, has just been made public. From a perusal of the summary of a year's quarantine work in the Philippine Archipelago it is gathered that there are now on duty in the Philippines four commissioned officers at Manila and Mariveles, one each at Cebu, Iloilo, and Jolo, one pharmacist at Manila, and 70 attendants who act in the capacity of clerks, launch crews, quarantine employés, and so on. 207 vessels were fumigated with sulphur. 105 vessels infected with cholera were disinfected. Seven vessels with small-pox aboard and two with plague cases were disinfected. In addition there were 119 vessels disinfected because they came from infected ports. The report states that with the possible exception of Tor, Egypt, there is probably more disinfection accomplished at the Mariveles quarantine station than at any other plant in the world. Cholera was the disease with which the quarantine officers in the Philippines had chiefly to deal. 68 vessels with cholera on board arrived at the port of Manila and on 37 vessels cholera appeared during the time they were serving their outgoing quarantine. Captain Heiser is a strong advocate of strict quarantine regulations and says: "It is a matter for congratulation that the practice prescribed by the quarantine laws and regulations has been so thoroughly vindicated by practical experience. Of the 105 cholera-infected vessels that were disinfected at the Manila station only one developed the disease after being released from quarantine and then nine days after disinfection." With regard to the plague the report states that it is particularly creditable to the officers on duty in China and Japan that notwithstanding the fact that plague has been epidemic at Hong-Kong and Amoy during the year and present at other ports in those countries not a single case of this disease found in Manila could be traced to infection from without. The destruction of rats, other vermin, and cockroaches on board vessels at ports in the Philippine islands has been carried on with energy and much success during the period covered by the report. A few cases of leprosy were detected on vessels visiting Manila during the year. According to the report, the endeavour to prevent the occurrence of quarantinable diseases in the Philippine islands after those now present have been stamped out will require the strict observance of the quarantine laws and regulations at the ports of entry. As some of these ports are less than 48 hours by steamer from countries in which diseases like cholera are endemic the problem will be a difficult one and perhaps more than can be expected of the quarantine service alone, but it is hoped that with the assistance of an intelligent, energetic Board of Health it will not be impossible.

THE AFTERMATH OF BAYLISS *v.* COLERIDGE.

WE deal in another column with the purely legal aspects of the libel case of Bayliss *v.* Coleridge which was recently decided in the law courts. We had hoped that with the finding of the jury the matter would have been allowed to drop. But events have happened and are happening which tend to prolong a useless controversy and which do not show the morality of an antivivisection society in a very favourable light. Mr. Coleridge was compelled by the verdict of the jury to pay a sum of £2000 damages and also to pay the costs. He thereupon, according to a statement made by his solicitor which appeared in the *Times* of Dec. 2nd, paid over from his private account a cheque for £2000, which cheque was duly sent to the plaintiff's solicitors on Nov. 19th. A paragraph afterwards appeared in the *Manchester Daily Dispatch* to the effect that the National Antivivisection Society had paid Mr. Coleridge's damages and costs. This was the statement which Mr. Coleridge's solicitor wrote to contradict. He added: "Mr. Coleridge also requests me to state that he has no intention of asking the society to contribute in any way to the payment of the damages or any of the legal expenses." As was to be expected, the London correspondent of the *Manchester Daily Dispatch* was not going to allow this traversing of his statement to pass unnoticed and accordingly in the *Times* of Dec. 7th appeared a letter from him inclosing for the information of the editor of the *Times* a circular sent out from the National Antivivisection Society under date Dec. 1st appealing for subscriptions to defray Mr. Coleridge's expenses and damages. The society also wrote on Dec. 2nd to the correspondent of the *Manchester Daily Dispatch* asking him to contradict a statement in which there was no word of truth and stating, moreover, that not only had the society not paid the costs and damages but that it had no intention of doing so. Mr. Coleridge may not have asked his society to pay his damages and costs but it is quite evident either that the society is distended bladders—a process, however carefully done, liable to lead to cystitis and pyelo-nephritis with possibly a fatal result—Dr. Cabot has found that permanent drainage at the onset of the cystitis was most beneficial. He now prefers to establish at once constant drainage of a distended bladder rather than to attempt intermittent catheterisation. Thus the risk of pyelo-nephritis following is greatly diminished. The question arises, How long shall catheter drainage be continued? Dr. Cabot's rule is to continue it until all symptoms have disappeared and the urine has become almost normal. If on attempting to discontinue it fever returns and the quantity of urine diminishes he concludes that the ureteric orifices have not recovered their valvular condition and that irritation of the kidneys has again been produced by backward flow of infected urine from the bladder. Probably, also, increase of tension plays a part. In such a case drainage should be again established not only till symptoms disappear but for a much longer time. Then another attempt may be made and if the condition of the kidneys is prone to relapse the change should be made gradually.

VICTORIA UNIVERSITY OF MANCHESTER: ADVANCED LECTURES ON PUBLIC HEALTH.

A SERIES of advanced lectures intended for medical officers of health will be delivered during the months of January, February, March, May, and June at the Victoria University of Manchester. These lectures, primarily intended for medical officers of health and medical men who are members of sanitary committees or who are candidates for diplomas in public health, are also open with certain formalities to others interested in sanitary matters. The syllabus for the coming session includes the following well-known sanitarians and public health authorities and we have placed the subjects on which they are announced to lecture next their names:—Professor Thomas Oliver, Industrial Diseases due to Poisonous Gases; Professor J. Lane Notter, Spread of Typhoid Fever, Dysentery, &c., with special reference to Military Tropical Life; Dr. James Niven, Feeding in Relation to the Health of the Young; Dr. S. Monckton Copeman, Vaccination, its Pathology and Practice; Dr. Arthur Newsholme, the Rôle of Unsuspected Cases in the Spread of Infectious Diseases; Mr. Gilbert Fowler, D.Sc., Chemistry of the Bacterial Treatment of Sewage; Dr. J. C. Thresh, Water Filtration; Dr. H. T. Bulstrode, Relations of Shell-fish to Disease; Dr. T. E. Hayward, the Construction of Life Tables, with Special Reference to Phthisis; Dr. John Robertson, Atmospheric Carbonic Acid, its Origin and Variation; and Mr. Francis Vacher, Defective Sanitary Appliances. Those who wish to attend this course of lectures should send their names with qualifications and address to Professor S. Delépine, Director of the Public Health Laboratory of the Victoria University of Manchester, 1, Stanley-grove, Manchester, who will supply any additional information.

INTRACTABLE CONSTIPATION.

A NEW method of dealing effectually with cases of intractable constipation has been devised and successfully carried out by Mr. W. Arbuthnot Lane. We have already published[1] the views held by Mr. Lane concerning the condition of intestinal obstruction that results from the development of adhesions round the large gut in persons suffering from chronic constipation. Mr. Lane has operated on some cases for obstruction alone with the result that though the adhesions were freely divided at the time of operation the trouble recurred. Mr. Lane therefore thought of the plan of effecting a lateral anastomosis between the end of the ileum and the first piece of the rectum. By this means a free passage is made between the small gut and the rectum and the sluggish course of the fæces through the large gut is avoided. In a case lately operated on by Mr. Lane the conditions calling for the operation were well exemplified. The patient was anxious for the first operation because of the pain and tenderness which the obstruction produced. The adhesions were divided on four occasions, but in spite of frequent and immediate purgation the adhesions re-formed and the symptoms recurred. The several operations were undertaken at the patient's urgent request. All these four operations were of the same nature and the method detailed of connecting the ileum with the rectum was then proposed and carried out with the satisfactory result that the patient was relieved from pain and freed from the intolerable suffering that accompanied the condition for which she originally sought relief by operation. By connecting the ileum to the rectum the whole of the large intestine above this portion of the bowel was no longer in use. The patient was completely relieved of pain and tenderness, she lost the toxic symptoms and physical depreciation due to the long continuance of the fæces in the large bowel, and her intestines reacted readily to mild purgatives.

CULTIVATION OF A TRYPANOSOMA.

THE extreme difficulty or impossibility of artificially cultivating the protozoa in a pure state—i e., free from bacterial or other contamination—has been a great hindrance to the study of the parasitic forms. The announcement, therefore, that Mr. W. J. McNeal and Dr. F. G. Novy have succeeded in cultivating the trypanosoma of the rat (trypanosoma Lewisi) is of considerable interest.[1] The medium employed was composed of agar to which was added defibrinated blood, usually of the rabbit, obtained with aseptic precautions. The hæmoglobin seems to be an important constituent. Ordinary nutrient agar is prepared, filled into tubes, and sterilised. After the last steaming the tubes are allowed to cool to 50° C. and about one-third of the volume of the defibrinated blood is added. The tubes are then placed in the sloping position and the medium is allowed to solidify. The condensation water in the tubes is inoculated with loopfuls of blood obtained from an infected rat and the tubes are incubated either at room temperature or at blood heat; at the former development is slow and at the latter fairly rapid. 11 passages from tube to tube were made in the course of a year, incubating at room temperature, and some of the fluid from the tenth generation proved to be still virulent for rats. Incubating at blood heat 22 passages were made in six months and the twentieth generation also proved virulent. Modifying the culture medium by the addition of glycocoll and sodium asparaginate the trypanosoma was kept alive in one tube for no less than 306 days. More recently the same investigators have succeeded in cultivating the trypanosoma of nagana (trypanosoma Brucei) in a similar manner, though it proved much more difficult to carry out.

THE medical officer of health of Cape Colony states that for the week ending Nov. 14th only one case of plague occurred throughout the Colony, being that of a native child at East London. Plague infected rodents were discovered during the week at Cape Town, Lady Grey Bridge, Knysna, and Port Elizabeth. As regards the Mauritius a telegram from the Acting Governor received at the Colonial Office on Dec. 4th states that for the week ending

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[1] THE LANCET, Jan. 17th, 1903, p. 153.

[1] "Contributions to Medical Research by Colleagues and Former Students" Dedicated to V. C. Vaughan. Ref. in the Bulletin de l'Institut Pasteur, vol. i., No. 16, 1903, p. 602.

Dec. 3rd there were 60 cases of plague and 41 deaths from the disease.

THE annual lecture under the endowment of the Richard Middlemore Post-Graduate Lectures will be delivered at the Birmingham and Midland Eye Hospital by Mr J. Jameson Evans, surgeon to the hospital, on Friday, Dec. 18th, at 4.30 P.M. The subject chosen by the lecturer is Bacterial Diseases of the Conjunctiva and there will be a clinical and microscopical demonstration after the lecture. All members of the medical profession are invited to attend.

A PAPER is to be read to-night (Friday) at the meeting of the Epidemiological Society at 11, Chandos-street, London, W.C., by Dr. Louis Sambon on Sleeping Sickness. The paper of Dr. Sambon, who is a lecturer at the London School of Tropical Medicine, may lead to an interesting debate if, as expected, Professor Ray Lankester, Sir Patrick Manson, Lieutenant-Colonel David Bruce, R.A.M.C., and Dr. Adolph Castellani are present.

THERE will be no measure introduced in Parliament next session to provide for revaccination. The Government appear to have found out at the last meeting of the Cabinet that their hands were too full to permit of the introduction of the Bill. Whether it will strengthen an administration whose best friends cannot describe as robust thus to shelve a necessary and promised piece of legislation is, to say the least, doubtful.

THE announcement is made that His Majesty the King has accepted an offer from Mr. John Brickwood to build a church for the Royal Sanatorium at Midhurst. The cost is estimated at £20,000. This may appear a late addition to the original scheme, but a place of worship was specifically omitted from the plans which obtained the first prize in the competition for reasons which Dr. A. Latham, the winner, gave.

THE FINAL REPORT OF THE ROYAL COMMISSION ON ARSENICAL POISONING.

I.

THIS report has now been issued as a Parliamentary paper.[1] It is a document of 50 pages and is signed by all six Royal Commissioners, Lord Kelvin (chairman), Sir William Hart Dyke, M.P., Sir William S. Church, K.C.B., Dr. T. E. Thorpe, F.R.S., Mr. H. Cosmo Bonsor, and Dr. A. Whitelegge, C.B. Dr. G. S. Buchanan, of the Local Government Board, acted as secretary to the Commission. It is stated that two volumes will shortly be issued, comprising the evidence received by the Commission and also various supplementary papers and reports of scientific inquiries which have been undertaken. In the present article, and in another which will appear in a subsequent issue, we propose to give an account of some of the principal points dealt with in the report.

The main circumstances which led to the appointment of the Commission in February, 1901, are sufficiently familiar. At the end of November, 1900, it became known that for several months large and continually increasing numbers of patients suffering from peripheral neuritis had been admitted to Manchester hospitals and Poor-law infirmaries and that Dr. E. S. Reynolds of Manchester had established that the cause of this occurrence and also of the prevalence of some other forms of illness was the presence of arsenic in beer—a fact which was confirmed by independent inquiries made by Mr. C. H. Tattersall, medical officer of health of Salford, and by several other investigators. Almost at once it was realised that this epidemic of arsenical poisoning was spread over many parts of Lancashire, Staffordshire, and elsewhere in the north and midlands and it was shown that in all cases the origin of the considerable quantities of arsenic found in the beer was "brewing sugar," sold by the Garston firm of Bostock and Co., which had been prepared by the use of an arsenical sulphuric acid manufactured by the firm of Nicholson and Sons of Leeds. Valuable reports on inquiries made in consequence of the epidemic were issued by medical men and chemists, particularly Dr. J. Niven, Dr. E. W. Hope, Mr. Tattersall, Dr. G. Reid, and Mr. E. Sergeant, by a strong "expert committee" appointed by the Manchester brewers, and by Dr. Buchanan on the result of inquiries made on behalf of the Local Government Board. These inquiries brought into prominence a state of affairs which on all hands was recognised as unsatisfactory: uncertainty, for example, regarding the extent of the epidemic, the share which malt and other ingredients of beer might have had in producing the recent poisoning by arsenic, the tests for arsenic most suitable for use by public analysts and brewers' chemists, and the risks of arsenical contamination in the case of other articles of food or drink. Moreover, they showed the necessity of thorough investigation of a number of important questions which had arisen in consequence of the demonstration afforded by the epidemic of the defects in the present laws relating to food and in existing administration under the Sale of Food and Drugs Acts. The Royal Commission which was consequently appointed at the instance of the President of the Local Government Board was given a wide reference covering these and other matters. The Commission issued an interim report in July, 1901, on which we commented at the time, setting out the results of its inquiries up to that date and the directions in which it was proposed to undertake further work, while making an interim recommendation for the exercise of control by the Board of Inland Revenue over arsenic in beer ingredients. It is evident that the investigation which has followed during the past two years has been thorough and comprehensive. The final report is divided into the following parts:—

1. Further observations regarding the epidemic of arsenical poisoning in 1900 and as to the medical and public health aspects of the evidence received regarding arsenic in beer and food.
2. The suggested relation between the disease "beri-beri" and arsenical poisoning.
3. Tests for arsenic in foods and substances used in the preparation or manufacture of food.
4. Ways in which foods are liable to become contaminated by arsenic.
5 Precautions which should be taken by manufacturers to exclude arsenic from foods.
6 Present means of official control over purity of food in relation to arsenic.
7. Recommendations as to improvements in official control over the purity of food.
8. Recommendations as to the proportions of arsenic in food which should now be held to constitute an offence under the Sale of Food and Drugs Acts.

The report has evidently been very carefully arranged and worded and its argument is so much condensed that it is by no means easy to abstract. In the present article we summarise some of the principal matters dealt with in Parts 1 to 3.

After briefly recalling the circumstances of the Bostock-Nicholson occurrence and the steps taken by public health authorities and by brewers to put an end to the outbreak of poisoning in 1900 the Commission reports the action which it took to secure that some 700 tons of arsenical glucose and "invert sugar" remaining at the works of Bostock and Co. after the company had gone into liquidation were disposed of for textile and other purposes unconnected with food. The danger of poisoning which arose through the use of arsenical sulphuric acid by this firm was not restricted to brewing sugars. In 1900 Messrs. Bostock and Co. had begun to manufacture preparations resembling treacle termed "table syrups"—sugar which had been "inverted" by Nicholson's sulphuric acid, flavoured with various fruit essences, and put up in two-pound tins for sale. The contents of some of these tins, examined by Dr. G. McGowan, D.Sc., showed about one grain of arsenic per pound. Fortunately, at the date of the discovery of arsenic in the firm's brewing sugars scarcely any of these syrups were on the market, as a trial series of tins sent out to retailers had not proved a success commercially on account of an accident in manufacture which led to the syrups crystallising. 14 tons of these tins were ultimately burnt by order of the liquidators.

Extent, Distribution, and Fatality of the Epidemic of 1900.

Information on these points was obtained by the evidence of witnesses and by circular letter addressed to medical officers of health throughout the country. No cases were reported from the southern or eastern counties, from London, or from 37 English county boroughs; the districts affected were in nearly all cases in the north-west and midlands. Lancashire and Staffordshire suffered most severely. Medical officers of health, in giving estimates of the number of cases which occurred in their districts, were in many instances careful to point out that there must have been others which did not come to their notice, and the Commission concludes that the total of persons attacked "was certainly 6000 and probably the number was, in fact, very considerably greater." It was impossible to determine the fatal cases with any approach to accuracy. A total of 70 deaths occurred in which arsenical poisoning was entered on the death certificate as one of the causes of death or was found to be the cause of death as the result of a coroner's inquest, but the deaths so certified did "not represent the total number of cases in which death resulted from, or was accelerated by, poisoning due to arsenic in beer. Deaths occurring before the discovery of the cause of the outbreak were frequently certified as due to 'chronic alcoholism' and 'cirrhosis of the liver,' and in some cases were attributed to Addison's disease and locomotor ataxy. Other deaths were recorded as due to 'alcoholic,' 'peripheral,' or 'multiple' neuritis." Owing to [illegible]

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[1] Cd. 1848, Eyre and Spottiswoode, price 5½*d.*

be made by comparing the deaths in 1900 with those of previous years.

Effect of the Epidemic on the Birth-rate.

Reference is made to statistics furnished by Dr. Niven, medical officer of health of Manchester, which suggest that a strongly marked fall in the birth-rate of Manchester, Salford, and Liverpool in the third quarter of 1901 was attributable to the epidemic. These statistics, which include comparison with other large towns unaffected by the epidemic, will be studied with interest when the volumes of evidence of the Commission appear. The fact, if established, would accord with observations made by Brouardel and others on anaphrodisia and impotence resulting from long-continued doses of arsenic.

Symptoms of Poisoning due to Arsenic in Beer during the Epidemic of 1900.

The report points out that—

> There were great differences in individual cases as regards the quantity of arsenic in the beer consumed, the amount of beer taken, and the duration of the period over which arsenical beer was drunk, and there were also further differences between individual beer-drinkers—e.g., as to age, sex, health, *conditions of nutrition*, and habits as regards alcohol—which determined the extent of their susceptibility to arsenical poisoning at the time when they began to take beer containing arsenic. ...... Corresponding to these and other differences, the disease produced by the arsenical beer during the epidemic varied greatly in its manifestations. On the one hand, there occurred throughout the epidemic (and particularly, it would seem, towards its termination, when people had been drinking arsenical beer for many weeks or months and so had taken considerable quantities of the poison) an abundance of cases in which, once the possibility of arsenic was entertained, there was comparatively little difficulty in deciding on clinical grounds that the illness was consistent with arsenical poisoning. Such cases presented symptoms *corresponding to those* described as characteristic of subacute poisoning by arsenic, or which are met with i[illegible] results from long-continued doses [illegible] example, inflammatio[illegible] huskiness, lacrymatio[illegible] and diarrhœa; periphe[illegible] and in some cases [illegible] erythromelalgia, keratosis, or recent pigmentation corresponding to that which not infrequently occurs in persons taking arsenic for long periods.
>
> On the other hand, symptoms of the above kind were often slight [illegible] instructive points in con[illegible]ses in which the [illegible] owing evidence of [illegible] symptoms point- [illegible] lly identical with [illegible] to be the result, alike in drinkers of beer and spirits, of the toxic action of alcohol on *nerve tissue.*

The latter considerations are of considerable importance in relation to the argument, subsequently developed in the report, that even minute quantities of arsenic should be excluded from food. In an epidemic such as that in Manchester, when once the *fact of arsenic in beer* was known a great deal of anomalous illness was explained. But in every-day practice, without an epidemic or other circumstances to suggest arsenic, the true nature of such cases (and especially of the slighter forms of poisoning) would very seldom be capable of being satisfactorily established.

Poisoning from Arsenic in Beer apart from the Epidemic of 1900.

The report gives a good deal of space to the question of arsenic in its relation to "alcoholic neuritis." The Commission is satisfied that before 1900 medical men in Manchester and other places were much more familiar with "alcoholic neuritis" than was the case in London, Scotland, and large centres of population in the south of England, and this view is confirmed by the comparative data obtained from hospitals. It is observed that in the former places the disease had been recognised (for some years before 1900 and the "Bostock-Nicholson" incident) as one which affected beer-drinkers far more than spirit-drinkers. Malt has now been shown to be liable to contain material quantities of arsenic, especially when dried by exposure to the products of combustion of gas coke. Manchester and Liverpool brewers who gave up the use of Bostock's and other brewing sugars found, nevertheless, that they could not produce beer which could be regarded as practically free from arsenic until they had discontinued the use of malt which had been dried over this fuel. Use of gas coke on the fire of the malt kiln has never been common in the southern and eastern counties, but at Manchester and Liverpool until the 1900 epidemic a large part of the malt used came from Yorkshire and had been dried over local gas coke. Some of these malts after the epidemic were found to contain one-twentieth of a grain and exceptionally even one-sixth of a grain of arsenic per pound, the quantity of malt used to the gallon of beer being usually between one and two pounds. From these considerations the Commission concludes that—

> The fact of greater prevalence of alcoholic neuritis among beer-drinkers in Manchester and Liverpool before 1900, when compared, for example, with London and places in the southern counties, is consistent with the explanation that (whatever may have been the case with regard to brewing sugars) the degree to which beer was likely to become contaminated by arsenic was greater in these two cities owing to the larger proportion of arsenic contained in much of the malt there used.

The report shows that this is confirmed by the evidence which the Commission has received of the marked diminution in "alcoholic neuritis" and in the condition locally known as "alcoholic heart" in Manchester during 1901 and 1902, when compared with other periods before the epidemic year of 1900. This diminution corresponds with stringent and effectual precautions against arsenic which have been taken by Manchester brewers since the epidemic, including the disuse of arsenical malt.

Arsenical Poisoning in Halifax in 1902.

A small but instructive outbreak in Halifax, which was investigated for the Commission by Mr. H. Hammond Smith, and also by Dr. J. T. Neech, medical officer of health of the borough, gives point to these conclusions. Some 15 cases (three of which were fatal) presenting symptoms pointing unmistakeably to arsenical poisoning were discovered in this town early in 1902, the circumstances being first brought to notice by Dr J. F. Hodgson:—

> All the persons attacked were beer-drinkers and in most instances heavy beer-drinkers. There was no reason to suspect that they had received arsenic otherwise than through beer, while there was strong evidence that the beer they had consumed had been arsenical. Samples of beer taken in January, 1902, from public houses frequented by certain [illegible] grain of arsenic per gallon [illegible] the other hand, the facts pointed strongly to the conclusion that the implicated beers had been contaminated by arsenic derived from malt used in *their preparation. In nearly every instance there was* evidence that the malt concerned had been dried over local gas coke and that the brewer, before using it, had taken no precautions to ascertain its condition as regards arsenic. *In most cases the malt* which had been used in the implicated brews had been dried in the [illegible] malting season, 1900-01, over gas coke; and at some maltings [illegible] 902. One [illegible] per cent. [illegible] coke was [illegible] Certain [illegible] which had

been used in the beers under inquiry showed amounts of arsenic such as one-sixtieth of a grain per pound. In one instance where the brewer had used malt in the proportion of two pounds to the gallon of beer, a sample of the beer, taken in January, 1902, was found to contain one-sixteenth of a grain of arsenic to the gallon, and it was shown that on the single occasion on which the maltster had sent a sample of his malt to be examined for arsenic the analyst had reported the presence of as much as one-thirtieth of a grain of arsenic to the pound.

The Commission points to the circumstances of this small outbreak as showing that poisoning by arsenic in beer may even now easily pass undetected, notwithstanding that a number of cases may be occurring in the same place at about the same time, and adds that the Halifax beers associated with the outbreak "must have been typical in respect of arsenic of a large class of beers prepared before the 1900 epidemic from arsenical malt."

Alcoholic Neuritis apart from Arsenical Poisoning.

On this subject the Commission states :—

> In our view it is important that the question of arsenic should be fully considered in all cases of peripheral neuritis attributed to beer-drinking. To what extent beer free from arsenic is capable of producing neuritis among heavy drinkers the data at our disposal do not suffice to permit an opinion to be given. We are unable to accept the thesis of some witnesses that there is, practically speaking, no "alcoholic neuritis" apart from arsenic. Inquiries which we have made as to the experience of London and provincial hospitals show that cases of alcoholic neuritis are met with from time to time in which the alcoholic liquor consumed has been exclusively spirits. All the evidence adduced is to the effect that spirits are not liable to contain arsenic.

As regards arsenical beer, "it may be conjectured that when small doses of arsenic are taken for a long time, together with considerable quantities of alcohol, the arsenical poisoning liable to result will be manifested more frequently and more conspicuously by peripheral neuritis than if the arsenic had been taken without the alcohol." Although it is possible that arsenic may enter into some combination with the organic matter of beer the chemical evidence is inconclusive and the Commission sees no reason to assume from merely clinical data that poisoning by arsenious oxide in beer is itself insufficient to explain the morbid conditions observed. Professor Delépine and others have shown that there is no evidence that cacodyl or substances akin to cacodyl are formed in arsenical beer.

The rest of Part I. deals with the evidence as to individual susceptibility to arsenic, accumulation of arsenic in human tissue, and ways in which arsenic is eliminated. It is obvious that the Commission has received a large amount of valuable information on these points and its evidence when published should provide a store of useful material for reference. An investigation into the elimination of arsenic by the hair, which the Commission undertook with the assistance of the medical registrars of certain London hospitals and the medical superintendents of certain London infirmaries, is summarised in the final report, and the complete account of this inquiry, which appears to have shown that the hair may give clear indications of arsenic when as little as one-twentieth or one-thirtieth of a grain has been taken daily for two months, will be awaited with interest.

Importance of the Exclusion of Small Quantities of Arsenic from Food.

Under this heading the report deals with the general trend of the evidence on the subject; as to individual susceptibility, the possibility of arsenic being received at the same time from more than one source of food or drink, the difficulty of ascertaining the true nature of milder forms of arsenical poisoning occurring in isolated instances, and the toxic effect of small doses of arsenic administered over long periods to rodents.

> The question has often arisen, with reference to particular foods liable to contain a relatively minute quantity of arsenic, whether such a quantity may not be regarded as unimportant and altogether negligible and the Commission have, as it were, been challenged to say that it can do no harm.

But reasons are given for not accepting this position.

> We adhere to the view expressed in our first report that it would be unwise to express an opinion that any quantity of arsenic, however small, is to be regarded as admissible in any articles of food, and we think it should be the aim of the food manufacturer to exclude arsenic altogether from his products.

Relation between Beri-beri and Arsenical Poisoning.

This question has been investigated by Dr. Herbert Williams, Mr. C. C. Bullmore, and other port medical officers of health, who have ascertained particulars regarding cases of beri-beri on vessels arriving at London, Falmouth, and elsewhere, and have collected specimens for analysis by Dr. McGowan on behalf of the Commission. In promising a detailed account of the information thus obtained the report states :—

> In a few instances the results gave some ground for inference that the beri-beri cases inquired into had lately been taking arsenic along with their food. Thus the hair of one or two of the patients contained noteworthy amounts of arsenic, while small quantities of arsenic were found in several samples of dried fish—an important article in the diet of sailors on Scandinavian sailing ships. But when such clinical, etiological, and chemical data as we have been able to collect are considered as a whole, they cannot be said to support the view that cases of beri-beri met with on ships arriving at home ports are essentially attributable to poisoning by arsenic.

Tests for Arsenic in Food and Substances used in the Preparation and Manufacture of Food.

All who have followed the "arsenic question" during the past two years will be aware of the great difficulties which arose, particularly at first, in obtaining satisfactory methods of estimating minute quantities of arsenic in organic substances. The Commission has received a great deal of chemical evidence, especially from two strong committees, one a joint committee of the Societies of Public Analysts and Chemical Industry, with Mr. Otto Hehner as chairman, and the other, with Dr. Thorpe as chairman, appointed by the Board of Inland Revenue to advise as to arsenic in beer ingredients. The report deals with the essential principles of applying what is now termed the "Marsh-Berzelius test' to various substances. In this test, as is well known, the arsenic from the arseniuretted hydrogen is deposited, not on a porcelain tile, as in the "Marsh" test, but in a capillary tube. Within a certain range "mirrors" of arsenic deposited in these tubes show definite differences in intensity according to the quantity of arsenic present and an estimation is made by comparing the intensity of the mirror obtained from a given weight of substance with a set of standard mirrors. Attention to various points of detail is essential to accuracy. In nearly all cases it is necessary in the first instance to destroy completely any organic matter present. The presence of iron salts in the Marsh apparatus may seriously vitiate the result. It is not only necessary to have zinc which is free from arsenic but also zinc which is "sensitive" and does not retain the arsenic in the solution tested. The Commission finds that chemists are now agreed as to these and other sources of error which it is necessary to avoid and that if due regard is had to these points differences as small as 0·2 part of arsenic per 1,000,000 in the substance taken, or 0·0014 grain of arsenic per pound, can be readily distinguished. When various substances are taken for analysis in quantities which have been found practically convenient the presence of arsenic will be detected when in amounts well below one-thousandth of a grain per pound, or in the case of a liquid well below one three-hundredth of a grain per gallon. The departmental committee has found that in the case of beer ingredients many of the difficulties attending the Marsh-Berzelius test are obviated by an electrolytic method of evolving arseniuretted hydrogen, which can be applied wherever a current of sufficient intensity is available. Wide experience of the working of this method may soon be looked for.

THE LONDON SCHOOL OF TROPICAL MEDICINE; ITS ACHIEVEMENTS AND REQUIREMENTS.

Sir Patrick Manson, M.D., F.R.S., gave an excellent address on Monday last, Dec. 7th, at the London School of Tropical Medicine, Seamen's Hospital, Royal Albert Dock, E., on the Achievements and Requirements of the School. A distinguished company was present to hear the address and to wish Sir Francis Lovell, the dean of the school, godspeed in his self-imposed task of paying another visit to the East to collect funds to carry on the work.

At the commencement of his address Sir PATRICK MANSON said that he wished to make public acknowledgment of the obligations of the London School of Tropical Medicine to Mr. Chamberlain, the late Colonial Secretary, who had been the mainspring of the movement for education in tropical medicine, and to the Seamen's Hospital Society and its governing body who supported Mr. Chamberlain's scheme. In a hundred ways it had been helping forward the good work. As regards the educational work of the school

Sir Patrick Manson said that since the school opened on Oct. 3rd, 1899, over three hundred students had passed through its portals. During the first two years (six sessions) they had had 149 students; during the last two years (six sessions) they had had 178 students. In the earlier days of the school's existence many of the students came for one or two months only. Now a large proportion of the students remained during the full course of three months. When they left the majority of the students had a genuine practical grasp of their subject. They had seen and most of them had applied for themselves the most recent methods of diagnosis, and as far as teaching and opportunity could insure they were qualified for medical work in the tropics—qualified both to practise their profession and to advance the science of tropical medicine. Where two or three men took a languid interest in tropical disease some five or six years ago, a whole army of eager investigators had arisen, mainly composed of men educated or inspired by the London and Liverpool schools of tropical medicine. This multiplication of investigators had already borne remarkable fruit. Without alluding to what had been done in Liverpool he could point out not a few notable triumphs by men from the London school, although the school had been in existence for only just over four years. He instanced Dr. G. C. Low's work in connexion with the etiology of elephantiasis; the practical experiment of Dr. L. Sambon and Dr. Low as to the spread of malaria by mosquitoes; the discovery in the Gambia colony by a pupil of the school of a new blood parasite which was subsequently recognised by Dr. J. E. Dutton of the Liverpool School of Tropical Medicine; and the demonstration by Dr. A. Castellani, another pupil of the school, of the association of this same parasite, a trypanosoma, with sleeping sickness. Sir Patrick Manson added here that the certainty of this trypanosoma being the cause of sleeping sickness had, through the clinical opportunities of their school and hospital, now been proved. There were other discoveries which might be accredited to the school, but those which he had mentioned were sufficient to indicate that their existence had not been unproductive and that the few thousand pounds which the establishment had cost the country had been well invested. The permanent additions to human knowledge made by the workers [illegible] while he [illegible] Craggs, [illegible] nable for three years, for purposes of research. He had also made a very handsome annual donation to be awarded to any actual or past student of the school who, during any current year, should make an important contribution to tropical medicine. In referring to beri-beri Sir Patrick Manson said they did not despair of getting light on this disease. Dr. C. W. Daniels, their late superintendent, had been placed in charge of the research laboratory at Kuala Lumpur, and in the Federated Malay States beri-beri was rampant. Perhaps no country in the world, he thought, was so likely to benefit by recent advances in tropical medicine as the British colonies and protectorates in the Malay Peninsula, for beri-beri was a terrible drag on the mining and agricultural industries there. The school had expressed its gratitude to the Hon. Bomanji Dinshaw Petit who gave the school 100,000 rupees, but when he thought of the wealth that many Chinese had accumulated under the British flag in the Straits of Malacca he was not without hope that Sir Francis Lovell in his excursion to the East would find a Chinese rival to Mr. Petit.

After paying an eloquent tribute to the energy and unselfishness displayed by Sir Francis Lovell in his work for the school, Sir Patrick Manson concluded by an appeal for public support. At the present time, he said, the school had certain schemes of investigation before it for some of which they wanted money, for others men and money. They wished to furnish their museum and library on a scale adequate to the needs of the school. In short, they wanted £100,000, or as much of that sum as they could get. Any one of the discoveries which he had mentioned, said Sir Patrick Manson, was worth the sum he had named ten times over, apart from the education which the school had supplied to its students. They had given the public a great deal more than they had ever received, or would ever be likely to receive, and therefore they had no hesitation in asking for something more on account. The teachers were strictly honorary, their pay was so small that the laboratory microscopes were sometimes required to see it. They had the approval of those best qualified to judge of the work the school had undertaken—viz., the medical profession, whose hearty practical sympathy was peculiarly gratifying to them. Finally, Sir Patrick Manson said that "he who gives to the London School of Tropical Medicine lends to humanity."

On the motion of Sir William S. Church, seconded by Sir F. Young, a vote of thanks was heartily passed to Sir Patrick Manson for his address.

MEDICINE AND THE LAW.

The Law relating to Experiments on Animals.

The recent libel action against the honorary secretary of the National Antivivisection Society was fought upon the issues raised upon the pleadings and so resolved itself into the question whether the dog experimented upon was under the influence of anæsthetics or was cruelly and recklessly operated upon without them. This was the substance of the libel, but the defendant's counsel in the course of the trial raised two questions as to the legality of the experiments performed which were not relevant because the libel contained no allegation with regard to them and which consequently were not decided either by judge or jury. These were (1) whether the demonstration performed by Mr. W. M. Bayliss before the students whom he was lecturing was permissible under the Act; and (2) whether the dog used for this demonstration should have been so used taking into consideration the fact that it had already had its abdomen opened for the purpose of examination by Dr. Starling. Both these questions are regulated by the same section of the Act (39 & 40 Vict. c. 77, Sec. 3). With regard to the first, which is the more important of the two to those engaged in the instruction of students, this section says: "The experiment shall not be performed as an illustration of lectures in medical schools, hospitals, colleges, or elsewhere," provided that "experiments may be performed under the foregoing provisions as to the use of anæsthetics by a person giving illustrations of lectures in medical schools, hospitals, or colleges or elsewhere, on such certificate being given as in this Act mentioned that the proposed experiments are absolutely necessary for the due instruction of the persons to whom such lectures are given with a view to their acquiring physiological knowledge which will be useful to them for saving or prolonging life or alleviating suffering." It will be seen that the important question here is the scope of the expression "absolutely necessary for the due instruction" of students in physiological knowledge such as will be useful to them in the medical profession, and that the application of the section to particular experiments must be, to some extent, a matter of opinion. At any trial arising out of an alleged infringement of this portion of the Act it would be a question of fact whether a particular experiment was necessary for due instruction. A jury would have to decide this if the case was being tried with a jury and the jury would have to base its decision upon evidence given on oath before it. The best obtainable witnesses as to this would be persons engaged in the instruction and examination of students, as it is submitted that their views would naturally and properly carry the greatest weight both as to the assistance given to instruction by actual demonstration and as to the need of accurate knowledge of the phenomena demonstrated by those desiring to "prolong life and alleviate suffering." The evidence of eminent men engaged in the practice of medicine and of surgery would be of almost equal importance and the court would no doubt listen to the opinion of any medical man who was called as a witness subject to such comment as might be made upon his qualification to speak with authority. The evidence given on behalf of Mr. Bayliss was precisely such as has been indicated above and had the issue in question been before the jury the evidence upon it could no doubt have been increased in quantity, although in quality it could hardly have been strengthened. The matter is one which no doubt throws considerable responsibility upon the teacher who has to exercise his discretion in the selection of his illustrations. He is, however, subject to the supervision imposed by the Act and this is in itself a protection to him. It is clear that the Act contemplates the use of live animals for purposes of instruction, and as only ascertained truths are required to be inculcated by teachers it must also be held to have contemplated the employment of animals for the demonstration of ascertained truths. The fact that the result of the experiment made use of at University College might have been described orally with the aid of diagrams or models was urged repeatedly during the hearing of Bayliss *v.* Coleridge. It is conceded that all scientific facts can to some extent be imparted without actual demonstration; it is the question of the degree to which such demonstration is desirable and the circumstances in which it is necessary upon which physiologists and "antivivisectionists" will continue to differ. If the question is removed from the debateable ground of physiology to that of chemistry few will be found to say that demonstration is unnecessary for instruction simply because the consequence that will follow the experiment has been reduced by previous trials to a matter of certainty. It must also be remembered that the standard imposed by the words "due instruction" is not a fixed one. The "due instruction" of students varies not only from century to century but from generation to generation and from decade to decade, and the public who alone gain by the advances of science and by the improvement in teaching in our medical schools will not be anxious to impose restrictions for which no need is shown. With regard to the second question, as to the repeated use of the same dog, "the animal must, if the pain is likely to continue after the effect of the anæsthetic has ceased, or if any serious injury has been inflicted upon the animal, be killed before it recovers from the influence of the anæsthetic which has been administered," provided that "experiments may be performed without the person who performed such experiment being under an obligation to cause the animal on which any such experiment is performed to be killed before it recovers from the influence of the anæsthetic on such certificate being given as in this Act mentioned, that the so killing the animal would necessarily frustrate the object of the experiment, and provided that the animal be killed as soon as such object be attained." In the course of Bayliss *v.* Coleridge it was proved that Dr. Starling performed an experiment upon a dog which he was entitled under the Act to perform and afterwards kept it alive as he was entitled under the Act to do. He at a later date anæsthetised it and made an examination of the result of his previous experiment which again he had a perfect right to do. He then according to the "antivivisectionist" contention should have killed the dog, instead of which, while it was still in a state of anæsthesia he allowed Mr. Bayliss to use it for a demonstration entirely distinct from the experiments made already upon it. Dr. Starling pointed out that the animal was already completely unconscious and destined never to return to consciousness and that the alternative was to take a fresh dog for the purpose of Mr. Bayliss's lecture. This has been represented in various "antivivisectionist" articles in newspapers and elsewhere as a desire to economise dogs, or, rather, to save the price of them. Such nonsense carries its own refutation on the face of it. It may be contended that Dr. Starling and Mr. Bayliss committed a technical infringement of the Act under which they performed their experiments. If they did so neither they nor any other physiologists need repeat their offence now that attention has been called to the point, and in this respect the effect of Bayliss *v.* Coleridge will be that a few more animals will be used in the performance of experiments in the course of each year than would otherwise have been the case, a curious result for an "antivivisectionist" society to have brought about. The amount of pain inflicted upon animals will be neither diminished nor increased.

Insanity in the Eye of the Law.

In a trial for murder at the recent Derby assizes Mr. Justice Channell told the jury that the prisoner might be insane and still be responsible at law for what he had done He called their attention to the answer given by the judges in M'Naughton's case. where it was said that "if the accused was conscious that his act was one which he ought not to do and if that act was at the same time contrary to the law of the land he was punishable," and where it was further pointed out that the usual course was "to leave to the jury the question whether the party accused had a sufficient degree of reason to know that he was doing an act that was wrong, with such observations and explanations as the circumstances of each particular case might require." Mr. Justice Channell added that his own practice was to lay down the law slightly more in favour of the prisoner by adding that if from disease of the mind a person was unable to consider what was the difference between right and wrong, then it might fairly be said that he did not "know" the difference between right and wrong. He added that mere insufficiency of motive was not to be relied upon as evidence that the prisoner did not know that he was doing wrong. In the case which his lordship was summing up a labourer, aged 25 years, had murdered a girl, a domestic servant at a farm where he was wagoner, by cutting her throat and had then attempted his own life in the same way. His own story as to motive was that she had "deceived" him and told him that she had "led him on for a bit of fun." There was evidence of several cases of insanity having occurred among the prisoner's relatives, descendants of his maternal great-aunts, and also that he had had an insane great-aunt, but no ancestor was proved to have been insane. The prisoner himself was stated to be deficient in intellect and the learned judge so described him to the jury but asked them to satisfy themselves before acquitting him that his mental condition was such when he did the act as to prevent him from judging whether he was doing wrong. The jury convicted the prisoner but recommended him to mercy, and *sentence of death was passed.* In these circumstances it will not be surprising if the clemency of the Crown is exercised, but at the same time it may confidently be said that if the sentence is carried out it will be after full and sufficient investigation. The degree of responsibility for criminal acts that should be exacted from those describable as mentally deficient must depend upon the consideration of each case and must also to a great extent be a matter of individual opinion. It is unfortunate that the conviction of prisoners so deficient should inevitably depend upon the varying views entertained by jurors, often after hearing conflicting evidence, and still more upon the varying degree of influence exercised by the judge who may either be willing to undertake an admittedly onerous responsibility or may shrink from doing so. This circumstance introduces an element of chance and uncertainty which is very undesirable.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8107 births and 5364 deaths were registered during the week ending Dec. 5th. The annual rate of mortality in these towns, which had been 17 9, 17·4, and 17·6 per 1000 in the three preceding weeks, further rose last week to 18·6 per 1000. In London the death-rate was 17 8 per 1000, while it averaged 18·9 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 7 4 in Kings Norton, 10·3 in Grimsby 10·6 in Hornsey, 10·8 in Walthamstow, 11·1 in Reading, 11·4 in Tottenham, and 11 8 in East Ham and in Handsworth; the highest rates were 25 5 in Walsall. 27 5 in Warrington, 27·7 in Bury, 29·2 in Bootle, 29·9 in York, 30·2 in Middlesbrough, 30·5 in Hanley, and 34·4 in Wigan. The 5364 deaths in these towns last week included 402 which were referred to the principal infectious diseases, against 432, 436, and 430 in the three preceding weeks; of these 402 deaths, 102 resulted from measles, 87 from whooping-cough, 72 from diarrhœa, 55 from diphtheria, 43 from scarlet fever, 40 from "fever" (principally enteric), and three from small-pox. No death from any of these diseases was registered last week in Hornsey, Hastings, Reading, Northampton, Handsworth, West Bromwich, Aston Manor, Halifax, or South Shields; the highest death-rates from the principal infectious diseases were recorded in Willesden, Warrington, Bury, Preston, Rotherham, York, Sunderland, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Willesden, Stockport, Warrington, Bury, Salford, Preston, Rotherham, York, and Sunderland; from scarlet fever in Merthyr Tydfil; from diphtheria in Great Yarmouth and St. Helens; from whooping-cough in Walsall, Bootle, York, and Merthyr Tydfil; and from diarrhœa in Stockport. The mortality from "fever" showed no marked excess in any of the large towns. Two fatal cases of small-pox were registered in Gateshead and one in Manchester, but not one in any other of the 76 large towns. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 51, 47, and 40 at the end of the three preceding weeks, had further declined to 35 at the end of last week; three new cases were admitted during the week, against 16, five, and five at the end of the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital on Saturday last, Dec. 5th, was 1715, against 1824, 1832, and 1770 on the three preceding Saturdays; 161 new cases were admitted during the week, against 185, 191, and 157 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory organs, which had been 339, 325, and 399 in the three preceding weeks, declined again last week to 358 and were 68 below the number in the corresponding period of last year. The causes of 67, or 1·2 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Leicester, Nottingham, Leeds, Newcastle-on-Tyne, and in 44 other smaller towns; the largest proportions of uncertified deaths were registered in Norwich, Birmingham, Liverpool, St. Helens, Warrington, Manchester, Sheffield, South Shields, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 17·4, 17·4, and 18·7 per 1000 in the three preceding weeks, further rose to 20·0 per 1000 during the week ending Dec. 5th and was 1 4 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 12·4 in Perth and 13·2 in Paisley to 23·3 in Greenock and 24·0 in Dundee. The 655 deaths in these towns included 22 from measles, 12 from diarrhœa, seven from whooping-cough, five from "fever," four from diphtheria, two from small-pox, and one from scarlet fever. In all, 53 deaths resulted from these principal infectious diseases last week, against 49, 61, and 62 in the three preceding weeks. These 53 deaths were equal to an annual rate of 1·6 per 1000, which was 0 2 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been 10, 13, and 17 in the three preceding weeks, further rose last week to 22, all of which occurred in Glasgow. The deaths from diarrhœa, which had been 20 and 22 in the two preceding weeks, declined again to 12 last week, and included five in Dundee, four in Glasgow, and two in Aberdeen. The fatal cases of whooping-cough, which had been four, seven, and nine in the three preceding weeks, declined again last week to seven, of which three were registered in Glasgow and two in Edinburgh. The deaths referred to different forms of "fever," which had been ten, six, and four in the three preceding weeks, rose again to five last week and included two in Glasgow and two in Dundee. The fatal cases of diphtheria which had been four, seven, and five in the three preceding weeks, declined again last week to four, of which two were recorded in Glasgow and two in Greenock. The deaths from small-pox, which had been one, four, and three in the three preceding weeks, declined last week to two, both of which occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 129, 136, and 148 in the three preceding weeks, declined again last week to 138, but were slightly in excess of the number in the corresponding period of last year. The causes of 24, or nearly 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·9, 24·5, and 24 8 per 1000 in the three preceding weeks, further rose to 27·5 per 1000 during the week ending Dec 5th. During the past four weeks the death-rate has averaged 24 4 per 1000, the rates during the same period being 17 1 in London and 16·6 in Edinburgh. The 200 deaths of persons belonging to Dublin registered during the week under notice were 20 in excess of the number in the preceding week and included 13 which were referred to the principal infectious diseases, against seven, nine, and 11 in the three preceding weeks; of these, five resulted from whooping-cough, four from "fever," two from scarlet fever, and two from diphtheria, but not any from small pox, measles, or diarrhœa. These 13 deaths were equal to an annual rate of 1·8 per 1000, the death-rates last week from the principal infectious diseases being 1·2 in London and 0 5 in Edinburgh. The fatal cases of whooping-cough, which had been three, two, and three in the three preceding weeks, further rose last week to five The deaths referred to different forms of "fever," which had been three, one, and four in the three preceding weeks, were again four last week. The 200 deaths in Dublin last week included 44 of children under one year of age and 55 of persons aged 60 years and upwards; the deat[illegible] decline from the number in the [illegible] of elderly persons were consider[illegible] from violence and three inquest cases were registered during the week and 74, or more than one-third, of the deaths occurred in public institutions. The causes of eight, or 4 per cent., of the deaths were not certified.

VITAL STATISTICS OF LONDON DURING NOVEMBER, 1903.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 6·0 per 1000 of the population, estimated at 4,613,812 persons in the middle of the year. In the three preceding months the rates had been 5·5, 6·5, and 6·8 per 1000 respectively. The rates were considerably below the average in Kensington, Chelsea, the City of Westminster, Hampstead, Stoke Newington, Finsbury, and Greenwich, while they showed the largest excess in St. Marylebone, Hackney, Shoreditch, Bethnal Green, Stepney, and Deptford. The prevalence of small-pox showed a slight diminution last month; of the 33 cases notified during the month eight belonged to the City of Westminster, seven to Wandsworth, four to St. Pancras, four to Islington, three to Southwark, and three to Camberwell. The Metropolitan Asylums hospitals contained 40 small-pox patients at the end of last month, against 57, 21, and 42 at the end of the three preceding months; the weekly admissions averaged eight, against nine, five, and ten in the three preceding months. Scarlet fever was considerably less prevalent during November than it had been in either of the two preceding months; the greatest proportional prevalence of this disease occurred in Paddington, Hackney, Bethnal Green, Stepney, Deptford, and Woolwich. The number of scarlet fever patients in the Metropolitan Asylums hospitals, which had been 1754, 1849, and 1794 at the end of the three preceding months had further declined to 1738 at the end of November; the weekly admissions averaged 184, against 211, 241, and 210 in the three preceding months. The prevalence of diphtheria showed a marked decline from that in the preceding month. Among the various metropolitan boroughs this disease was proportionally most prevalent in Fulham, St Marylebone, Bethnal Green, Poplar, Wandsworth, and Deptford. There were 763 diphtheria patients remaining under treatment in the Metropolitan Asylums hospitals at the end of last month, against 716, 671, and 753 at the end of the three preceding months. The weekly admissions averaged 109, against 94, 114, and 121 in the three preceding months. The prevalence of enteric fever, [illegible] continuously during the seven preceding [illegible]ber; the greatest [illegible]red in Hackney, [illegible]ermondsey, and Woolwich. The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 172, 247, and 285 at the end of the three preceding months, had increased to 286 at the end of last month; the weekly admissions averaged 45, against 27, 40, and 44 in the three preceding months. Erysipelas was proportionally most prevalent in Hackney, Holborn, Finsbury, Shoreditch, Bethnal Green, and Bermondsey. The 14 cases of puerperal fever notified last month included two in Wandsworth and two in Lewisham.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various boroughs, the deaths occurring in public institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ending Nov. 28th, the deaths of 5735 persons belonging to London were registered, equal to an annual rate of 16·2 per 1000, against 13·5, 14 4, and 14·6 per 1000 in the three preceding

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING NOVEMBER, 1903.

(*Specially compiled for* THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1903.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,613,812	33	863	536	—	305	4	14	369	—	2124	6·0	2	119	29	56	49	—	58	—	172	485	1·4	5735	16·2	156
West Districts.																										
Paddington	146,032	—	42	6	—	12	—	—	13	—	73	6·5	—	5	2	1	1	—	—	—	6	15	1·3	155	13·8	106
Kensington	178,409	—	23	9	—	11	—	—	13	—	56	4·1	—	7	3	1	2	—	2	—	6	21	1·5	221	16·2	176
Hammersmith	115,803	1	16	15	—	9	—	1	5	—	47	5·3	—	—	1	1	1	—	1	—	3	7	0·8	150	16·9	157
Fulham	147,780	1	19	25	—	10	—	1	2	—	58	5·1	—	18	—	1	—	—	4	—	8	31	2·7	175	15·4	114
Chelsea	74,169	—	9	7	—	2	—	1	3	—	22	3·9	—	3	—	—	—	—	2	—	2	7	1·2	79	13·9	171
City of Westminster	179,052	8	23	13	—	7	—	—	7	—	58	4·2	2	12	1	2	2	—	1	—	2	22	1·6	206	15·0	105
North Districts.																										
St. Marylebone	131,234	1	25	27	—	7	2	1	12	—	75	7·5	—	5	—	3	1	—	3	—	4	16	1·6	144	14·3	73
Hampstead	85,197	—	10	9	—	1	—	—	2	—	22	3·4	—	—	1	1	—	—	—	—	—	2	0·3	81	12·4	130
St. Pancras	235,716	4	51	31	—	8	—	—	24	—	118	6·5	—	—	4	1	3	—	1	—	6	15	0·8	286	15·8	138
Islington	339,137	4	59	21	—	11	—	1	22	—	118	4·5	—	2	1	2	2	—	4	—	8	19	0·7	401	15·4	149
Stoke Newington	52,069	—	2	—	—	1	—	—	3	—	6	1·5	—	—	—	—	1	—	2	—	—	3	0·8	58	14·5	101
Hackney	224,082	—	54	26	—	23	—	—	24	—	127	7·4	—	3	—	2	3	—	3	—	4	15	0·9	230	13·4	143
Central Districts.																										
Holborn	57,845	—	10	1	—	5	—	—	11	—	27	6·1	—	—	—	—	—	—	2	—	1	3	0·7	87	19·6	178
Finsbury	99,717	—	11	2	—	4	—	—	15	—	32	4·2	—	6	1	1	—	—	1	—	7	16	2·1	171	22·4	172
City of London	24,539	—	4	1	—	2	—	—	1	—	8	4·3	—	—	1	—	—	—	1	—	1	3	1·6	35	18·6	179
East Districts.																										
Shoreditch	117,513	—	28	11	—	14	1	1	15	—	70	7·8	—	7	2	1	2	—	3	—	6	21	2·3	197	21·9	222
Bethnal Green	130,028	—	44	23	—	9	—	1	21	—	98	9·8	—	1	2	1	3	—	2	—	9	18	1·8	201	20·1	250
Stepney	302,153	—	83	46	—	26	—	—	32	—	187	8·1	—	4	1	5	5	—	1	—	9	25	1·1	421	18·2	165
Poplar	169,550	—	35	30	—	14	—	1	8	—	88	6·8	—	—	2	10	2	—	4	—	9	27	2·1	249	19·1	173
South Districts.																										
Southwark	207,369	3	24	20	—	37	—	—	22	—	106	6·7	—	3	1	1	2	—	8	—	14	29	1·8	306	19·2	199
Bermondsey	129,801	—	22	9	—	12	—	—	25	—	68	6·8	—	1	1	1	1	—	3	—	3	10	1·0	207	20·8	187
Lambeth	307,711	—	39	38	—	21	1	1	17	—	117	5·0	—	15	2	3	5	—	3	—	12	40	1·7	369	15·6	137
Battersea	173,422	—	34	24	—	12	—	—	16	—	86	6·5	—	9	—	3	2	—	1	—	7	22	1·7	202	15·2	163
Wandsworth	249,678	7	43	49	—	14	—	2	18	—	133	6·9	—	15	—	5	3	—	1	—	13	37	1·9	290	15·1	138
Camberwell	265,562	3	41	25	—	12	—	1	15	—	97	4·8	—	3	—	1	2	—	3	—	15	24	1·2	311	15·3	170
Deptford	112,537	—	45	25	—	1	—	—	12	—	83	9·6	—	—	2	4	2	—	—	—	3	11	1·3	142	16·4	183
Greenwich	99,824	—	7	10	—	2	—	—	5	—	24	3·1	—	—	1	2	1	—	—	—	7	11	1·4	106	13·8	138
Lewisham	136,405	1	27	17	—	4	—		3	—	54	5·2	—	—	—	3	—	—	1	—	3	7	0·7	110	10·5	108
Woolwich...	121,478	—	33	16	—	10	—	—	3	—	62	6·7	—	—	—	—	3	—	1	—	4	8	0·9	145	15·6	170
Port of London	—	—	—	—	—	4	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

months. The lowest death-rates in London last month were 10·5 in Lewisham, 12·4 in Hampstead, 13·4 in Hackney, 13·8 in Paddington and in Greenwich, and 13·9 in Chelsea; the highest rates were 19·2 in Southwark, 19·6 in Holborn, 20·1 in Bethnal Green, 20·8 in Bermondsey, 21·9 Shoreditch, and 22·4 in Finsbury. The 5735 deaths from all causes included 485 which were referred to the principal infectious diseases; of these, two resulted from small-pox, 119 from measles, 29 from scarlet fever, 56 from diphtheria, 49 from whooping-cough, 58 from enteric fever, and 172 from diarrhœa. The lowest death-rates last month from these infectious diseases were recorded in Hammersmith, Hampstead, St. Pancras, Islington, Stoke Newington, Holborn, and Lewisham; and the highest rates in Fulham, Finsbury, Shoreditch, Bethnal Green, Poplar, Southwark, and Wandsworth. The two fatal cases of small-pox belonged to the City of Westminster. The 119 deaths from measles were 50 below the corrected average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Fulham, the City of Westminster, Finsbury, Shoreditch, Lambeth, Battersea, and Wandsworth. The 29 deaths from scarlet fever showed a decline of 39 from the corrected average number; among the various boroughs the greatest proportional mortality from this disease occurred in Kensington, St. Pancras, the City of London, Shoreditch, Bethnal Green, and Deptford. The 56 fatal cases of diphtheria were only slightly over one quarter of the average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in St. Marylebone, Poplar, Wandsworth, Deptford, Greenwich, and Lewisham. The 49 deaths from whooping-cough were 30 below the corrected average number; among the various metropolitan boroughs this disease showed the highest proportional mortality in Shoreditch, Bethnal Green, Stepney, Lambeth, Deptford, and Woolwich. The 58 deaths from enteric fever were 35 below the average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Fulham, Chelsea, Stoke Newington, Holborn, Shoreditch, and Southwark. The 172 fatal cases of diarrhœa were 95 in excess of the corrected average number; the greatest proportional mortality from this disease occurred in Fulham, Bethnal Green, Poplar, Southwark, Camberwell, and Greenwich. In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was nearly 30 per cent. below the average.

Infant mortality in London during November, measured by the proportion of deaths among children under one year of age to registered births, was equal to 156 per 1000. The lowest rates of infant mortality were recorded in Paddington, Fulham, City of Westminster, St. Marylebone, Stoke Newington, and Lewisham; and the highest rates in Holborn, the City of London, Shoreditch, Bethnal Green, Southwark, Bermondsey, and Deptford.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Inspector-General of Hospitals and Fleets Thomas Bolster has been placed on the retired list and Deputy Inspector-General of Hospitals and Fleets John C. Birkmyre Maclean has been promoted to the rank of Inspector-General of Hospitals and Fleets.

The following appointments are notified:—Fleet Surgeons: C. W. Buchanan-Hamilton to the *Glory;* C. E. Geoghegan to the *King Alfred* for voyage home; G. Wilson to the *King Alfred* and to the *Leviathan;* S. T. O'Grady to the *Impregnable;* A. G. Andrews to Yarmouth Hospital; C. W. Sharples to the *St. Vincent;* J. O'B. Williams to the *Euryalus;* and J. Dudley to the Royal Marines, Plymouth. Surgeons: J. W. Bird to the *Excellent;* J. Whelan to the *Lion;* J. Martin and R. F. MacMahon to the *King Alfred;* A. J. Laurie to the *Cambridge;* J. Thornhill to the *Kinsha;* H. Huskinson and J. G. Wallis to the *King Alfred* for voyage home; J. E. H. Phillips and N. H. Mummery to the *Euryalus;* F. Bolster to Chatham Hospital; and F. E. Bolton to the *Resolution.*

ROYAL ARMY MEDICAL CORPS.

The undermentioned Lieutenants to be Captains (dated Nov. 29th, 1903):—H. J. McGrigor, W. R. P. Goodwin, J. H. Brunskill, A. C. Duffey, A. W. Gibson, C. D. Myles, R. N. Hunt, H. E. J. A. Howley, R. F. M. Fawcett, W. L. Steele, H. A. Davidson, J. W. West, W. Riach, H. R. Bateman, H. G. Pinches, T. White, J. C. Kennedy, A. R. C. Parsons, J. B. Cautley, W. M. B. Sparkes, S. B. Smith, E. W. Powell, J. L. Jones (dated Nov. 30th, 1903); and E. S. Worthington.

The undermentioned Lieutenants are confirmed in that rank:—J. M. M. Crawford, C. Bramhall, T. E. Harty, H. H. Swanzy, J. E. Skey, H. T. Stack.

INDIAN MEDICAL SERVICE.

The King has approved of the resignation from the service of Captain John Elliott Robinson (dated Nov. 1st, 1903).

VOLUNTEER CORPS.

Rifle: 2nd (the Weald of Kent) Volunteer Battalion the Buffs (East Kent Regiment): *Brigade Surgeon-Lieutenant-Colonel* T. Joyce, Senior Medical Officer, Sussex and Kent Volunteer Infantry Brigade, resigns his commission and is granted the honorary rank of Surgeon-Colonel with permission to wear the prescribed uniform on retirement (dated Dec. 5th, 1903). 3rd (Dundee Highland) Volunteer Battalion the Black Watch (Royal Highlanders): Alexander Kirk Traill to be Surgeon-Lieutenant (dated Dec. 5th, 1903). 2nd Volunteer Battalion the Prince of Wales's (North Staffordshire Regiment): Surgeon-Lieutenant-Colonel W. G. Lowe resigns his commission and is granted the honorary rank of Surgeon Colonel with permission to wear the prescribed uniform on retirement (dated Dec. 5th, 1903).

MENTIONED IN DESPATCHES.

The name of Lieutenant Hornabrook, medical officer of the Natal Mounted Rifles, has been added to the list of those mentioned for meritorious service in South Africa in Lord Roberts's despatch of April 2nd, 1901.

RECENT ARMY ORDERS.

Among the Army orders for December we notice the following:—*Royal Army Medical Corps: Examination of Majors for promotion.*—For the year 1904 the special subjects for the examination of majors, R.A.M.C., for promotion to lieutenant-colonel, referred to in paragraph 5 (*a*), (*b*), and (*c*), Appendix VIII B (formerly VIII A) of the King's Regulations will be: Subject 5 (*a*), Medical History of the more important campaigns; Subject 5 (*b*), A general knowledge of the Army Medical Services of other Powers. Candidates will not be examined in subject 5 (*c*), The Laws and Customs of War.

GONORRHŒA AMONG SOLDIERS.

In a clinical lecture delivered at the Val-de-Grâce School of Military Medicine and reported in the *Archives de Médecine et de Pharmacie Militaires* for October, Professor Toubert quotes some remarkable statistics regarding the prevalence of gonorrhœa at the present day and lays emphasis upon the necessity of paying the greatest attention to the treatment of the affection when it occurs in soldiers. According to Neisser blennorrhagia follows next to measles as the most widespread of all diseases. At Breslau from 15 to 30 per 1000 of the military population, and about 87 per 1000 of the students were affected; while in New York, according to Nœggerath, out of every 1000 men who get married 800 have had the complaint, no fewer than 720 of these remaining uncured at the time of their marriage. Gonorrhœa, though less dreaded than syphilis, is nevertheless a most serious disease, capable of causing disastrous results not only in the males primarily affected but also in the innocent females to whom they impart the contagion. With proper treatment the prognosis in gonorrhœa should be favourable, but unfortunately medical men, in Professor Toubert's opinion, may, generally speaking, be said to neglect the disease. They, as a rule, underrate its insidious and tenacious character, treat its symptoms more or less empirically, and do not take the trouble to assure themselves that its seeds have been thoroughly eradicated. As soon as the more prominent manifestations have disappeared or become latent they dismiss their patients, although still in a condition which cannot but render them dangerous to society. Before pronouncing a gonorrhœal subject cured the most searching verification of the fact is necessary. Rough tests alone, such as beer drinking or the well-known procedure of Guyon, are not sufficient; a thorough exploration of the urethra from one end to the other is absolutely essential, together with a systematic examination of the urine. Professor

Toubert reposes great faith in the *explorateur à boule.* In skilful hands this is a most useful instrument for the detection of localised centres of infection. Although, as Desault said, gonorrhœa may often "die of old age" still in some cases it may persist for years. Ricord met with a case of 40 years' standing and Desormeaux with one of 50 years'. The *vis medicatrix naturæ* alone will seldom effect a perfect cure. Sometimes in chronic cases a keratinised condition of the urethral mucous membrane interferes with the action of local remedies. When this takes place Professor Toubert directs the patient to retain in his urethra by mechanical means about five cubic centimetres of the following solution for a period of from one to three hours: hermophenyl, 0 75 gramme; protargol, 0·75 gramme; glycerine, 30 cubic centimetres; chlorhydrate of cocaine, one gramme; water, 1 litre. This solution may be made stronger or weaker according to circumstances. In conclusion Professor Toubert says: "From the day when gonorrhœal affections shall be treated methodically during their acute stage they will cease to become chronic. ...... For many reasons the treatment of blennorrhagia deserves more than the indifference, or it may be the disdain, which heretofore it has too often met with on the part of medical men even more than from patients."

INDIAN MEDICAL SERVICE.

The *London Gazette* of Dec. 4th contains revised regulations for the Indian Medical Service which provide that the substantive ranks of medical officers in the Indian military forces shall be as follows: surgeon general (ranking as major-general), colonel, lieutenant colonel, major, captain, and lieutenant. Subject to certain conditions, a lieutenant shall be promoted to the rank of captain on completing three years' full pay service, a captain to the rank of major on completing 12 years, and a major to the rank of lieutenant-colonel on completing 20 years. Time on half pay not exceeding one year shall be allowed to reckon as service for promotion under Articles 2, 3, and 4 where removal to half-pay has been the consequence of ill-health caused by military service. A captain, after at least six years' service, a major, or a lieutenant-colonel may be promoted to the next higher rank by brevet for distinguished service in the field or for distinguished service of an exceptional nature other than in the field. A certain number of lieutenant-colonels may be specially selected for increased pay for ability and merit. Promotion from the rank of lieutenant-colonel with increased pay to that of colonel, and from the rank of colonel to that of surgeon-general, shall be given by selection for ability and merit. A lieutenant-colonel may also be promoted to the rank of colonel and a colonel to the rank of surgeon general for distinguished service in the field. Exchanges between officers of the Indian Medical Service and officers of the Royal Army Medical Corps below the rank of major, and transfers of such officers from either of these services to the other, shall be permitted subject to the approval of the Secretary of State for War and of the Secretary of State for India in Council, and on the following conditions: (1) that the officers shall not have less than seven years' service; (2) that the senior officer exchanging shall take the place of the junior on the Departmental List and shall not be promoted under Article 3, 4, or 5 until the officer next above him shall have been so promoted; (3) that the junior officer exchanging shall be placed for seniority next below all medical officers whose commissions have the same date as his own; and that the officer transferred shall be placed for seniority below all medical officers holding the same rank at the time of his transfer and shall not be promoted under Article 3, 4, or 5 until the officer next above him shall have been promoted. With a view to maintain the efficiency of the service medical officers shall be placed on the retired list when they attain the following ages: surgeon general and colonel at 60 years and lieutenant colonel and major at 55 years.

THE JOURNAL OF THE ROYAL ARMY MEDICAL CORPS

The sixth number of this journal, so far from showing any sign of decreasing interest and usefulness, seems to be growing and developing in a satisfactory and promising way. Among the articles in the December number we may refer to an excellent paper by Lieutenant Colonel R. H. Firth on a Comparative Study of Some Dysentery Bacilli and to a very useful and instructive contribution from Lieutenant-Colonel W. G. Macpherson, C.M.G., R.A.M.C., on the German Regulations for Utilising Voluntary Aid in War. Those who are at all interested in the subject of voluntary-aid organisations will do well to read what Lieutenant-Colonel Macpherson has to say.

RECRUITING OFFICERS.

We are glad to notice a change introduced into the regulations for recruiting which we have long advocated as very desirable in the interest of the service. Instead of having army recruiting officers located in undesirable positions or hidden away in back streets, as has hitherto been the case, we read that "in hiring recruiting houses and rooms only such as are suitable in every way and situated in respectable localities will be selected."

Looking Back.

FROM

THE LANCET, *SATURDAY*, DEC. 10, 1825.

TOBACCO SMOKING.

To the Editor of THE LANCET.

SIR,—If some of your friends will answer this note, the answer will be read with interest by many individuals.

In Turkey, Spain, and Portugal, a peculiar mode of smoke ing prevails; the smoke of the pipe or segar, is quietly inhaled with the breath, and allowed to pass through the nostrils, without any effort, by the mere expiration of the breath.

Medical men in England refuse to allow that the smoke passes into the lungs, but if they were to see the method of smoking practised by Turks, &c., they would probably allow that it is actually inhaled into the lungs.

In Spain and Portugal, a thin paper, manufactured from straw, and without size, is used for making segars, by rolling up some tobacco in the paper, until the whole is about the size of a common pencil and the length of a finger.

The tobacco itself cannot get into the stomach or lungs, as in the case of snuff taking, nor can the raw juice of the tobacco do it, as in the case of quid-chewing; but the mouth, nasal passage, and (I think) the lungs, gullet, and stomach, must be powerfully coated with smoke, and whatever that smoke contains.

Turks are perpetually smoking; Spaniards and Portuguese use tobacco profusely; and since the army returned from the Peninsula, the habit has become fashionable; the increased number of tobacco shops must be evident to every observer.

Now, Sir, I should be glad to know, and I believe a great number of persons besides myself would be glad to know, what effect must be produced upon the structural and functional condition of the stomach and lungs by this habit.

I am, respectfully, Sir,
Your very obedient servant,
CIGARRO.

⁂ If "Cigarro" were alive what would he think of the prevalence of smoking? Medical men now know that genuine inhalation does take place, though probably it does not occur so often as is believed. Abuse of tobacco brings evils that have been widely recognised, but as to the pathological effects of its moderate use there is as much doubt now as there was when "Cigarro" addressed us on the subject nearly 80 years ago. This has been recently shown by correspondence in our columns.—ED. L.

DURHAM UNIVERSITY MEDICAL GRADUATES' ASSOCIATION.—Dr. Frederick Spicer, the President, took the chair at the autumnal dinner of this association which was held at the Café Monico on Dec. 3rd. The toast list was limited to the usual loyal toasts and that of the University of Durham and they were given from the chair. Sir William Selby Church, Bart., who was recently elected an honorary member, paid the association the compliment of attending the dinner as a member.

Correspondence.

"Audi alteram partem."

THE NEED FOR FURTHER REFORMS IN THE DEPARTMENT OF ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—I have naturally enough been greatly interested in the letter of your correspondent dealing with the Relation of the Anæsthetist to the Patient and to the Surgeon, and whilst fully agreeing with the leading article in THE LANCET of Nov. 21st, p. 1442, and with the anonymous writer of the letter in the same issue as to the present unsatisfactory nature of these relations, I would submit that the reform proposed, which is in itself an excellent one, is of secondary importance as compared to other reforms which are, to my mind, more urgently needed in this department of practice. For many years past it has seemed to me that if the profession is to do itself justice, if the interests of the public are to be properly safeguarded, and if the anæsthetist is to be given his right position certain changes must be made in the very foundations of this department. The principles under which we have worked and still work have grown up side by side with, and have been dependent upon, certain conditions in the great field of surgery, but as these conditions have completely changed it is obvious that our principles should have changed also and in a corresponding degree. May I therefore be permitted to indicate some of the more pressing reforms which seem to me to be called for?

I do not deny that the position of this department has within recent years somewhat improved and that the public and profession have thereby benefited, but there is ample evidence that further reforms are necessary. The very fact that improvement is noticeable is in itself an indication that the roads along which we have been travelling have been the true roads of advance and an argument for pushing forward in the same direction. The causes which have led up to this somewhat improved state of affairs are not difficult to define. The better education of students, the inclusion of the subject of anæsthetics in the curriculum, the appointment of special anæsthetists on a more extensive scale, and, above all, the dissemination and appreciation of the proper principles of anæsthetisation, these are amongst the most important. It is also satisfactory to observe that the attitude of the profession as a whole towards this branch of practice has distinctly changed during recent years. This change is doubtless due partly to the revolutionary advances in surgery brought about by Lister's great work which have had the effect, as I shall presently show, of giving to the risk of surgical anæsthesia its true significance, partly to so much attention having been devoted to the problems of the subject by some of the ablest physiologists of our day, and partly to the recognition by the profession of the advantages that have accrued from the establishment of special departments and from the appointment of special officers for those departments. But this slightly improved position of the department and this fuller appreciation of its work should, I think, be looked upon merely as indicating the commencement of a greater development. Our ambition should be progressively to raise our standards with the object of one day providing surgery proper with a far more satisfactory department than that which at present exists. It is therefore necessary to consider our disabilities, and as the foremost amongst them is the present unnecessarily high risk of surgical anæsthesia the first reform needed must be a reduction of this risk. It is only just beginning to dawn upon the profession that this risk may by proper precautions be reduced to infinitesimal proportions, and before any attention can be seriously paid to such comparatively trifling reforms as those which have been suggested by your correspondent we must surely endeavour to introduce a reform of far greater importance—that by which the death-rate of anæsthesia will be so reduced as to become a negligible factor in surgery. All reforms must hinge upon this one.

Let me next endeavour to show how a want of parallelism between surgery proper and that branch of it which we are now considering has come about. Prior to the days of aseptic surgery, when any given surgical operation had its not inconsiderable risk, little was thought of any possible danger from the anæsthetic. The major shadow—the risk of the operation—included and altogether obscured the minor shadow—the risk of the anæsthetic. But improved surgical methods have changed all this, and putting on one side desperate and unfavourable cases the risk to life of a surgical procedure of to day is, *quâ* that procedure, so small that the scrupulously careful surgeon hardly takes it into consideration. In other words, the fading of the major shadow has brought into prominence the true proportions of the minor and we find ourselves to-day face to face with a disproportion in risk which, whilst it may be creditable to the average operating surgeon, is distinctly discreditable to the average anæsthetist The enemy has come out into the open and we find that he is more formidable than was supposed. Had surgeons remained satisfied with the comparatively light form of unconsciousness provided for them 30 or 40 years ago this risk of anæsthesia would certainly be less than it is at present. The demands of surgery, however, so far as the depth of anæsthesia is concerned, are far greater than they were formerly and it hence happens that in a considerable proportion of cases that now come to the operating table—cases, for example, in which the patient is termed a "bad subject" whilst the operation is a simple one—the responsibilities of the anæsthetist are as great as those of the surgeon. Moreover, it often happens that this deep form of anæsthesia has to be maintained for protracted periods, so that the resources of the anæsthetist may be taxed to an even greater degree than those of his colleague.

What is the present state of things in actual practice? In hospital we find that the [illegible] operations is constantly [illegible] existing arrangements for [illegible] is, however, little or no [illegible] At some hospitals the [illegible] administered by officially appointed anæsthetists who are as a rule non-resident. At other institutions the great bulk of the anæsthetics are given by clinical assistants, house surgeons, or students, the surgeons holding themselves more or less responsible for the safety of their patients. If, as is generally the case, the anæsthetists are non-resident some of the most difficult cases for anæsthesia—cases such as the visiting anæsthetist may never see for the simple reason that they are cases of urgency—are placed in the hands of comparatively inexperienced house officers. Then again a large number of minor operations are annually performed at most hospitals by house surgeons who may be unable to obtain anything approaching skilled assistants as regards the anæsthetic. It is in this way that so many accidents occur during comparatively trivial operations. In some hospitals certain resident or non-resident officers act vicariously as anæsthetists, a plan which is open to the serious objection that such officers may have no special aptitude for administering anæsthetics, whilst they may be interested in the surgical aspects of the case and so be tempted to pay more attention to the operation than to the anæsthetic. Where there is much pressure of work considerable risk may be incurrred by the anæsthetist having insufficient time carefully to examine his patients beforehand, to cleanse or to sterilise his apparatus, and to attend to the numerous details which collectively constitute success. In private practice the state of things is, at all events from the surgeon's point of view, often equally unsatisfactory, for [illegible] of cases the medical practitioner wishes to [illegible] practice [illegible] of the [illegible] day and difficulties arise which in a not inconsiderable proportion of cases actually militate against the success of the operation. Much of the discredit which attaches to anæsthesia has originated in this way.

Now what is the result of this unsatisfactory state of things? It may be described as a threefold result. In the first place, the public, as represented by the patients who are subjected to the unskilled anæsthetisation incidental to the present systems, are unnecessarily inconvenienced and alarmed. In the second place, the success of operations is greatly interfered with. In the third place, human life is unnecessarily sacrificed. One is always meeting with patients who give one the most weird accounts of what befel them at the dentists, how they smashed the furniture, assaulted the rubella, is likely still further to confuse diagnosis. If, however, Dr. Biss's object is to emphasise the difficulties of diagnosis then I sincerely hope that his paper will have the desired effect and that it will lead to the exercise of more care on this point, though it is no less sad than remarkable that at this time of day it should be thought necessary to write at such length to demonstrate that membrane is not essential to diphtheria, that the rash may be wanting in scarlet fever, and that the diagnosis of some forms of sore-throat is difficult—facts which were known and taught years ago by Graves and Trousseau.[1]

Dr. Dukes in his criticism of Dr. Biss's paper makes a statement which shows how widely different may be the experiences of two medical practitioners, the one resident in Rugby, whose personal knowledge of infectious disease has, I understand (Dr. Dukes will correct me if I am wrong), mostly been acquired from an attendance upon a large school of boys belonging to the better classes of society; the other resident for some years in a fever hospital whose patients come from the crowded East of London. The statement I refer to is that in the position he holds it is so infinitely rare for these diseases to occur as single cases. Just so, in the position he holds. But in London the occurrence of single cases, whether masked or patent, is of anything but infinite rarity. Infinite rarity is for all practical purposes the equivalent of total absence, so that Dr. Dukes has to all intents and purposes to wait never more than a few days before his doubts as to the nature of the disease are set at rest. Would that I were as fortunate as he in finding so simple a solution of my difficulties!

Dr. Dukes more than once makes use of the statement that these diseases breed true. I am not quite sure exactly what is meant by this expression. I think different writers use it in different senses. If by breeding true Dr. Dukes means that if an unequivocal case of a given infectious disease (say scarlet fever) gives rise to another unequivocal case then the second case will also be one of the same nature (scarlet fever and not measles, &c.), then I am at one with him. But if he insists that an uneqivocal case of scarlet fever necessarily gives rise to an unequivocal case of scarlet fever then I demur; for the unequivocal case may give rise to the equivocal and (as Dr. Dukes himself admits) the equivocal to the unequivocal; and lastly, a fact which Dr. Dukes's experience of the infinite rarity of single cases has apparently led him to overlook, a case, whether equivocal or unequivocal, may never breed at all.

Laying hold of a somewhat loose expression in Dr. Biss's paper Dr. Dukes seizes the opportunity of making an attack on the administration of fever hospitals which I am surprised to find coming from him. The question of the value and influence of fever hospitals is one that will not be profitably discussed unless it is discussed with fairness. Doubtless the question of administration is involved in the wider question. But I think that before Dr. Dukes wrote what he has written about the want of observation and quarantine rooms in fever hospitals and descended to the use of such phrases as "setting their house in order" and "saving these hospitals from themselves" he might have taken the trouble to find out what has been done and is being done with respect to details of administration, not only by lay committees of management but also by certain members of his own profession who occupy positions to the responsibilities of which they are quite alive.—I am, Sirs, yours faithfully,

Homerton, N.E., Dec. 2nd, 1903. E. W. GOODALL

To the Editors of THE LANCET.

SIRS,—I should, indeed, be neglectful of the amenities of debate did I fail to express my appreciation of Dr. Clement Dukes's graceful compliment to myself before seeking to reply to his criticisms on my paper on the Borderlands of Diphtheria and Scarlet Fever. The pleasure I feel at his kind words is the keener in that they come from so illustrious a worker in the same field as myself. But I must not allow my sense of Dr. Clement Dukes's courtesy to blind me to the fact that he traverses my whole argument, in so far at least as he interprets it in the sense I intended. My contention briefly was this. That the study of these diseases brings into relief a general principle of medicine—namely, that diseases are only conventional names for certain departures from health; that as all departures from health are merely changes of state there can be no hard-and-fast line between any diseases; that by taking a little group of closely allied diseases one can advantageously trace the transition-steps between them; that this study is best pursued by regarding those cases of sickness that do not bear the text-book features of any single disease; and, finally, that due attention to these considerations will show that the art of diagnosis—that is to say, skill in assigning cases of sickness to definite groups—is limited because it cannot assign sicknesses to groups that do not exist. To these propositions Dr. Clement Dukes replies: 1. That diseases never lose their identity; though they may vary in type they always breed true. 2. That cases are not borderland cases when they infect others. 3. That the poisons which generate infectious diseases are "absolute entities." 4. That fever hospitals are very bad places because borderland cases (which are not borderland cases) cannot be isolated from each other in them.

Let me deal briefly with these *seriatim:* 1. This is, of course, the conception of disease at which my shaft was levelled. It seems to me a cramped and artificial one. It presupposes that disease is an entity in itself, something foreign and external which is superimposed on a patient, and not, as I should regard it, merely a concatenation of morbid changes in sick people. Two persons are ailing with the same symptoms. We say they have the same disease, but we mean that in them there are similar perturbations in similar tissues. But one may have some perturbations that the other has not. Let us say that of two patients with sore throats one has an erythematous rash of the skin, whilst the other has not. Are they still suffering from the same disease? It is a question of degree. The decision we come to, the diagnosis we make, depends upon the weight we individually or collectively attach to particular phenomena or groups of phenomena. It may seem advantageous to assign one case to this "disease," another to that, or they may be regarded as variations of the same "disease." At a certain point the links may be equally strong with two "diseases." In that case the disease is undiagnosable. If we hold this view, what becomes of the expression "breeding true"? I confess that to me the phrase smacks more of the empiricism of the dog-fancier's yard than of the exactitude of scientific ideas. Is it, moreover, not somewhat of a shibboleth? Does not variation constitute the basis of the breeder's art? Are not deviations from the "truth" the potent element in all development or degeneration of species? Identity becomes lost after a number of variations have been passed through. Is the gorgeous double dahlia of to-day the same as the modest bloom that Dahl brought to Europe three centuries ago? or, to put a stronger case, is a bird a reptile? 2. This contention of Dr. Clement Dukes's is more rhetorical than real. A case may be far from the mean of one disease and near the border of another disease and yet serve as a source of infection to others of one or even both these diseases. 3. I fear I cannot reply to this contention, as it is so vaguely expressed that it is difficult to attach an exact meaning to the phrase. What are the "poisons"? and what does "generate" mean in this connexion? I fear that my spectacles are not sufficiently polychromatic. 4. I was not concerned with the defence of our isolation hospital system. It has many faults and many disabilities, of which no one is more conscious than I. My practical point was to show how far some of these disabilities reached. If Dr. Clement Dukes will support Dr. C. Killick Millard's proposal for inquiry into this question he will have my cordial coöperation.

I am, Sirs, yours faithfully,

Eastbourne, Dec. 2nd, 1903. HUBERT E. J. BISS.

HETEROGENESIS.

To the Editors of THE LANCET.

SIRS,—I unfortunately overlooked the letter of Dr. J. M. Fortescue-Brickdale in THE LANCET of Nov. 21st, p. 1459, which has only this day been brought to my notice. It contains some rather serious misrepresentations of my views and statements which ought not to pass uncorrected.

In the last paragraph of his letter the writer distinctly intimates that I "ignore entirely the results of the direct injection of tubercle bacilli in pure cultures into animals." This suggestion is absolutely devoid of all foundation. I freely admit that tubercle bacilli may and do act as veritable contagia in the spread of the disease alike in the lower animals and in man and I am surprised that anyone should suppose I think otherwise. This erroneous suggestion must, I suppose, have owed its origin to my expressed belief that the disease is sometimes generable apart from contagion, coupled with the widely spread notion that a contagious disease cannot arise *de novo*, the latter being a conclusion which to many seems to have been made certain by the discovery that micro-organisms constitute the contagia of so many of the communicable diseases.

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[1] Sanné's remarks on "Diphthérie sans Diphthérie," alluded to by Dr. Biss, are almost word for word those used by Trousseau at the commencement of his lecture on "Common Membranous Sore-throat."

Granting the facts of contagion, let us look for a moment at the possible modes of origin of a contagious disease. One or other of three views may be held concerning the origin of the contagium. We may, to put it briefly, believe (1) in special creation; (2) in transmutation; and (3) in its *de novo* origin.

1. We have in the first place the notion that the various contagia have been specially *created* with a view to the production of this or that disease. This surely cannot be regarded as a scientific hypothesis. It is a teleological conception entirely out of harmony with existing beliefs. And if it is to be rejected a *de novo* origin, either in present or in past times, by one or other of the two remaining modes of origin is alone open for our acceptance. It is well that this should be fully realised.

2. The second view implies that there is no absolute demarcation between non-pathogenic and pathogenic organisms, and in its favour there is an immense amount of evidence showing the mutability, both in form and in function, of the micro-organisms in question. Some who do not adequately appreciate the weight of this evidence are, as a distinguished physician has lately said, willing to subscribe to the view that "the origin of the germs of disease was probably in the remote geological past," even though as to all the conditions of such occurrences they must be absolutely devoid of all knowledge. This is a nebulous and unsubstantiated point of view which does not appeal to me. I prefer to seek for actual evidence of the occurrence of such transformations in the present day, and for this reason, in your issue of Oct. 31st, p. 1220, I called attention to the conditions of origin of two experimentally produced forms of septicæmia and contended that a fair and impartial consideration of the evidence (apart from unproved assumptions) should lead to the belief that both "Davaine's septicæmia" and "Pasteur's septicæmia" had been produced over and over again *de novo*, and that the micro-organisms by which they are characterised (if not arising independently) must in such cases have been produced by the transformation of common organisms. In the case of "Davaine's septicæmia" the disease has been caused by the injection of two or three drops of putrid blood taken from a previously healthy animal. Such blood soon swarms with organisms of different kinds The deadly specific germ could not have been contained in the healthy animal from which the blood was taken, and the specific bacillus ultimately produced in the putrefying blood is said never to have been recognised in the outside world apart from such blood. To assume, nevertheless, that this specific germ is omnipresent in the atmosphere and ever ready to drop into the blood with which experiment is about to be made seems to me an absurdly gratuitous and unfounded supposition. All the evidence points rather to the conclusion that the specific bacillus has been produced from one of the common forms at some particular stage in the putrefactive process. Again, in regard to "Pasteur's septicæmia," the fact that this disease can be produced in a previously healthy animal within 24 hours by the injection of a germ-free chemical irritant into its peritoneal cavity cannot, I think, be satisfactorily explained by supposing that the organism which is the cause of the disease is always present in the intestine, and that the setting up of an intense inflammation in the peritoneum leads it to multiply rapidly and at once to begin to make its way through all the coats of the intestine in order to get into the peritoneal fluids. *These are assumptions devoid of proof, and if Dr.* Fortescue-Brickdale is disposed to give them credence it seems a pity he should not have recollected that some of the same germ-free chemical irritant introduced into the subcutaneous tissue of the healthy animal under conditions, as Sir J. Burdon Sanderson said "[illegible] of the introduction of any [illegible] will nevertheless give rise t[illegible] Do the organisms which characterise it exist also in the subcutaneous tissues of healthy animals or does he suppose them to be so abundant in the air that they are always ready to baffle the most skilful experimenter whenever an opening is once made in the skin, however minute this may be? It is, moreover, an absolute error for Dr. Fortescue-Brickdale to say that I regard the bacilli characterising Davaine's and Pasteur's septicæmia respectively as "altered forms of the same organism." No such view has been put forward by me. He is further wrong in supposing that I relied upon these experimental researches as furnishing a proof of the *de novo* origin of bacilli. I cited them rather as affording very strong evidence in favour of the transmutation hypothesis and as showing that some contagious diseases do arise *de novo*.

3 When I said in reference to micro-organisms I "have proved the possibility of their *de novo* origin" I was referring to the researches the results of which are recorded in the *Annals and Magazine of Natural History* for October last and to which reference was made in THE LANCET of Nov. 7th, p. 1316. I venture to think that the evidence there recorded, which will also be found in Section xxiii. of my "Studies in Heterogenesis" (to be published next week) is not capable of being explained in accordance with existing knowledge and commonly received views. The only legitimate interpretation of my observations and experiments, as I believe, is that bacteria and their allies can, and do, now arise by heterogenesis and the proof of this possibility I regard as of great importance for the science of medicine.

I am, Sirs, yours faithfully,

Manchester square, Dec. 4th, 1903. H. CHARLTON BASTIAN.

THE ALIEN IMMIGRANT.

To the Editors of THE LANCET.

SIRS,—I trust you will kindly give me an opportunity of replying in your columns to Mr. Morris Streimer's letter of Nov. 10th[1] and of thanking you at the same time for the very valuable criticism of my book which appeared in THE LANCET of Nov. 7th (p. 1304) and which Mr. Streimer is pleased to describe as "partial." I have been absent in Paris or should have addressed you on the subject before

Mr. Streimer objects to the assertion that the Jews are "a race apart" and says: "All experience and all study show that once social and legal restrictions are removed the people of any country tend to become homogeneous in their general characteristics." He ignores the fact that it is contrary to the precepts of the Hebrew faith that Israelites should intermarry with Gentiles and that therefore in their case no appreciable absorption among the surrounding populace takes place. They have kept themselves "a race apart" since, as before, their dispersion and are as much so in the United States to-day as anywhere else. I think that any impartial observer must admit that the national spirit among the Jews is increasing rather than diminishing. The great Zionist movement is based upon the national idea and though no trustworthy figures are available it is probable that several millions of Jews are Zionists. Why should Mr. Streimer take exception to the statement that the Jews are a race apart? For myself I can see nothing derogatory in it. Mr. Streimer ridicules my assertion that there are streets in the East-end where "it is an exception to hear the English language spoken." He ignores the official testimony, to which I refer, of Chief Superintendent Mulvaney of the "H" Division who told the Royal Commission on Alien Immigration that in six years 107 streets in Stepney alone had passed *wholly* into the occupation of aliens. It is not probable that the new inhabitants speak English.

I agree with Mr Streimer when he lays stress on the question of sanitation. I notice that as recently as Nov. 23rd the medical officer of health of Stepney reported a case of small-pox—that of a Russian whose illness was notified two days after his arrival in England. And I observe that Mr. Cluer at Worship street Police-court on Nov. 18th made the following remarks about some of our East-end immigrants. "You come into this country to make a living, defying or breaking our laws, crowding your dirt and indecency together, and bring your family after you." It is not, in my opinion, the case that "the question of our foreign population is but one aspect of the general social question." The question is whether we wish to have our own social ills aggravated by the constant arrival of aliens of this class who come here in consequence of no natural operation of the law of supply and demand but on account of governmental measures of extrusion adopted in Eastern Europe.

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[1] THE LANCET, Nov. 21st, 1903, p 1461.

I am, Sirs, yours faithfully,
Chelsea Embankment, S.W. W. EVANS GORDON.

THE URBAN HOSPITAL TREATMENT OF TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—The report on the urban hospital treatment of tuberculosis by the committee appointed by the Society for the Study of Disease in Children to inquire into the matter and report to them is still under consideration by that body, and its publication in THE LANCET of Dec. 5th, p. 1590, was owing to an unfortunate oversight. As this report is still *sub judice* its discussion at the present moment would be premature.—I am, Sirs, yours faithfully,

GEORGE CARPENTER,
Senior Honorary Secretary.
Welbeck-street, Cavendish square, W., Dec. 7th, 1903.

THE MORTALITY AFTER OPERATIONS FOR STRANGULATED UMBILICAL HERNIA.

To the Editors of THE LANCET.

SIRS,—I shall be glad if any of your readers can give me a reference to any statistics with regard to this subject. I have been unable to find any definite information but that it is unexpectedly high I believe.

I am, Sirs, yours faithfully,
Hove, Dec. 3rd, 1903. ARTHUR H. BUCK.

THE PHOSPHATES AND UREA OF URINE.

To the Editors of THE LANCET.

SIRS,—I shall be obliged if you will give me space for a somewhat belated acknowledgment of the communications from Dr. H. Harper, Dr. A. W. Gilchrist, and others, in THE LANCET of the latter end of 1902, and January of this year, referring to a paper of mine on the above subject.[1] These letters appeared at a period when serious illness prevented me from attending to anything, and I have only recently found an opportunity of looking through the back numbers of your journal.

To remove misconception (for I think there was some, partly owing perhaps to the results of the analyses having been tabulated, for the sake of brevity, so that the figures yielded by very different pathological samples were in juxtaposition), I should like to state, chiefly in reply to Dr. Gilchrist:—1. That I never thought to "establish an analogy" between the diseases. In one not a medical man I should think this presumptuous 2. As a scientific chemist I have long known the desirability that analyses of urine should represent the collective fluid excreted during 24 hours. But for the analyst, and, if I mistake not, for the medical man also, this is very often impracticable. The former, at all events, has to work with just what is submitted to him, frequently by the medical adviser, who cannot help himself. 3. Professing to no knowledge of medicine, I certainly did not intend it to appear as if I had had the temerity to make any precise comparison of the composition of tuberculous urine with that of the fluid from glycosuria or with other samples of urine from similar cases. No data were at my command for this sort of comparison, which was left, of course, to medical men. I sent these analyses, such as they were, to THE LANCET on the chance that they might be of some service or interest to my medical brethren; but I was far from wishing to seem to attach to them undue importance and was particular in giving what information I possessed, as to times, &c, so as to show clearly that the samples were not representative of the entire 24 hours' excretion. Any remarks—they could hardly be called conclusions—were extremely guarded, and confined to comparisons of the most general kind, not with analyses of other pathological urines, but with such statements regarding the limits of composition of *normal* urine as are to be found in ordinary works of reference—by Halliburton, Hammarsten, Allen, Pearmain and Moor, and others; and referred only to the actual samples, *as they were received.* I do not at all claim infallibility for the remarks in question. At the worst, if the paper had no other use, the figures recorded such analytical results as may be yielded in particular circumstances and by limited samples, representing only part of the 24 hours—such as medical practitioners must often be forced to be content with. 4. As far as my own imperfect opportunities permitted me to judge, I was under the impression that there were not very many readily accessible analyses, at all events as full as that of the tuberculous sample, and personally I had never seen any published analysis of urine from a case of *tubercle of the bladder.* For my own information, I should be grateful for references to such analyses, and interested to know whether the figures are similar to, or different from, those yielded in *other* cases of tuberculosis, as of the lungs; also whether the "graph" in Dr. Gilchrist's communication represented the results from one sample of tuberculous urine or the mean of several.

Lastly, the cautiously chosen title of the paper, "Observed Variations," &c., was changed in the later communications to "The Low Phosphates and Urea," &c. I must disclaim responsibility for this. My own use (in the paper) of the expression, "low phosphates" related solely to the particular set of analyses and to the actual specimens of urine received, imperfectly representative as they may have been. This was without any universal application or generalisation, such as the latter title might imply: I intended none.—I am, Sirs, yours faithfully,

EDWY G CLAYTON, F.I.C., F.C.S.
Holborn Viaduct, E.C., Nov. 30th, 1903.

RADIUM AND THE BACILLUS TYPHOSUS.

To the Editors of THE LANCET.

SIRS,—The following experiences with bromide of radium upon cultures of the bacillus typhosus may be of interest to some of your readers. The cultures were of the usual kind, in agar, and were exposed to the rays of 50 milligrammes of the salt for periods varying from 15 minutes to 48 hours. The longer exposures were in the dark in order to eliminate any inhibitory effect of daylight upon the cultures. The tubes containing the cultures were at first placed horizontally above the radium at a distance of five centimetres but were afterwards allowed to rest in an upright position actually upon the mica cover of the box containing the radium, so that the culture received the full rays diverging from below upwards throughout its length. From each tube subcultures were afterwards taken without difficulty and so far as could be observed there seemed to be no inhibitory action upon the growth of the culture. Rather the contrary, for, in the opinion of more than one observer, examining the cultures under a high power, there seemed to be more activity in those cultures which had been subjected to the longer exposures, and in cultures which had been exposed, than in others of the same date which had not been exposed to the radium but had been simply excluded from daylight.

These experiences would seem to lead one in the direction of supposing the beneficial action of radium in certain cases to be that of stimulation of normal tissue rather than directly bactericidal. It is not easy to determine accurately the activity of a radium salt, but at a rough estimate the radium used in this instance is sufficiently strong to make its rays apparent upon the screen through a thickness of 15 coins, half-crowns and pennies. They pass easily therefore through the thickest part of a Cabaud gauge and in therapeutic use an application to the skin of five minutes produces redness and one of ten minutes a slight burn, appearing after two days. The cultures were kindly prepared for me in the laboratory of the Westminster Hospital.

I am, Sirs, yours faithfully,
Beaumont-street, W., Dec. 5th, 1903. R. BROWNE-CARTHEW.

ST. JOHN'S HOUSE OF REST, MENTONE.

To the Editors of THE LANCET.

SIRS,—We are anxious through the medium of your journal to draw the attention of the members of the medical profession to the existence in Mentone of St. John's House of Rest which we believe to be little known to them. The institution, which was founded 25 years ago, is intended for

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[1] THE LANCET, Sept. 6th, 1902, p. 656.

professional men who in consequence of illness or over work require rest and a mild climate and who could not otherwise afford the expense of a sojourn on the Riviera. Medical men have occasionally been among the inmates The house
a separate
dining, an
the garden *for open air treatment Applications for admission* have hitherto been few so that the house has seldom been filled except for short periods It is open from Nov 1st to May 1st The charge made is £1 a week including medical attendance We think that medical practitioners must frequently meet with cases for which such a home would prove a great boon The gentlemen who have resided in the House of Rest have expressed themselves grateful for the care and comfort which they have met with Of course, such an institution cannot be self supporting and the sum of £250 is required yearly to meet all the extra cost entailed We remain, Sirs, yours faithfully,

J L SIORDET, M B, F R C P Lond
STANLEY RENDALL, M D Paris

Mentone Dec 3rd, 1903

Obituary.

PROFESSOR PROUST.

THE Paris Faculty of Medicine has recently received a severe blow by the very sudden and unforeseen death of Professor Proust. While he was presiding over the delivery of a thesis by one of his pupils on Nov *24th* he was suddenly struck down by a paralytic seizure and although he was at once removed to his home he grew rapidly worse and died on the 26th He was born at Illiers in the department of Eure et Loire on March 18th, 1834 He determined to study medicine and had a brilliant career as a student, so that while an *interne* at the hospitals he took his doctor s degree in 1862 at the age of 28 years In 1866 he was elected agrégé and soon afterwards physician to the hospitals In 1879 he was elected a member of the Academy of Medicine in succession to Tardieu, and finally, in 1885, he was elected to the chair of hygiene in the faculty of medicine, having acted as deputy for Bouchardat for two years previously Long before this date, however, his attention had been turned towards the study of hygiene and as far back as 1869 he had been intrusted with an important mission to Russia and Persia for the purpose of studying the best means of fighting against an invasion of cholera. He was next elected a member of the Consultative Committee of Hygiene of France, to which body he acted as secretary, and Fauvel nominated him as his collaborator On Fauvel's death Professor Proust succeeded him as inspector general of the sanitary service In every question which he had to consider Professor Proust distinguished himself by the essentially practical qualities of his talents, and he had besides an infinite capacity for work, so that wherever his duties as inspector called him, whether abroad or at home, he never spared himself when any risks were to be run He was Commander of the Legion of Honour

PROFESSOR PROUST
Inspector General of the French Sanitary Service

JOHN HENRY SYLVESTER,

DEPUTY SURGEON GENERAL, I M S

WE regret to announce the death of Surgeon General Sylvester, which occurred at his residence, 16, Melbury-road, Kensington, London, W, on Nov 29th in his seventy-fourth year He began his medical studies at King's College, of which he was an associate, and for a time assisted the late Professor Owen In 1854 he went to India in the employ of the India Office and served with the 14th Light Dragoons in Persia During the Indian Mutiny he was with his regiment in the Deccan Malwa, Nerbudda, Central India and was also engaged with the Central India Field Forces and with the 1st Regiment of Beatson's Horse in Bundelkhand and Rajputana In the Umbeylla *Campaign he served as field surgeon For his services in* Persia, Umbeylla and Central India he received the medals and clasps granted for those operations At Ahmadnuggar he saw some further service and afterwards became professor in the Grant Medical College at Bombay and assistant surgeon in the *Jamsetjee Jeejeebhoy Hospital He also* served for four years on the frontier of India at Peshawur and other places On his return to Bombay he was appointed ophthalmic surgeon then professor of physiology and second physician at the Jamsetjee Jeejeebhoy Hospital He remained in India until 1875 when he retired with the rank of deputy surgeon general After his retirement he diligently devoted himself to the study of painting in London, Paris, and Italy, and for the rest of his life that art was a great source of pleasure to him His best known pictures are a portrait of the present Bishop of Peterborough, which now belongs to the Kensington Vestry and hangs in the board room of the town hall and a portrait of Field Marshal Lord Roberts which he presented to the East India United Service Club, and of which *engravings* were published by Mr Thomas McLean of the Haymarket Surgeon General Sylvester possessed great warmth of friendship and his memory will be associated with the kindest recollections Until eighteen months ago he enjoyed remarkably good health, leading a very regular and active life his hobbies, in addition to painting, being bicycling, which he practised daily up to the time of his illness and fishing *He leaves a widow and one daughter,* Mrs Hodder the wife of Major Hodder, R E

EXTENSION OF THE METROPOLITAN ASYLUMS BOARD S AMBULANCE SERVICE —The Metropolitan Asylums Board at its meeting on Nov 28th decided to extend the operations of its ambulance service so as to include the transport of medical, surgical, and mental cases for which application might from time to time be made by any authority or person within the metropolis Such extension *shall* not be held to include the removal of cases of street accident or of patients to and from the several lunatic asylums under the control of the London County Council, unless by special sanction of the ambulance committee or, on emergency, of the chairman of that council or the clerk to the board It was also decided that upon the necessary legal authority being obtained for the managers from the Local Government Board the work should be immediately undertaken and a charge of *7s 6d* made in respect of each removal, and in addition a mileage of *1s 6d* beyond the boundary of the metropolis

THE INTERNATIONAL SANITARY CONFERENCE AND THE PROPOSED PERMANENT INTERNATIONAL SANITARY BUREAU.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

Paris, Dec. 7th.

IT was on Dec. 3rd and not, as previously anticipated, on Nov. 30th that the International Sanitary Convention was signed. The representatives of the various Governments having broken the continuity of their work and returned to their respective countries it was not so easy to reassemble them, particularly as there was a heavy fall of snow and the roads were blocked in more than one direction. Then after all they had only to be present as a matter of form to sign the document and to exchange mutual compliments. The real work had already been accomplished, for the Conference held its inaugural meeting as far back as Oct 10th last. Altogether there were held seven full sittings. But apart from these it was subdivided into three commissions and these latter met 35 times, so it will be seen that there was a great deal of work done. The convention drawn up as the result of all these deliberations is divided into ten chapters or "titres," to use the official French term, and these are subdivided into 184 articles. The representatives of the following 20 Powers were authorised to sign the convention. The order in which they are placed corresponds with the French alphabetical arrangement: Germany, Austro-Hungary, Belgium, Brazil, Spain, United States of America, France, Great Britain, Greece, Italy, Luxembourg, Montenegro, Holland, Persia, Portugal, Roumania, Russia, Servia, Switzerland, and Egypt. The representatives of the Argentine Republic, Denmark, Sweden, Norway, and Turkey withheld their signatures as they had not yet received the approval of their respective Governments. In spite, however, of these abstentions the Act already bears eight more signatures than the preceding conventions.

It would not be possible in a limited space to give a full account of this lengthy international agreement, nor is this in any wise necessary. The greater part of the convention merely codifies and repeats what had already been agreed upon at previous conventions. Thus the first chapter deals with the general dispositions and describes how the signatory powers are to notify to each other when any cases of cholera or plague occur on their respective territories. Then as before in the part that relates to the precautions to be taken, ships are again divided into three categories: (1) those that are infected; (2) those that are "suspect"; and (3) those that have a clean bill of health. But the great point gained, the new rule introduced, is that the delay imposed upon infected ships is reduced from 12 to seven days. Then again full cognisance is now taken of the discoveries made in regard to the action of rats in spreading plague. So important, indeed, is the destruction of rats considered that this has given rise to the creation of a new word. Therefore, and in common parlance, we are now told that the "deratisation" of ships has become obligatory. A ship is not to be considered as disinfected if there are still any rats living on board.

Then the convention contains a great deal that is applicable to certain localities such as the Red Sea, the Suez Canal, and the Persian Gulf, and there is a whole chapter on the pilgrimages to Mecca and the penalties to be inflicted on the captains of ships transporting these pilgrims who fail to carry out the sanitary regulations. Another chapter is devoted to the international sanitary councils of Constantinople, of Alexandria, and of Tangiers. It was also decided that all the signatory Governments should make representations to the Government of the Sublime Porte so that it should accept the sanitary measures proposed, for without the help of Turkey it will be difficult efficiently to protect the other countries. Yellow fever in the light of recent discoveries in regard to the action of mosquitoes was likewise discussed and, lastly, there arose the question of establishing a permanent international sanitary bureau in Paris. This final proposal is altogether a new departure and it is therefore necessary to give its history in detail. The suggestion was first made at Brussels during the opening ceremony of the Eleventh International Congress of Hygiene and Demography. The representative of the French Government, M. Henri Monod, director of the Sanitary Department at the Ministry of the Interior, on that occasion concluded his speech by saying:—

> There is another form of agreement for which I long most ardently and which I am convinced w[illegible] An agreement is established [illegible] to oppose and check the ir[illegible] sceptics are obliged to render homage to the results this has brought about. Why should we not take into consideration, why should we not prepare an agreement, an understanding for common action against endemic and preventable diseases? These latter, if we consider a more lengthy period of time, are far more destructive than the plague, the yellow fever, or the cholera. Why should there not exist one of these days an official international bureau of public hygiene to which all nations would contribute useful information and from which all nations would borrow the elements that contribute to sanitary progress? At this the fiftieth year since the first Congress of Hygiene met it is permissible to dream this dream and to foresee the formation of an international alliance for a common struggle against disease and death which should be, and which one day will be, our only enemies.

These words were greeted with loud applause and in the sections and at the general meeting held for the closure of the congress more than one motion was carried supporting the principle of an international understanding concerning legislature with regard to public health. In the Fourth Section, which dealt with industrial hygiene and where the fear of foreign competition was so often brought forward as a reason for not legislating against unwholesome industries, the President told us that he hoped the Belgian and French Governments would take the initiative to invite representatives of all nations to compare their factory and similar legislation. Then a permanent international office might be formed to help in the unification of such laws, so that the fear of foreign competition should not check the endeavours that were made to save human life. In the section that dealt with the spread of tuberculosis it was strongly felt that the dominating factors were poverty, overcrowding, and over-pressure. Such great evils can scarcely be modified in a large and general sense unless with the aid of legislative enactments. But it will always be easier for a nation to act in this sense if its commercial rivals are also taking similar steps. In this manner, and for many and various motives, the desire to establish something like a permanent international connecting link was very widely manifested. Thus, all that occurred during the Congress tended to confirm the applause that had greeted the suggestion which M. Monod threw out at the opening ceremony.

On his return to Paris M. Monod found that his immediate superior, the Minister of the Interior, had so thoroughly approved what was said in regard to an international bureau that he had submitted the whole question to the Minister of Foreign Affairs. This occurred in the middle of September. On Oct. 10th the International Sanitary Conference met in Paris under the presidency of M. Camille Barrère, French Ambassador at Rome. Nothing more had been said to M. Monod about his speech at Brussels, but after M. Barrère had welcomed the foreign representatives and described at some length the work that was set before them he added these words:—

> Now I reach the last point and its examination will not be one of the least important among the subjects that will occupy the conference A desire was expressed at the last International Congress of Hygiene by M. Monod that a sanitary office should be created which should be intrusted with the task of centralising information and of exercising a general surveillance over the application of such measures as have been prescribed. This wish, gentlemen, will be reproduced here. A few years ago this appeared premature; the moment now seems to us to have arrived to take in hand its realisation. Perhaps I may be allowed to state, for I have had some experience of international institutions which are at work and are prosperous, that I do not know of any international organisation for which there is *to day a more evident and imperative necessity*.

The representative of Italy—and it was from Italy that the request for the meeting of the conference emanated—supported M. Barrère. Commandant Santoliquido, who was the chief of the Italian delegation and vice-president of the conference, said:—

> I shall be allowed here to recall an initiative that will assuredly prove fruitful taken by M. Henri Monod on the occasion of the recent International Congress of Hygiene and Demography held at Brussels M. Henri Monod proposed, and his proposal was gladly accepted by several official delegates, that an international bureau of hygiene should be created for the common defence of the various States against the reciprocal importation of in[illegible] maladies. Could not such an [illegible]itable organisation, or rather this s[illegible]s—be observatory of the developmer[illegible]ague, commissioned to order, when [illegible], and special measures of defence i[illegible]n to could such a bureau not also [illegible] which such measures should be applied?

The object, the speaker went on to explain, was to render homogeneous the measures taken while at the same time respecting, and avoiding all interference with, the internal policy of the nations concerned and, above all, shunning any contact with politics. Commandant Santoliquido concluded by saying that—

> In any case it is evident that this international bureau, always informed in a very precise manner of all that is happening throughout the world which relates to infectious diseases, would be better able than anyone else to judge wisely what was the real magnitude of the danger and to apportion thereunto measures of defence which would thus spare the countries exposed all economical injury that was not absolutely rendered necessary by the exigencies of our common security. This bureau would also when the necessity arose be equally able to render evident the defects or negligences that may eventually occur in regard to local preventive measures and suggest what [illegible] it such a bureau existed [illegible] ect their individual or [illegible] have already said, the [illegible]

The proposal to constitute an international sanitary office and bureau was supported by all the representatives except those of Great Britain, Germany, and Austro-Hungary. When actually voting on the question, the representatives of five other nationalities, while agreeing with the proposal, desired to refer the matter to their respective Governments. The article instituting the international bureau was carried and it was further decided that it should be established in Paris. M. Monod thought that Brussels would be selected but the Italian representatives proposed, and the Russians seconded, that the town selected should be Paris and this was carried. Nevertheless it is to be clearly understood that the bureau will be absolutely international. The place where it is organised will in no wise modify its character. There will not be more French representatives at the bureau because it is in Paris than if it had been in any other town or country. The cost will be defrayed by all the Governments but it is not thought that the sum needed will be sufficiently large to become an obstacle. However, it is somewhat premature to discuss the details. A project for the organisation of the office or bureau will be drawn up at once and it is thought that it will be ready to submit to the different Governments in about three months' time.

The one trouble in the way, the one cause of perplexity, of anxiety, of surprise, and of disappointment, is the fact that the British delegates did not seem to favour the project. In spite of many and persistent questions I could not get any tangible explanation as to their reasons for the sort of opposition which they made. It was stated that they failed to see that there was any need for such an institution or that it would render any service if established. Evidently, if this was all the British delegates said, then they did not think fit to express their real reasons for objecting. Of course, it is easy to understand that the British representatives might imagine that some continental legislatures were disposed to touch questions which in England were not as yet the subject of legal enactment. But even if this were so, the existence of an international bureau to facilitate the collecting and diffusion of information would not have much influence in making the British Legislature follow some continental example. In any case these are but theoretical objections, for in actual practice the position of affairs presents the reverse to this picture. It is the nations of the continent, on the contrary, which have to imitate the British people. We prevent over-pressure by closing almost all places of business on Sunday, by four bank holidays, and there is a weekly half-holiday besides. We limit the hours of labour for women to ten hours by law and for a very [illegible] nine hours by trade-union [illegible] for the continent to attain [illegible] fear that association with continental countries will push the British nation to advance more quickly than it desires. On the contrary, it is the British nation which has every interest in seeing continental countries improve the condition of their working classes. If sanitary laws, by the restrictions imposed, are to augment the cost and difficulty of production for the sake of preserving the health of the producer the only objection that can be raised is that by so doing the business itself may be destroyed. Where there is foreign competition such objections are not altogether devoid of foundation. But in England we already do impose such restriction. Employers' Liability Acts and such laws have long been on our Statute-book. If any nation suffers in competing in foreign markets because of increased cost in production caused by the application of laws for the preservation of health it is assuredly the British nation. Therefore we have no reason to fear the institution of an international bureau because it would tend to assimilate the legislation for the protection of labour and health in the different countries. On the contrary, it would be a great boon to the British nation if the laws of the continental countries that deal with these questions could be brought up to our own level. This would do much to lay the bogey of foreign competition. But in all this I am arguing rather from the point of view taken at the Brussels Congress.

At the Paris Conference the representatives were more concerned with international intercourse, the transit of contaminated persons, merchandise, mosquitoes, or rats, than with the condition of various industries and the injuries resulting therefrom to the workers. But in this also we have everything to gain by the publicity that the existence of the proposed international bureau should provide. For instance, occasions may arise when it would be maintained that some particular sorts of merchandise, old rags, carpets, &c., were capable of conveying a certain disease. Therefore these things before they can be introduced into the country must be disinfected. Some such precaution taken against goods of this kind coming from an Eastern or Red Sea port might be very justifiable but would be very vexatious if applied against Southampton or some other port belonging to a nation advanced in the application of practical sanitation. If rags came from a country where disinfection is not obligatory it may be a matter of some risk to import such articles. Therefore, for this and a multitude of other reasons it may be necessary to take more rigorous precautions against the merchandise coming from one than from another country. But who is to make this selection? Would not an international sanitary bureau assist considerably in the making of such selection and what could England lose in such a process? Do we fear being compared with other nations? We have undoubtedly our weak as well as our strong points, but at least in respect to sanitation we can hold our own in the face of the whole world. Indeed, many sanitary reformers of the continent will welcome the creation of the International Sanitary Bureau as a means of making the sanitary measures taken in England better known on the continent and thus it will be easier to get the continental authorities to act in a similar manner. In fact, it is difficult to see what possible disadvantage there can be in the diffusion of information and establishing intimate comparisons between the efforts made in all countries to protect public health. This can only result in helping those who are behindhand to hasten forwards. Just at the moment when the official representatives of so many nations were endorsing this proposal and preparing to sign the convention in favour of the International Sanitary Bureau a large number of members of the British House of Commons were being entertained in a most magnificent manner by the French Government and by the French people. Nothing could exceed the enthusiasm and the friendliness that prevailed. It really did seem as if old antagonism had been completely effaced and as if the two nations had drawn together for a permanent and hearty friendship. At almost identically the same moment there came an opportunity of giving a practical expression of realising in a small way this very evident desire to work hand in hand, and it was the British representatives who drew back, hesitated, and would not pledge themselves to support the new international form of coöperation intended to promote public health in all countries. Such a work could not help incidentally contributing also to promote the cause of international peace and it is to be hoped that the British Government when better informed will see its way to join heartily, if tardily, the great majority of the other nations in creating an international institution that will be of benefit in developing throughout the world an important phase of civilisation.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Thompson-Yates Laboratories: Death of the Donor.

THE Rev. Samuel Ashton Thompson-Yates, M.A., the munificent donor of the pathological and physiological laboratories to the then University College, Liverpool, which bear his name, died in London on Nov. 22nd at the age of 61 years. Prior to his gift of the laboratories Mr. Thompson-Yates had proved himself an enthusiastic friend of education and was a constant subscriber to the University College fund. He was for many years a member of the court of governors and was one of the first to advocate independence for the College. The funeral took place on Nov. 26th at Highgate Cemetery. Vice-Chancellor Dale, Professor C. S. Sherrington, and Professor Woodward were deputed by the council to represent the University of Liverpool at the funeral obsequies. The flag at the University was hoisted at half mast when the news of his death was received. The laboratories were also closed on the day of the funeral.

Liverpool free from Small-pox.

For the first time for 18 months the medical officer of health (Dr. E. W. Hope) was able to report, at a recent meeting of the health committee of the city council, that there was not a single case of small-pox in any of the city hospitals. The last patient was discharged on Nov. 23rd. The epidemic had been on the decline for some months and for the last four or five weeks only some half-dozen cases were in hospital. It was therefore with much satisfaction that the committee heard of its absolute disappearance. Scarlet fever, on the other hand, is prevalent; there were 391 cases in hospital on Dec. 3rd. The general death-rate of the city for the past week was 22·2 per 1000 of the inhabitants, as against 25·8 per 1000 during the corresponding week of last year.

Liverpool School of Tropical Medicine: Ankylostomiasis among Miners.

At the University of Liverpool on Nov. 27th Mr. Charles Salter gave some results of a tour of inquiry into the outbreaks of ankylostomiasis among miners in Westphalia and Belgium, Professor Ronald Ross being in the chair. Mr. Salter said that the researches of Perroncito at the time the St. Gothard tunnel was being driven showed once for all that the disease was due to the ankylostoma, a worm which adhered to the intestines in the human body. The male of the parasite was from a quarter to one-third of an inch in length and the female was longer and thicker, reaching sometimes a length of half an inch. The female laid between 2000 and 3000 eggs a day, and as these parasites could live in the human body during four or five years their potentiality of increase was very great. Recent research showed that the ova were not capable of reaching the adult stage save in the intestines as a habitat, but the eggs retained their vitality in dirty water for as long as five months. For their development they needed a heat of 68° F. and upwards, a certain supply of oxygen, and exclusion of light. The most favourable hatching medium was, given the requisite heat, damp coal-dust mixed with animal refuse. The supposition that the larvæ could penetrate into the bowels through the wall of the abdomen had been proved by experiment to be baseless. They were introduced into the system through the mouth and the disease owed its propagation to the habit on the part of miners of eating their food with soiled hands. It was chiefly prevalent in warm, damp mines. The symptoms were a complexion of livid grey colour, palpitation, dizziness, loss of appetite, and gastric disturbance, with in bad cases great lassitude. As a result of the epidemic among the miners of Westphalia there were upwards of 17,000 cases this year. The lecturer then described the measures taken by the authorities to cope with the outbreak. The treatment considered safest was the administration of calomel and extract of male fern in alternate doses. This generally produced a cure in about a week. As to prophylactics, the best had been found to be dilute sulphuric acid and ammonia. Both, however, being too expensive to be used as disinfectants on a large scale the only alternative was strict and compulsory rules of sanitation and these, as carried out in German mines, had had a most marked effect. The provision of douche baths, rooms for changing clothing, and properly constructed latrines, as well as mine hospitals, were among the precautions found necessary. He regretted the waiting policy of the Home Office in this country, as prevention would prove far better than cure.

Presentation to Professor A. M. Paterson.

On Dec. 5th the annual dinner of the medical students of the University of Liverpool was held at the Adelphi Hotel, and the occasion was taken advantage of to make a presentation to Professor A. M. Paterson who until three months ago had for more than nine years occupied the position of dean of the medical faculty of University College, Liverpool. Sir William Banks presided and about 120 gentlemen sat down to dinner. Mr. Frank Jeans, the honorary secretary of the dinner committee, presented Professor Paterson with a silver inkstand, a silver flower-bowl, and silver candlesticks. He referred to the great success which had attended Professor Paterson's occupation of the office of dean and the great personal and friendly interest which he had always taken in the welfare of the students. In replying Professor Paterson, who was received with prolonged cheering, said that it was a source of great gratification to him to think that of all the students who had passed through his hands 87 per cent. had duly qualified as medical practitioners. He looked upon it as a favourable sign that amongst medical students in Liverpool the "chronic" had almost entirely disappeared. The evening was a great success, the speeches of Sir William Banks and Mr. Edgar A. Browne being very amusing and highly appreciated.

University of Liverpool.

At the first meeting of Liverpool University court of governors, held on Dec. 5th, Mr. E. K Muspratt (pro-chancellor) in the chair, appeals were made for further financial aid to assist in the development of the university. The university starts its career by taking over investments valued at £275,000 and lands and buildings worth £230,000.

Hospitals and their Rates.

In the issue of THE LANCET of Nov. 28th, p. 1536, reference was made to the remarks of the Lord Mayor (Mr. R. A. Hampson) at the annual meeting of the Hospital Saturday Fund, suggesting the formation of a committee with the object of securing legislation to relieve hospitals from the payment of rates. I understand that a small committee has been formed with that object and will shortly meet at the town hall under the presidency of the Lord Mayor who, as president of the Stanley Hospital, is keenly interested in the question.

Dec. 8th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Overcrowding of Bedwellty Workhouse.

THE Bedwellty (Mon.) board of guardians has for several years past been aware that some decisive step would have to be taken to increase the accommodation at the Tredegar workhouse. The population of the union in 1901 was 81,820, an increase of 17,219 over the number of persons recorded in 1891, and included within the area of the union are the populous colliery districts of Abertillery, Ebbw Vale, Rhymney, and Tredegar, where there is every prospect of the local industries being still more extended. The overcrowding of the workhouse has been reported upon over and over again during the past three years, not only by the master and the medical officer (Mr. G. A. Brown) but also by the Poor-law inspector of the Local Government Board (Mr. F. T. Bircham). As long ago as December, 1902, it was stated that 17 boys were sleeping in a ward calculated to accommodate only ten and at that time the board room was given up as a sleeping apartment for the inmates and other temporary measures were adopted. At a meeting of the board held on Dec. 2nd last the master reported that there were 355 inmates in the house, although there was only room for 266. Various proposals have from time to time been made to remedy this deplorable overcrowding. The division of the union with the consequent establishment of a separate workhouse elsewhere and the purchase of a large unoccupied house in another portion of the district to be used as a branch workhouse, although suggested, have not been seriously considered and the members of the board of guardians are to be congratulated upon having at last decided to make extensions to the existing buildings upon an adequate scale. The cost is estimated at £27 886 and accommodation will be provided for 100 additional inmates. Properly arranged sick wards and isolation wards will also be erected. It is further proposed to relieve the workhouse by the removal of the children to cottage homes which are to be erected at Tredegar at a cost of £8325. In this group of buildings there are to be four cottage homes, each having accommodation for 15 children and a foster mother. The total expenditure involved will entail a rate of 1½*d.* in the pound for 30 years.

Ankylostomiasis.

The possibility of the introduction of ankylostomiasis duodenalis among the colliers of South Wales has recently been freely discussed in that district and it is especially gratifying to find Mr. William Abraham, M P., the miners' agent, and more popularly known as "Mabon," giving the colliers most excellent advice with a view to prevent any spread of the disease should it unfortunately make its appearance among them. Conferences, too, have been arranged between the colliery owners and leaders of the men in various districts in order to determine what preventive measures should be taken. In a communication to the local press Mr. Abraham states that at a meeting held at the Home Office at the end of November between representatives of the coal owners and of the miners the latter suggested that closets and urinals should be placed near the pit bank and in the pit itself near the pit porch and main passbyes in the return airways, that these places should be examined by the medical officer of health who should also examine any collier suspected of having contracted the disease, and finally that all workmen coming from a district where the disease prevails or has prevailed should be examined by a medical man who should be empowered to place in quarantine any man found to be suffering from the disease. The sanitary committee of the Glamorganshire county council has sent a circular letter to the medical men practising in the county offering the assistance of the Cardiff and county public health laboratory in the diagnosis of suspected cases

Side Windows in Covered Vans.

The Glamorganshire county council, which was the first authority in the country to adopt a by-law prohibiting indiscriminate spitting, is now endeavouring to lessen the number of accidents caused by the drivers of covered vans suddenly altering their direction, unaware that another vehicle, pedestrian, or cyclist is passing. After Jan. 1st, 1904, the following by-law will be in force within the administrative county:—

> Every tradesman's van or other covered vehicle intended to be driven by a person sitting inside thereof shall be so constructed with side windows or otherwise as to enable such person to see the approach of vehicles from behind on either side thereof.

The penalty for not complying with the by-law may be £5 The tradesmen who are particularly concerned—bakers, grocers, and others—appear to resent the adoption of this by-law, but its enforcement cannot fail to be of service.

Glamorganshire County Sanatorium.

The medical officer of health to the Glamorganshire county council (Dr. William Williams) has reported to the sanitary committee of the council in favour of establishing at the cost of the county a sanatorium for consumptives with accommodation for 30 patients. He estimates the cost of the site at £3000 and of the buildings and furniture at £12,000, or £400 per bed. The annual expenditure is put down at £4189.

Swansea Technical College.

The Swansea Technical College is now recognised as a school in which medical students may attend classes in physics and chemistry during the first of their five years' curriculum.

Dec. 8th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

A New Out-patient Department for the Royal Hospital for Sick Children, Edinburgh.

THE out-patient department at the Edinburgh Royal Hospital for Sick Children has grown so greatly since the present hospital was opened some eight years ago that the directors found it necessary to undertake the construction of premises to meet the demands made on the department. Last year 6724 children were attended to in it, while the number of attendances reached a total of close upon 22,000. Not only did the department require enlarging but it required to be refitted in conformity with the present position of scientific medicine. The new department is a two-storey building to the west of the hospital. Patients enter by a south gate inside which there is a covered place for perambulators. Off the entrance open three isolation rooms for children suspected of having infectious disease Medical cases are treated on the ground floor. The medical waiting room measures 36 by 38 feet and a dressing room opens off it which again opens into the room where the physician in attendance sees the patients. This room also has an entrance from the outside for the students and the staff. The drug dispensary is also on this floor. Upstairs the rooms to the south front contain electrical, ophthalmic, and photographic appliances; those to the north are occupied by the surgical department, including [illegible] anæsthetic room, and [illegible] modern necessaries. [illegible] tory for the use of the staff. The floors are of concrete, finished with cement, and the walls are tiled to a height of seven feet. The floors have scuppers and the ordinary angles and corners are rounded, so that the walls can be cleaned by means of the hose. The rooms are heated by means of steam pipes on the low-pressure system and ventilation is aided by extraction fans driven by electricity. The new department, which has been planned and the work carried out with great care, has cost about £6000. It was formally opened on Dec. 8th by H.R.H. Princess Louise, Duchess of Argyle.

Physiology in Relation to the Teaching Profession.

Dr. D Fraser Harris delivered an interesting lecture to the University Education Society of the University of St Andrews on this subject on Monday last Pointing out that the profession of teaching involved the highest physical and moral responsibilities in matters of conduct, he claimed that no science could be more closely related to these same matters of conduct than physiology. The physiology of circulation, respiration, digestion, excretion, and of the central nervous system should all be studied by the teacher if he is to help the State to combat the grave physical defects which the nation as a whole is now alleged to suffer from. Moreover, a study of physiology gives an insight into what is meant by inhibition, the development of which power in his pupils Dr. Harris ranked as the highest function of the teacher. The lecture, which was illustrated by diagrams, was listened to with marked attention and Dr. Harris may be considered to have advanced a powerful plea for knowledge of physiology among the instructors of our young.

The University of Glasgow.

The Right Hon. the Earl of Stair, K.T., LL D., Chancellor of the University of Glasgow, died on Dec. 3rd at Lochinch, near Stranraer, after an illness of five weeks' duration. The Principal communicated the announcement, which had been telegraphed to him by Viscount Dalrymple, to his colleagues at a special meeting the same afternoon. The Senate adopted the following minute as a permanent record of the sad event:—

> The Senate has received with deep regret the intelligence of the death of the venerable Chancellor of the University, the Right Hon. the Earl of Stair, K.T., who died this morning at Lochinch in the eighty-fifth year of his age. Lord Stair had faithfully served the [illegible] The Senate desires to record [illegible]

The clerk of the Senate has forwarded a copy of this minute to Lord Dalrymple conveying at the same time an expression of the Senate's deep sympathy with the family of the deceased earl. Representatives from the Senate, the University Court, and other bodies connected with the University attended the funeral which took place on the following Monday, on which day as a token of respect no classes were held within the walls of the University.

Death of William Douglas Pringle, M.B., B.Ch.Aberd.

Many Aberdeen graduates will learn with deep regret of the death of Dr. William Douglas Pringle, Lieutenant I.M.S., aged 26 years, which occurred at Tientsin, China, on Sept. 3rd last, and news of which has just reached this country. Lieutenant Pringle graduated at Aberdeen in 1900 with distinction in the third and final professional examinations. He was an Anglo-Indian but he rapidly adapted himself to his new surroundings and became one of the most popular men of his year. While at the University he took an active interest in athletics, being a good oar, a strong swimmer, a keen pedestrian, a brilliant shot, and an all-round sportsman. After graduating he passed into the Indian Medical Service, taking the ninth place in the entrance examination. His death was due to dysentery.

Tuberculous Cases in Aberdeen Royal Infirmary.

In connexion with the appointment of managers of the infirmary attention has been directed to the reports of the directors for the past four years, with special reference to cases of phthisis and tuberculous disease. From the figures of the reports it was shown that during the four years 1899 to 1902 there had been 380 cases of phthisis received, out of which five recovered, 214 improved, and 80 died. During the same period 81 patients had been taken away "at desire or having been unfit." The matter of erecting a sanatorium somewhere on Deeside where sufficient and efficient provision would be made for the treatment, arrest, and, if possible, the eradication of the disease and the benefits of which would be within the reach of all, has been under the serious consideration of the directors for some time. Plans of a building have been prepared and negotiations are in progress for the acquisition of land for the erection of a sanatorium to be equipped in the light of the most recent scientific discoveries and experience. Quite recently the directors had a consultation with the medical officer at the head of the sanatorium at Nordrach-on-Dee as to the plans of the proposed building and a large amount of information was placed before the directors which will be of great value when the building comes to be erected. With the comparatively limited resources of the Royal Infirmary it has been impossible to give the full and undivided attention of the staff to the particular branch of disease in question, but on a limited scale the principle of the outdoor treatment of consumptives has already been tried at Woolmanhill and so far the results have been satisfactory, the patients under treatment eating much better and being in every way improved in strength. Sufficient time, however, has not yet elapsed to enable any definite conclusions to be made as to the effect of the treatment. With reference to the small number of recoveries of patients the important fact must be borne in mind that most of the cases which are admitted to the infirmary are already in an advanced stage and therefore practically beyond hope of cure.

Dec. 8th.

IRELAND.

(From our own Correspondents.)

Royal College of Surgeons in Ireland.

At a meeting of the President, Vice-President, and Council of the Royal College of Surgeons in Ireland held on Dec. 3rd the vacancy caused by the death of Sir George Duffey was filled by the appointment of Dr. Michael McHugh to the post of professor of materia medica.

The Granard Nursing Quarrel.

What has been known as the Granard nursing quarrel seems after a duration of nearly 12 months to be now drawing to a close. At a meeting of the guardians held on Dec 7th a letter was read from the Roman Catholic bishop of the diocese which, while blaming the Local Government Board for "a glaring miscarriage of justice," stated definitely that he would not permit the nun nurses to return to the hospital at Granard. After a long discussion and many threatening remarks directed towards the medical officer of the union hospital, whose complaints are looked upon as the cause of the whole trouble, the board decided on appointing a trained nurse to hold office permanently.

Union Medical Officers of Ireland.

A long letter has appeared in the morning papers from Mr. McArdle in which he denounces the recent suggestion of the President of the Royal College of Surgeons in Ireland that union medical officers should be chosen by an examination held by a competent examining board. Mr. McArdle considers that such an arrangement would be a most unfair interference with the rights of the popularly elected guardians and would be "contrary to the spirit of the age." However that may be, there can be no doubt that in the election of a Poor-law medical officer in Ireland the very last thing that is considered is the candidate's merit as evidenced by his career as a student or by the value of the medical qualifications which he holds. Practically all those elections are decided by political or religious motives, or by the fact that the candidate has some influential relative on the board. After his election the same factors settle his career. The poor for whose sake he is appointed may find him stupid and incompetent. It does not matter so long as he avoids dismissal by the Local Government Board and he has no sort of incentive to do better—promotion being unknown in this unique service. In the circumstances it is not surprising that the President of the Royal College of Surgeons should have made a suggestive attempt to improve such a state of things and to solve an important but most difficult problem.

The Sterilisation of Milk in Schools.

At a meeting of the committee of the Dublin branch of the National Association for the Prevention of Tuberculosis held at the Royal College of Physicians, Kildare-street, on Dec. 1st, attention was drawn to the recently published annual report of the Registrar-General for Ireland, from which it appears that the death-rate from tuberculosis during the year 1902 was 2·7 per 1000 of the population. The committee also considered the important question of the dissemination of the disease by means of infected milk and the following motion was passed unanimously:—

> As tubercular infection is the most frequent cause in young people, not merely of ordinary consumption but of bone and joint diseases, meningitis, and many forms of lung disease not ordinarily registered as consumption, and as milk derived from even apparently healthy cows may contain the tubercle bacillus and is believed to be capable of infecting human beings, and especially the young, with tuberculosis—Resolved—That the attention of the principals of boarding schools and public institutions for the young be called to the above facts and to the desirability of sterilising milk before its use by those under their charge. Further, that they be informed that this advice is in conformity with regulations issued last year by the Minister of Public Instruction in France.

Health of Belfast.

At the usual monthly meeting of the city corporation of Belfast held on Dec. 1st it was reported that the town clerk was directed to make inquiries as to the possibility of obtaining the services of a medical expert having experience in connexion with the treatment of consumption in sanatoriums to act in conjunction with the medical superintendent officer of health in advising the health committee on these matters. The health of the city during the past five weeks had continued satisfactory. Typhoid fever had decreased as well as scarlet fever and the type of the latter disease was mild. The death-rate was 17·9 per 1000. There were 1030 births and 618 deaths (including 54 from zymotic disease, 95 from phthisis, and 125 from diseases of the respiratory organs). The council has decided to contribute £300 for the removal of decaying sea-weed from the Cultra foreshore in Belfast Lough. No discussion has so far taken place on Professor J. Lorrain Smith's report.

Attendance on Children's Hospitals.

For several years the Senate of the Royal University of Ireland obliged candidates to have a certificate of having had "personal charge" of six cases of diseases of children and of six cases of diseases of women. A few years ago the rule suddenly (no one can explain the reason) disappeared from the Royal University of Ireland calendar and now a "personal" attendance on midwifery cases is all that is required, notwithstanding the fact that a separate paper is given on gynæcology and diseases of children. The absurdity of the rule is that students must have "personal charge" of at least ten fever cases and yet no separate paper or examination is held on fevers. The clinical teachers in Dublin are anxious to have the former rule re-enacted.

The Royal Victoria Hospital, Belfast.

The lot of the resident surgeons in charge of the extern department is rapidly becoming a most difficult one owing to the exacting demands of the working-class subscribers who criticise the treatment, make the most flimsy complaints, and in many cases demand admission, not from the urgent need of their accidents or ailments but solely on the ground that they are subscribers. Recently the Belfast trades' council publicly discussed the way in which one of its members had been treated at the hospital and sent a deputation to the board of management demanding an inquiry which was held, the upshot of which was to exonerate house surgeons, nurses, and all concerned with the Royal Victoria Hospital. The result of the Workmen's Liability Act has been to cool largely the enthusiasm of employers for hospitals, as they are obliged to pay a heavy insurance now to protect themselves against accidents to their workers, and they naturally feel that the workers themselves should contribute to the upkeep of the places in which they are treated, while as a natural consequence the employers are beginning to regard hospitals as clubs, at least this is what is rapidly approaching in Belfast. The time of the resident superintendent of the hospital and of busy members of the board of management is being constantly taken up and absurdly and uselessly wasted in settling the most miserable and utterly without foundation complaints. As a natural consequence the old idea that hospitals are charities will soon disappear.

Army Medical Examinations.

Professor T. Sinclair of Belfast has been appointed examiner in surgery at the army medical examinations.

Dec. 8th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Births and Deaths in France for 1902.

STATISTICS of the population of France for 1902 have just been published. There are 83,944 more births than deaths, or an increase over the figures for 1901 of 11,546. This favourable result is not due to an increase in the number of births but to a marked diminution in the number of deaths. As a matter of fact, in 1902 the number of births was 11,896 less than in 1901 and the number of deaths was 22,442 less than in 1901. The increase in the birth-rate is therefore only apparent, for in reality the birth-rate has again diminished. In 1902 the population increased by 22 per 10,000 inhabitants, a figure slightly higher than that for 1901, which was 19 per 10,000. Even this figure, however, was better than the mean for the decennium 1891–1900, when it was only 6 per 10,000, for during the decennium in question there were four years in which the deaths exceeded the births. Despite the small progress shown of late the state of France as regards increase of population remains unsatisfactory, especially if it be compared with that which obtains in other countries of Europe.

The Society for Aiding the Wounded.

In 1899 the Society for Aiding Wounded Soldiers founded at Paris in the Rue de Vanves a dispensary under the charge of Dr. Guyon, a member of the Institute and of the Academy of Medicine. This dispensary did such excellent work in instructing ladies who were willing to act as nurses with the ambulances in time of war that six provincial towns followed the example of Paris in providing dispensaries for training ladies of the red cross. At Lyons, Marseilles, Reims, Cherbourg, Vannes, and Evreux dispensaries are at work and give certificates to nurses when trained. This year the following additional towns have followed suit: Bordeaux, Grenoble, Nancy, Rennes, St. Malo, Boulogne-sur-Mer, Epernay, Tours, and Le Mans. It is evident that eventually all provincial towns of any importance will do the same.

Dr. Marmorek's Serum.[1]

The meeting of the Academy of Medicine held on Dec. 1st was almost entirely devoted to a discussion upon Dr. Marmorek's serum, of which I have already given your readers an account. M. Dieulafoy gave a *résumé* of the conclusions to which he had come after seeing some experiments undertaken in his wards with his leave by Dr. Marmorek. They are anything but encouraging. Patients who exhibited pyrexia did not improve and one patient in whom the temperature was not raised showed a rise after the first injection. Expectoration increased to double or triple its former quantity and as for the evolution of tuberculous lesions secondary lesions appeared around the primary foci after the injection of the serum. Out of seven patients treated two survived, the other five dying at periods varying from two to 11 months. Dr. Marmorek then made some experiments upon guinea-pigs at the Hôtel Dieu. Eight guinea-pigs were infected with the bacillus tuberculosis in culture, four were then given the serum and the other four were kept as controls. The four which had received the serum died before those which had not received it. M. Le Dentu followed with his experience which only related to one case. The patient suffered from tuberculosis of the upper end of the tibia. He received 15 injections of serum without showing any improvement and Dr. Marmorek then desisted. The surgeon then scraped out the tuberculous focus and promptly the patient, who was saturated with the so-called antituberculous serum, showed an exacerbation of symptoms. First the knee became invaded, then the lungs; the leg was amputated and the patient died two months after the serum treatment had begun. M. Monod, who followed, said that in sundry cases of articular and glandular tuberculosis he had observed some improvement but no cure. It is well known, however, that localised forms of tuberculosis in the limbs or in the glands often tend to spontaneous recovery with rest and slight surgical interference. M. Hallopeau tried the serum in seven cases of tuberculosis of the skin which were under his care at the St. Louis Hospital. Some cases showed no results but in one patient ulcers appeared at the sites of inoculations which were indurated just as if tuberculosis virus had been inoculated. At the meeting held on Dec. 8th M. Lucas Championnière said that one patient under his care appeared to improve at first but at the end of five days he died from tuberculous meningitis.

Crookes's Bulbs for Radio-therapy.

In cancer of the tongue, the uterus, and the rectum treatment by the x rays is almost impossible, for these organs are so deeply seated and are so protected by healthy or bony tissues that application of the rays is almost impossible without running the risk of setting up severe x ray burns. To obviate this difficulty M. Oudin has had constructed some Crookes's bulbs fitted with an ebonite handle which the surgeon can hold and so apply the rays locally without the risk of bringing about x-ray burns of the overlying tissues. M. Oudin exhibited these new bulbs at a meeting of the Academy of Sciences which was held on Nov. 25th.

Dec. 8th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

Psycho-therapeutics in General Practice.

AT the last semi-annual meeting of Swiss medical men which took place at Olten on Oct. 31st and which was attended by over 200 medical men from all parts of Switzerland Professor Dubois of Bern, lecturer on diseases of the nervous system, spoke on Psycho-therapeutics. He disregarded hypnotism and referred solely to treatment by suggestion of various nervous ailments, such as neurasthenia, hysteria, and some forms of hypochondriasis, which he thinks should be considered as psychical affections and not merely as nervous ailments. A correct diagnosis which carefully excludes organic disease is of great importance, as also is the fact of impressing the patient with the curability of his ailments. In short, convince him and he is cured. This doctrine he demonstrated by reference to remarkable cures effected in the space of a few weeks of patients of many years' duration. The medical man treating such cases must have a great deal of tact and a certain amount of will force and patience, and must not be nonplussed by the various complaints of his patients. He must be well versed in science, literature, religion, and philosophy, and enter into all the details of the ailments complained of and make use of the information thus obtained to effect a cure by appealing in turn to the patient's will force, to his affections, and to his sense of duty. The practitioner should devote considerable time daily to each patient and should avail himself of psychical treatment on every occasion and should not waste his patient's time in trying all sorts of so-called cures. All other systems of treatment in vogue only tend to confirm the patient in his belief that he is seriously ill and make him a helpless invalid who is a burden to himself and a distress to his fellows. With regard to special treatment Professor Dubois referred his audience to his "Leçons de la Psychonévrose." At the end of his lecture he made the astonishing statement that he had never been obliged to resort to hypnotic medicine, such as bromides, chloral, sulphonal, &c., to procure sleep for his patients, but that suggestion had always proved successful. His remarks well
ver-increasing
obvious that
r words, that
have to be content to march at
of his able instructor in psycho-
therapeutics. In any case this form of treatment will be welcomed by all those medical men who have many reasons for distrusting and discrediting hypnotism.

Zürich, Dec. 5th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Medical News.

LITTLE of medical interest has occurred during the last month. The small-pox epidemic seems to have died out in Tasmania and no fresh cases of plague have occurred in any of the States. The Bill to amend the Lunacy Act in Victoria, an outline of which was given last month, has been read a second time in the Legislative Assembly and discussed in Committee. Some opposition was shown to the provisions for the constitution of a Board of Lunacy and further consideration was postponed.

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[1] Dr. Marmorek's original paper appears in full at p. 1642.—ED. L.

Health Society of Victoria.

The annual meeting of the Health Society of Victoria was held on Oct. 10th. His Excellency the Governor presided and gave an interesting address, in which he observed that statistics showed that public sanitation was steadily diminishing the death-rate, but there was also need for bringing home to the people the necessity for regulating their own lives in accordance with well-known principles of hygiene—what was called "personal hygiene"—and that was what the society was trying to accomplish. He believed the first principles of sanitation should be taught in the schools. He did not see why the pulpit should not be sometimes employed for teaching obedience to the laws of health, which were the laws of God. The more healthy a community was as a whole the more virtuous it was likely to be. The report of the council stated that there had been an increase in membership during the year. The usual series of "health lectures for the people" had been given and meetings for women had been held in the suburbs.

Hospital Affairs.

Hospital Sunday, Oct. 24th, in Melbourne was, as it usually is, a wet day. The collections, however, amounted to very nearly the same as last year, a little under £4000. His Majesty the King has been graciously pleased to confer the title "Royal" on the Prince Alfred Hospital, Sydney. It has been found that the system of having clinical assistants at the Prince Alfred Hospital has not been a success and the board of directors has decided at the termination of the present appointments to abolish the positions and to appoint additional honorary assistants to those departments which need them. The conference of delegates from the hospitals on the proposed Hospitals Amending Bill held its final meeting in Melbourne. The recommendations of the subcommittee (which were outlined in a former communication) were agreed to, except the most important one of all, that relating to the mode of election of the honorary medical staff. The committees of the metropolitan hospitals were all so hostile to the proposal of an electoral college that it was abandoned by the conference. It affirmed that the honorary staff should *not* be elected by the subscribers.

Obituary.

Mr. William H. Goode, B.A., M.D., M.Ch. Dub., died at his residence, Macquarie-street, Sydney, on Oct. 13th, after a prolonged illness. Dr. Goode, who was a native of Ireland, was educated at Trinity College, Dublin, where he graduated as M.B in 1867 and M.D. in 1876. The following year he obtained the diploma in State medicine. His early career was spent in the Royal Navy. He served on H.M.S. *Dido* on the African coast and subsequently on the Australian station. He retired from the navy in 1878 and settled in Sydney where he soon had an extensive practice. He was one of the first surgeons to the Prince Alfred Hospital. Afterwards he was surgeon to the Sydney Hospital and to the Hospital for
...ldren. For many years he was medical officer to the
Asylum. From the commencement of the Sydney
A long ...ol Dr. Goode was lecturer on medical juris-
Mr. McArdle ...blic health. He was a member of the board
of the Presiden... a keen interest in its work. He was also
that union medi... visitors to the hospitals for the insane.
nation held by a com... high position in the profession in
considers that such an arran...d both by his colleagues and
interference with the rights of
and would be "contrary to th...toria has suffered a very
ever that may be, there can ...f two of its most capable
election of a Poor-law medical officer R. H. Ritchie
very last thing that is considered is the can... native of
as evidenced by his career as a stud...ar School
the value of the medical qualifications which he... in
Practically all those elections are decided by political ...f
religious motives, or by the fact that the candidate has so...or
influential relative on the board. After his election the
same factors settle his career. The poor for whose sak...ad
is appointed may find him stupid and incompetent. It d...r
not matter so long as he avoids dismissal by the Loc.
Government Board and he has no sort of incentive to d
better—promotion being unknown in this unique service.

fault and always ready with a joke. He endeared himself to all his patients and was a type of man the country can ill afford to lose.

Robert Henry Ritchie was born at Bega in New South Wales. His medical education was begun at Guy's Hospital and School, London, and finished at Melbourne University, where he graduated M.B. in 1894. After graduation he was appointed resident medical officer to the Melbourne Hospital. He then settled in Horsham and was surgeon to the local hospital. In spite of bad health he did some excellent work and contributed several papers to the Medical Society of Victoria. He was the first surgeon in Australia to perform amputation of a leg under spinal cocainisation. Personally he had a most winning manner and a delightful disposition. His ability was far above the average and but for his poor health he would undoubtedly have taken a very high position. The cause of his death was pulmonary tuberculosis.

Nov. 3rd.

Medical News.

TRINITY COLLEGE, DUBLIN.—At the final examination in midwifery held in Michaelmas term the following candidates were successful:—

Thomas H. Gibbon, George B. M'Caul, Reginald H. Lee, Herbert St. M. Carter, David Gray, Harry R. Nelson, Philip S. Stewart, Winslow S. S. Berry, Thomas C. A. Sweetnam, Samuel H. Vickery, Frederick F. C. Willington, John C. Hall, Frederick W. Bury, and Herbert Stone.

UNIVERSITY OF CAMBRIDGE.—At the congregation on Dec. 5th Mr. J. M. Martin, Peterhouse, received the M.D. degree. Dr. W. L. Dickinson, Dr. H. D. Rolleston, and Dr. T. H. Kellock have been appointed as additional examiners for the third M.B. examination.

VACCINATION STATIONS.—At the meeting of the Chard board of guardians held on Nov. 23rd it was resolved to send to every union in the south-west of England a copy of a motion recently passed by the guardians in favour of reverting to "stational" vaccination, in consequence of the increased cost of vaccination since the passing of the Vaccination Act.

ATTEMPTED MURDER OF A MEDICAL MAN.—Mr. Justice Darling took a serious view of the attempted murder of Mr. George Whittenbury White at the Fir Vale Workhouse Infirmary, a short account of which was published in THE LANCET of Nov. 28th, p. 1545. On the conviction of the prisoner by a jury of attempt to murder, Mr. Justice Darling sentenced him to penal servitude for life. Punishment has here followed quickly upon the heels of crime.

SPECTACLE MAKERS' COMPANY.—Alderman Sir George Faudel-Phillips presided on Tuesday last at the Mansion House at a meeting of the special sight-testing committee appointed by the Spectacle Makers' Company to consider the advisability of including sight testing in the company's syllabus. The witnesses examined by the committee have expressed themselves, under certain limitations, in support of the movement, in regard to which it is stated that oculists and the trade will be consulted.

MEDICO-LEGAL SOCIETY.—At a meeting of this society held on Dec. 8th at 20, Hanover-square, W., Sir William J. Collins, the President, in his address commented upon the width and possibilities for development of forensic medicine; he hoped it would soon assume its legitimate status in the medical curriculum. The society should deal with such subjects as (1) coroners' law amendment; (2) the present position of professional secrecy; (3) the attitude to be taken with regard to secret remedies; and (4) other "residual" topics neglected alike by lawyers and medical men. He paid an eloquent tribute to the life-work and memory of Mr. Herbert Spencer. Mr. John Troutbeck (treasurer) read a paper on Inquest Juries. After great experience he defended their present utility, showing, however, that in several directions they had lost their primitive significance and importance. The average voter was well qualified to serve as a juror; a large jury was a check upon "cranks"—he would consider seven or nine as sufficient. The lack in London of centralisation of medico-legal work was as deplorable as its opportunities were unique.

The President, Mr. Walter Schröder, Mr. William Lewis (of the Treasury), Dr. Harvey Littlejohn, Dr. F. J. Smith, Mr. W. A. Brend, and Mr. S. B. Atkinson continued the discussion. In his reply Mr. Troutbeck urged either a better class of registrar or early official medical inspection of all certificates of death.

BRISTOL ROYAL HOSPITAL FOR CHILDREN.—It is hoped to raise £4000 for the endowment of the "Mark Whitwill Ward," which is the form of memorial that has been decided upon to perpetuate the memory of the late Mr. Mark Whitwill. Up to the present time £2788 have been received.

CONFERENCE ON THE TRAINING AND SUPPLY OF MIDWIVES.—Lord Monkswell, chairman of the London County Council, took the chair on Dec. 2nd at a conference convened by the Association for promoting the Training and Supply of Midwives to consider the methods and means for promoting the training and supply of midwives. The conference was held at 2, Cromwell Houses, London, and was well attended by ladies and others interested in the movement. The chairman in a few opening remarks asked for an expression of the opinion of those present as to whether the London County Council should administer the provisions of the Midwives Act in the metropolis or whether the borough councils should be intrusted with the work. Later in the course of the proceedings the chairman put the question directly to the meeting and it was found that those present were in favour of the London County Council discharging the duties to be carried out under the Act, only one lady voting against it. The two principal speakers in favour of the London County Council being the authority intrusted with the administration of the Midwives Act were Mrs. W. Bruce and Miss Rosalind Paget who strongly urged the step because it was necessary in the metropolis to insure the control of the midwives under one central authority. Most of the speeches had reference to a motion which was to the effect that the meeting was in favour of the work and aims of the Association for promoting the Training and Supply of Midwives and would do what was possible to further the work of organising the training of midwives on a sound basis. This motion was proposed by Miss A. Clifford, seconded by Lady Mary Glyn, and carried unanimously. Lady Mary Glyn, in the course of her remarks, expressed the strongest disapprobation of any scheme that involved "mixing up" midwifery with district nursing. Mrs. W. Bruce said that a good standard of training ought to be maintained and pointed out that a large sum of money would be required to secure the fulfilment of the objects of the association. Dr. J. R. Kaye of Wakefield sent a letter in which he urged that midwives should be utilised as district nurses, because in small villages it would be impossible for the midwife to make a living without also acting as a nurse. Miss Amy Hughes gave her reasons in great detail why nursing and midwifery should be combined, provided efficient supervision by fully competent women was secured. Mr. Shirley F. Murphy severely criticised the Midwives Act, calling it "An Act for the Prevention of the Practice of Midwives." He showed how impossible it would be to carry out the provisions of the Act in the case of many of the midwives who had been admitted on the roll by reason of the fact that many of them were unable to write and therefore would be unable to fulfil the requirements of the Act in regard to keeping a reasonable note of the cases which they attended. With reference to the supply of midwives he put the whole matter to the meeting very tersely by saying that the supply would depend upon the fees they were likely to receive. Sir Michael Foster deprecated the stringency of the regulations concerning midwives and observed that although it might be right to discuss the high standard the midwife of the future should attain at the present moment it was not wise to be too exacting. Provision had to be made for midwives in country districts and it had to be recognised that a midwife living in [illegible] rom midwifery alone. [illegible] undesirable that nurs- [illegible] but midwifery could be mixed up very well with looking after a small shop, or lodgers, or a husband. Funds were necessary, not to pauperise midwives but to enable women who by nature were qualified to be midwives to be trained so that they might make a living. Sir Michael Foster concluded with the following words: "Do not demand any extraordinary expenditure on the part of these women before they can begin to earn what will afterwards be a very limited livelihood." Many of the ladies availed themselves of the cordial invitation of the chairman to take an active part in the deliberations and the proceedings were followed with the closest attention by the audience.

BORIC ACID IN MILK.—The sanitary committee of the Exeter city council has just issued notices to the milk vendors in that city pointing out that the use of boric acid in milk is an offence under the Sale of Food and Drugs Act.

BY-LAW AGAINST SPITTING.—The Bristol city council at its meeting on Nov. 24th adopted a by-law against spitting in public places, the penalty being £1 for each offence.

BELGRAVE HOSPITAL FOR CHILDREN.—On Dec. 1st this hospital in its new situation in the Clapham-road, S.W., was opened for the reception of patients. The inauguration ceremony was conducted by the Bishop of Rochester who in the course of a few remarks said that the hospital had had a previous inauguration when Princess Henry of Battenberg came there in July last; the present occasion was of a simpler character and was a gathering together of friends and neighbours of the hospital to start it on its career of useful work with words of prayer and benediction. He said that though the Belgrave Hospital was an old one it was a new one in its present position and it had come to fill a much felt want on that side of the Thames. It would be found to be well arranged in every respect, its one fault being that it was not yet completed. £40,000 had been spent and it was earnestly hoped that the funds necessary for its completion would soon be forthcoming as an institution could not be said to be worked economically until all its capabilities were utilised to their fullest extent. The company then visited the wards, which already had two small occupants, and the operating theatre which with its fittings and sterilising chamber was presented by Mr. C. T. Dent to the hospital.

UNIVERSITY OF OXFORD.—An examination for a Radcliffe travelling fellowship of the annual value of £200 and tenable for three years will be held in Hilary term, 1904, commencing on Tuesday, March 1st. Candidates must have passed all the examinations required by the University for the degree of Bachelor of Arts and for the degree of Bachelor of Medicine. They must also have been placed in the first class in one, at least, of the public examinations of the University or have obtained some prize or scholarship within the University unattached to any college or hall and open to general competition among the members of the University. The successful candidate must before election declare that he intends to devote himself during the period of his tenure of the fellowship to the study of medical science and to travel abroad with a view to that study. The Regius professor of medicine and the examiners, two months before the expiration of the second year after the election of each fellow, present a report on the work done by him to the electors, who may, if they think the report unsatisfactory, declare the fellowship forfeited. The examination will occupy three days. Papers will be set in physiology, pathology, and preventive medicine, and a subject will be proposed for an essay. There will also be a practical examination in pathology. Intending candidates should send their names, addresses, and qualifications to "The Radcliffe Examiners, University Museum" on or before Tuesday, Feb. 9th, 1904.

HOSPITAL FOR CHILDREN WITH HIP DISEASE, SEVENOAKS.—The committee of management of this hospital has just appealed for help owing to the financial depression of last year and to the heavy tax on the giving capacity of local friends for the erection of the new building (the cost of which, we understand, has been about £10,000 and which was opened in 1902). Of 56 patients treated last year 33 were from London and of the remainder only six belonged to Sevenoaks. The staff being largely voluntary the expenses of management are small and the cost per patient averages 17s. The charge has been fixed at 7s. a week to make it possible for working people to send their children to the hospital or for charitable people to help them to do so. Of the 56 patients already spoken of as treated last year 17 were discharged as cured or convalescent, nine were otherwise dealt with, and 30 remained in hospital. The committee claims that the great feature of the hospital is that the length of treatment is much greater than is possible in large hospitals, owing to so many urgent cases pressing for admission into the latter, which causes hip cases sometimes to be discharged before they are permanently benefited. Anybody interested is invited to go to the hospital and to see for himself what is being done there. This certainly seems to be a charity well worthy of support and the fact that a comparatively large number of cases come from London ought, we think, to appeal to Londoners.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to The Lancet *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

Acland, John McKno, M.R.C.S., L.D.S. Eng., has been appointed Honorary Surgeon Dentist to the Royal Devon and Exeter Hospital.

Andrew, Henry, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Anæsthetist to the Royal Devon and Exeter Hospital.

Carling, Albert, M.A., M.B., B.C. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Queen Elizabeth Hospital and the Red Maids' Schools, Bristol.

Davies, Edward, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Honorary Surgeon Dentist to the Queen Adelaide's Dispensary, Pollard-row, Bethnal Green, E.

Dyball, Brennan, M.B., B.S., L.R.C.P. Lond., F.R.C.S. Eng., has been appointed Honorary Anæsthetist to the Royal Devon and Exeter Hospital.

Edwards, Arnold, M.D. Vict., Ch.B., has been appointed Honorary Assistant Surgeon to the Manchester and Salford Lock Hospital.

Heilborn, W. E., B.A., M.B., B.C. Cantab., has been appointed Anæsthetist to the Royal Infirmary, Bradford.

Martin, Robert, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer to the Banbridge Dispensary District.

Morgan, Frederick Charles, L.R.C.P. Lond., M.R.C.S., has been re-appointed Resident Medical Officer to the Eastville Workhouse by the Bristol Board of Guardians.

Perrott, Charles John, L.R.C.P., L.R.C.S. Irel., has been re-appointed Medical Officer of Health for Kingswood.

Roberts, J. Lloyd, M.D., B.S., B.Sc., B.A., M.R.C.P. Lond., F.R.C.S. Eng., has been appointed Honorary Physician to the Royal Southern Hospital, Liverpool.

Sequeira, James H., M.D., M.R.C.P. Lond., F.R.C.S. Eng., has been appointed Physician in Charge of the Skin Department of the London Hospital.

Solly, Reginald Vaughan, M.D., B.S., L.R.C.P. Lond., F.R.C.S. Eng., has been appointed Honorary Medical Registrar and Pathologist to the Royal Devon and Exeter Hospital.

Walker, F. A., L.R.C.P. Edin., M.R.C.S., has been appointed Certifying Surgeon under the Factory Act for the Weymouth District of the county of Dorset.

Williams, Frederick Mann, M.R.C.S., L.R.C.P. Edin., D.P.H. Cantab., has been re-appointed Medical Officer for the Plymouth Port Sanitary Authority.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Army Medical Service.—Examination of Candidates for not less than 30 Commissions in the Royal Army Medical Corps.

Birmingham, Jaffray Branch of the General Hospital, Gravelly Hill.—Resident Medical and Surgical Officer. Salary £150 per annum, with board, residence, and washing.

Bradford Royal Infirmary.—House Physician, unmarried. Salary £100 per annum, with board and residence.

Bridgwater Infirmary.—House Surgeon. Salary £80 a year, with board and residence.

Bristol Royal Hospital for Sick Children and Women.—House Surgeon. Salary £120 per annum, with rooms and attendance.

Chelsea Hospital for Women, Fulham-road, S.W.—Registrar. Honorarium £40 per annum.

Derbyshire Royal Infirmary. — Senior House Surgeon. Salary £100 per annum, with apartments, board, &c. Also Assistant House Surgeon for six months. Salary at rate of £60 per annum, with apartments, board, &c.

Edinburgh, University of.—Additional Examinerships in Materia Medica and Clinical Surgery.

Evelina Hospital for Sick Children, Southwark, S.E.—Eight Clinical Assistants.

Great Northern Central Hospital, Holloway, N.—Senior House Surgeon, Junior House Surgeon, and Junior House Physician, all for six months. Salary of senior officers at rate of £60 per annum, of junior officers £30 per annum, with board, lodging, and washing. Also Assistant Anæsthetist. Honorarium 10 guineas per annum.

Great Yarmouth, County Borough of.—Medical Officer of Health, Medical Officer of the Borough Isolation Hospital, and Port Medical Officer of Health. Salary £400 a year.

Hospital for Consumption and Diseases of the Chest, Brompton. —Resident House Physicians for six months. Honorarium of £25.

Indian Medical Service, India Office, London.—Examination for not less than 20 Commissions in His Majesty's Indian Medical Service.

Leeds Public Dispensary.—Junior Resident Medical Officer. Salary £100, with board and lodging.

Liverpool Cancer Research.—Assistant Director. Salary £200 per annum.

Liverpool Infectious Diseases Hospitals. — Assistant Resident Medical Officer, unmarried. Salary £120 per annum, with board, washing, and lodging.

Metropolitan Hospital, Kingsland road, N.E.—Assistant Surgeon.

Mount Vernon Hospital for Consumption and Diseases of the Chest, Hampstead, N.W.—Male Resident Medical Officer. Honorarium £60.

Newport and Monmouthshire Hospital.—Assistant House Surgeon, Salary £70 per annum, with board, residence, and washing.

Northampton General Hospital.—Assistant House Surgeon, unmarried. Salary £75 per annum, with apartments, board, attendance, and washing.

North-Eastern Hospital for Children, Hackney-road, Bethnal Green, E.—Surgeon.

Norwich, Heigham Hall Private Asylum.—Assistant Medical Officer.

Oldham Infirmary.—Senior House Surgeon. Salary £100 per annum, with board, residence, and washing.

Queen's Jubilee Hospital, Earl's-court, S.W.—House Surgeon for six months, renewable. Salary at rate of £52 per annum, with board, residence, and washing.

Royal Eye Hospital, Southwark, S.E.—Refraction Assistants. Honorarium £40 for the year 1904. Also Honorary Clinical Assistants.

Royal London Ophthalmic Hospital (Moorfields Eye Hospital), City-road, E.C.—Assistant Surgeon.

St. George, Hanover square, Provident Dispensary, Little Grosvenor-street, W.—Resident Medical Officer. Salary £100, with allowance about £80, and residence.

St. John's Hospital for Diseases of the Skin, Leicester-square, W.C.—Honorary Assistant Physician or Honorary Assistant Surgeon.

St. Mary's Hospital Medical School, Paddington, W.—Lecturer on Physics and Assistant Lecturer on Chemistry. Salary £100 per annum.

St. Peter's Hospital for Stone, &c., Henrietta-street, Covent-garden, W.C.—Junior House Surgeon for six months, renewable. Salary at rate of £50 a year, with board, lodging, and washing. Also Clinical Assistants for Out-patients for six months.

Salford, County Borough of.—Assistant to the Medical Officer of Health. Salary £200 per annum.

Seamen's Hospital Society ("Dreadnought"), Greenwich, S.E.—Junior Resident Medical Officer. Salary £40 per annum, with board, residence, and washing.

Sheffield Royal Hospital.—Assistant House Physician, unmarried. Salary £50 per annum, with board and lodging.

South Devon and East Cornwall Hospital, Plymouth.—House Surgeon. Salary £100, with board, residence, and washing.

Wolverhampton and Staffordshire General Hospital.—Assistant House Physician for six months. Honorarium at rate of £75 per annum, with board, lodging, and washing.

The Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory Act at Hanley, in the county of Stafford; at Cockermouth, in the county of Cumberland; and at Castle Bytham, in the county of Lincoln.

Births, Marriages, and Deaths.

BIRTH.

Pridie.—On Dec. 7th, at Wansford, Northamptonshire, the wife of H. Hampden Pridie, M.B., of a son.

MARRIAGES.

Gavin—Stevenson.—On Dec. 3rd, at the Mission Church, Ahmadabad, Neil Murphy Gavin, F.R.C.S. Edin., to Maud Muriel Stevenson, M.B., Ch.B., daughter of the late Rev. W. Fleming Stevenson, D.D., Dublin.

Novis—Tunstall.—On Dec. 1st, at St. John's, Upper St. Leonards, Thomas Shepherd Novis, Captain I.M.S., 2nd *Bo. Lancers*, to Margaret Anne, youngest daughter of the late Captain Anthony Tunstall of Brighton.

Payne—Howe.—On Dec. 5th, at St. George's, Hanover-square, W., Ernest Le Fevre Payne, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., to Helena, daughter of the late George Howe, of Brooklands, Cheshire

DEATH.

Newman.—At Stamford, on Dec. 3rd, 1903, William Newman, M.D Lond.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE LIGHT CURE AND ELECTRO-THERAPEUTIC INSTITUTE, LIMITED.

A PROSPECTUS has been filed with the registrar of joint-stock companies and a copy has been forwarded to us setting out the advantages of securing shares in an institution called "The Light Cure and Electro-Therapeutic Institute, Limited." The *directors* are Sir Edward Noel Walker, K.C.M.G., formerly Lieutenant-Governor of Ceylon; *Mr. J. W. Sidley* and Mr. J. F. Shone, both of Hampstead; and Mr. Alderman D. S. Ward of Harrogate. The objects of the institute are to provide light *cure and the* more modern methods of electrical treatment for the general public, and to supply electric light and heat baths as substitutes for the Turkish bath. It is stated that the institution will be under *the constant supervision* of a thoroughly qualified medical gentleman with special experience, who *has* placed *his* services at the disposal of the institute. He is a *brave man. If this institution proposes to* carry on the treatment of all the dangerous and chronic conditions *for which light* cures and electro-therapeutics *have* been recommended, so far as we can *see it will do* an extensive trade as a quack association. Undoubtedly the prospectus attempts to provide for the [illegible] pervision of this thoroughly [illegible] t be remembered that *if* the [illegible] *s that satisfy the* General [illegible] medical man will cease to be [illegible] at all. It appears to be [illegible] having "gout, rheumatism, lumbago and sciatica, catarrh and influenza, anæmia, obesity, neuralgia, insomnia, hysteria, and nervous affections generally" should have *resort to the electric light* baths of the institute; and the prospectus continues in its next paragraph. "The estimate *arrived* at and checked by experts ..... shows a very large profit upon the *proposed* capital." We can quite imagine that an institution proposing to embark in the West-end of London upon the treatment of the public generally, when suffering from such a list of diseases as that which we have set out, might make large profits. "*The unique character of the institute* and the style in which all the arrangements will be carried out should attract the patronage and support not only of the general public but also of the wealthy and fashionable circles," says the prospectus, and we think that the probabilities of the case are well gauged. But the question that concerns *our* readers is, Might the institute not do, as well as a good trade, a *great deal of damage? Can* we not imagine a member of the public, who thinks that his "anæmia" *or his "obesity" constitutes* his disease, walking off to the institute and paying his two guineas or his five *guineas for a course* of treatment that is especially bad for his general condition? The prospectus suggests that patients should be *sent* to the institute by medical men, but it does not suggest that the handsome estimated profits will be obtained if *only* such patients *are received*, while *it is quite clear that the institute* proposes to *do a* large medical business. The public can choose their own disease out *of a long* catalogue and can have any treatment they like if they pay *for* it. We need hardly indicate to our readers that such an *institute is not a thing to be joined*, and we shall be very much surprised to *learn that* any *medical officer* whose name is on the Register will be *found to* work for it. Such an institution can only be made really useful to the public if the management is in the hands of a strong *medical and scientific directorate.*

THE BRITISH MEDICAL BENEVOLENT FUND.

THE Treasurer (Dr. S. West, 15, Wimpole street, London, W.) begs to acknowledge the receipt of the following further special donations to the Fund in response to Sir William Broadbent's appeal:—

	£	s.	d.		£	s.	d.
Sir Anderson Critchett ...	10	0	0	Mr. J. B. H. Davson (Sierra Leone)	5	0	0
Mr. Morton Smale	5	5	0	Mr. W. F. Brook	1	1	0
Mr. T. Corbett	5	5	0				
"Thankoffering"	5	5	0				

QUEEN'S HALL CONCERTS

ALL lovers *of music owe a debt to Mr. Robert Newman* for the admirable concerts which he gives them. The Symphony concert on Nov. 28th was chiefly remarkable for a brilliant performance of Bach's Brandenburg Concerto No. 3. How the master of music's work was played it is needless to particularise. On Dec. 2nd the testimonial concert was given to Mr. Newman than whom nobody, with the possible exception of Sir August Manns, has ever better earned such an honour. The hall was very full and the programme was excellent with the exception that it was too *long. To ask a hearer to listen for two and a half* hours to such complex and emotional music as Beethoven's Egmont overture, Tchaikowsky's Pathetic Symphony, Wagner's Tristan overture, with the Liebestod and the Tannhauser overture with the Venusberg music is too much. Other items were the Casse Noisette suite and the Meistersinger overture. The former, though comparatively simple, makes demands on the mind by reason of its curious orchestration, *there being striking* contrasts of tone colour, such as, for instance that obtained by a *conversation* between a celeste and a bass clarionet. Few persons consider what a wonderful analytical power the ear of one accustomed to listen to a big orchestra possesses. Not only can he tell at once what instrument out of some 15 different *kinds is playing but he can detect any variation in pitch. This* analysis, though carried out automatically, is tiring, and we think that *those responsible* for orchestral programmes should never arrange a concert of more than one and a half hours' duration. Mr. Wood is a master conductor and his band is as good as a band *can be*, but *there is* no use in working a *willing horse to* death. All concerned made the testimonial concert a success and we *cordially congratulate them.*

THE POOR-LAW ADMINISTRATION AND INFANT MORTALITY.

To the Editors of THE LANCET.

SIRS,—It is needless in a medical journal to discuss the amount or dangers of high infant mortality but I should like to mention one of the causes and also point out how that cause is likely to increase and how it may be diminished. Dr. A. Newsholme in his well-known work *on "Vital Statistics" says that one of the causes is the omission on the* part of the parents to call in medical aid soon enough. Mr. A. E. *Harris*, the medical officer of health of Islington, in a recent report attributed many of the deaths *from* measles to the same cause. Recently, in an Oxfordshire village a large number *of children had* diphtheria and went about in this condition and even attended school with their throats swathed up, no medical man being in attendance on them. It is needless to multiply instances and the *reason is obvious. Poor* people of the labouring class cannot afford to pay doctor's *bills or even to subscribe to clubs. If* the *baby is upset or a* child *has a sore throat* a father or widowed mother will hesitate to call in a medical man when the result will be (even on the very moderate terms on which medical men attend poor people) that the family have to go without dinner for several days. But it will be said that the Poor-law provides a medical man for the poorest. Yes, so it does; but *unfortunately there are a "hard school" of so called Poor-law reformers.* These *people* [illegible] "medical relief" has largely diminished and I think *it is practically* certain that this must have caused much *suffering* and *in some cases* death. I think the attention of the medical profession and of the Local Government Board should be drawn to this subject.

I am, Sirs, yours faithfully,

Oxford, Dec. 3rd, 1903. J. THEODORE DODD.

THE JOHN JAMES JONES SANATORIUMS.

FROM a paragraph in a recent newspaper it would seem that the Gainsborough board of guardians have not been much edified by the treat- [illegible] woman who had been sent by [illegible] *sanatoriums at Sandgate* [illegible] the board went to Sandgate and found that the [illegible] nall bedroom with three other persons and was fed with food of a second-class quality. He also found, as all readers of THE LANCET could have warned him that he would, that at these homes there was no "open-air treatment" whatever in the medical or technical sense of the word. The patients just had the use of the open air of the streets. The relieving officer appears also to have reported that in the sanatorium the sheets and the table-cloths were interchangeable. Communications have recently been forwarded to us showing that a medical man named Gore has taken upon himself the highly responsible title of medical officer to these sanatoriums. We think that Mr. Gore's position in the matter must be looked into by the General Medical Council.

PICTURE POST-CARDS AND THE HOSPITALS.

To the Editors of THE LANCET.

SIRS,—I do not see why the hospitals should not *participate* in the [illegible] from the rage for picture postcards and I there- [illegible] use of these designs, and that on each card underneath the picture [illegible] "Received from ..." and then [illegible] ed a minimum sum for each card, say 3*d*., which would pay for the cost of the postage stamp ½*d*., the cost of the postcard, and leave a margin to the hospital. The *hospital could reckon the card as 1d.* (although it would not cost that to produce) and thus the contribution would be 1½*d*. Before leaving the hospital the postcard might, if necessary, be stamped with a distinctive die to ensure authenticity. Each card of the hospital series should be numbered, say, "Guy's No. 1," "Guy's No. 2," and so on, so that any collector of picture postcards would be able to get *any particular one* of the series he wished for. If this should be thought to entail too much work at the hospitals perhaps King Edward's Hospital Fund could take charge of the issue of the different series of postcards for some of the hospitals and thus centralise the clerical work. As to whether dealers should be supplied would be a moot question, but if they were it seems to me that they should be supplied at *3d* per card less equitable amount for the cost of distribution and their profit, and even then the postcards should only be supplied to dealers taking large numbers. I do not suppose that the cost of the photographic reproductions would be very costly to the hospitals as there are sure to be some philanthropic photographers who would prepare the necessary plates for little or no charge if allowed to print their names and perhaps a word or two on the cards.

I am, Sirs, yours faithfully,

London, Dec. 1st, 1903. A WELL WISHER OF THE HOSPITALS.

THE PRICE OF A BATH AT HOTELS.

To the Editors of THE LANCET.

SIRS,—Your remarks in THE LANCET of Oct. 3rd, p. 968, on this subject are particularly gratifying to an Australian. In the grandest hotel in Australia and the poorest bush public-house if they have the water you can have a bath *free*. They are very far behind in this matter in the old country. My income is very small and when I found in an hotel in Edinburgh I had 14*s*. a week to pay for washing myself I had to leave, and then there was no shower or hot water laid on. I went to a large boarding-house in London which suited me in every thing but one—no bath-room. The charming landlady assured me the thing was already in hand and would be completed in a fortnight. I stayed there six months and the same tale continues to be told to any newcomer who happens to have clean habits. Out of about 40 people, mostly women, I found no advocates for the daily bath. It is one of the greatest discomforts we have to put up with visiting England and may your remarks have some effect on those catering for strangers, more particularly colonials.—I am, Sirs, yours faithfully,

Oct. 3rd, 1903. M. M. IRVING.

THE VAGINAL DOUCHE.

To the Editors of THE LANCET.

SIRS,—Referring to Dr. G. Crichton's letter in THE LANCET of Nov. 28th, p. 1547, he is in error in stating that the central opening at the end of vaginal tubes is a fault common to all such syringes. Speaking for ourselves, we can state that we have never sold such a tube during the past 24 years and we believe that the same answer could be given by other surgical instrument houses of repute. We know the fault does exist in some syringes on the market and equally serious defects in similar instruments when not obtained from reliable sources, but we think a general statement of this nature should only be made after full inquiry. We are, Sirs, yours faithfully,

DOWN BROS., Ltd.

St. Thomas's-street, London, S.E., Dec. 2nd, 1903.

PSEUDO (?) ANGINA PECTORIS OCCURRING IN CASES OF MITRAL STENOSIS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 21st, p. 1431, records are given of pseudo (?) angina pectoris occurring in cases of mitral stenosis under the care of Dr. Graham Steell. Dr. H. Waldo recently kindly drew my attention to a well-marked case in one of his wards, but it is not upon that case that I have any right or desire to comment. The point which it has occurred to me may have escaped the notice of some is the occasional presence of well marked fibrosis of the cardiac muscle in cases of mitral stenosis. The patches of fibrous tissue may reach the size of the nail of the little finger, not a large size, but sufficiently large to be very definite. I regret to say that I have not examined the clinical histories of the cases in which this fibrosis has been present in order to ascertain whether there had been any cardiac pain during life, but the absence of pain would not materially detract from the interest of the occasional association of fibrosis of the cardiac muscle with mitral stenosis, because it is only in the minority of any cases of such fibrosis that marked pain occurs. Although, however, severe cardiac pain is much less common than fibroid disease of the cardiac muscle, in fatal cases of angina pectoris fibrosis of the cardiac muscle is almost invariably present. The occurrence, therefore, of fibroid disease of the cardiac muscle in some cases of mitral stenosis suggests that the pathology of cardiac pain, when it occurs in this variety of valvular disease, does not materially differ from that of the pain present in cases in which valvular disease is absent. The same remark applies to aortic valvular disease, in which disease fibroid degeneration of the myocardium is common.

I am, Sirs, yours faithfully,

Clifton, Bristol, Dec. 3rd, 1903. THEODORE FISHER.

PATENT MEDICINES.

To the Editors of THE LANCET.

SIRS,—I venture to think that Dr. R. Hutchison has omitted reference to one very important factor in his very interesting paper on Patent Medicines, published in THE LANCET of Nov. 28th, p. 1492, and that is the power of suggestion.

It is useless to deny that these extensively boomed remedies do good in a large number of cases, otherwise their proprietors would not flourish as exceedingly as they do, and neither can it be denied that the improvement or cure obtained in many cases assuredly cannot be the direct result of the particular preparation that has been swallowed. I believe, therefore, that a large percentage of these widely advertised nostrums owe their success entirely to the influence of suggestion and that it does not signify a row of pins how inept or inert their composition may be provided that the ailment and the patient be sufficiently "suggestible"

Of course, it does not matter a jot to the sick man whether he is restored to health by suggestion or by drugs—he simply wants to get well—and I doubt if there is much potential of harm intrinsically in the multitude of "pills" and "powders" and "tonics," &c, th quacking advertisements of which do their suggestive work for good or for ill without ceasing; indeed, probably greater harm is done by the amateur but well-meaning prescriber who dispenses potent drugs ignorantly.

It seems to me that the only way to get rid of the pest that infests the columns of the daily and weekly press (not wholly to their disadvantage) is by the better education of the public and the greater recognition on our own part of the mental factor in the treatment of disease by drugs. Surely it is time to have done with such unscientific methods as the giving of placebos and the happy-go-lucky prescribing of drugs in various neurasthenic states of which the general practitioner sees so much nowadays. The olden time practitioner was content with his stock-in-trade treatment by medicine, and medicine, and always medicine—possibly "Little Mary" was a more troublesome child then. In these more enlightened times drugging as a method of treatment is taking a less and less important place and the tendency is to supplant, to supplement, or to obscure it by other therapeutic methods, such as electricity, hydropathy, massage, rest, &c. Might we not take a leaf out of the *quack's book and employ suggestion after a scientific method both in* the waking as well as in the hypnotic condition?

I am, Sirs, yours faithfully,

Brighton, Dec. 1st, 1903. STANLEY NOBLE.

◆

L.R.C.P.I.—We observe that the extract from the newspaper speaks of one gentleman and that our correspondent's letter speaks of another with a similar name, and we presume that the same individual is meant. We do not consider that there is any proof of "self-advertisement," as our correspondent styles the paragraph. It is our experience that such paragraphs are generally supplied to the lay press by well-meaning friends. It must not be assumed that they are sent by the medical man mentioned in them, to whom they bring considerable annoyance sometimes.

Nemo.—The person is the usual quack, the whole game of whose existence is to deceive the public.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.).

WEDNESDAY (16th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.). St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M).

THURSDAY (17th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.)

SATURDAY (19th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the *Royal Eye Hospital* (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), *and the* Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (14th).—[illegible] 1, Chandos street, [illegible] Functional Albu- [illegible] F. de Havilland [illegible] (3) Its Clinical [illegible]

[illegible] SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Paper:—Dr. C. J. Martin: Methods of Estimating Blood Pressure. And other communications.

CHELSEA CLINICAL SOCIETY (Chelsea Dispensary, Manor street, King's road, S.W.).—8.30 P.M. Cases:—Dr. Vinrace: (1) Selected Cases of Skin Disease; (2) Gould's Apparatus for the Treatment of [illegible] Operations.

WEDNESDAY (16th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Mr. F. W. W. Baker: Exhibition of a Series of Slides Illustrating the Development of an Ascidian. Paper:—Dr. G. J. Hinde: On the Structure and Affinities of the Genus Porosphæra.

ROYAL METEOROLOGICAL [illegible] George-street, Westmi[illegible] W. Marriott: Some A[illegible] late James Glaisher, [illegible] tionships between the Diurnal Curves of Barometric Pressure and Vapour Tension at Kimberley, South Africa.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

[illegible] uit street, [illegible] and Mr. [illegible]

[illegible] Hospital, [illegible] sanity in [illegible]

[illegible] io (22, Chenies-street, [illegible] (Medical.) 5.15 P.M. [illegible] Life in the Tropics. [illegible] D EPILEPTIC (Queen-[illegible] er: Gait in Nervous Diseases.

[illegible] Course.)

WEDNESDAY (16th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Beddard: Practical Medicine.

MEDICAL GRAD[illegible] W.C.)—4 P.M. [illegible] Dr. C. O. Haw[illegible] Nervous System.

THURSDAY (17th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.).—5 P.M. Mr. Baldwin: Practical Surgery.

MEDICAL GRADUATES' COLLEGE [illegible]

[illegible] COLLEGE (West London Hospital, [illegible] P.M. Mr. Bidwell: Chronic Pan-[illegible]

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 10th, 1903.

Date	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Remarks at 8.30 A.M.
Dec. 4	29 42	S.W.	0 12	62	48	36	44	45	Cloudy
" 5	29 22	S.	...	39	39	36	36	37	Foggy
" 6	29 57	W.	...	42	42	30	33	35	Overcast
" 7	29 44	S.	...	49	47	35	39	42	Overcast
" 8	29 29	S.W.	0 12	69	49	40	41	43	Cloudy
" 9	29 20	S.W.	0 15	67	53	43	47	48	Raining
" 10	29·12	S.W.	0·17	67	49	43	46	48	Stormy

During the week marked copies of the following newspapers have been received: *Shrewsbury Chronicle, Wakefield Express, Highland News, Wallington and Carshalton Herald, Reading Mercury and Oxford Gazette, Western Mail, South Wales Daily News, Western Gazette, Westminster Gazette, Carlisle Journal, Dublin Evening Mail, Daily News, Aberdeen Free Press (Weekly), Surrey Advertiser, Bristol Mercury, Dublin Express, Morning Post, Sanitary Record, Local Government Chronicle, Hertfordshire Mercury, Army and Navy Gazette, Burton Chronicle, &c.*

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An Address

ON

THE MODERN TREATMENT OF FRACTURES OF THE CLAVICLE, WRIST, AND ANKLE; DISLOCATIONS OF THE SHOULDER, ELBOW, AND THE SEMILUNAR CARTILAGES OF THE KNEE-JOINT.

Delivered before the South-West London Medical Society on Nov. 11th, 1903,

BY F. F. BURGHARD, M.S.LOND., F.R.C.S.ENG.,
SURGEON TO KING'S COLLEGE HOSPITAL AND TO THE CHILDREN'S HOSPITAL, PADDINGTON GREEN.

MR PRESIDENT AND GENTLEMEN,—The title of my address is of Dr. Mackintosh's choosing. If I may say so I think that his choice is a happy one, for, while the injuries included in it are among the commonest surgical affections that you are called upon to deal with, their proper treatment is still sufficiently far from being definitely decided that it is a good thing to review our knowledge by the light of the improvements that have recently been introduced into this region of surgery.

Until quite recently the ge[illegible] treatment of a fracture had [illegible] turies. Controversies certain[illegible] these were mainly about splints or other points of mere detail and not over general principles. Recently, however, it has become obvious that the old doctrine that absolute immobility is essential in a fractured limb until union is complete is no longer tenable. Formerly the surgeon's sole aim was to keep the fractured bone rigid, leaving the soft parts to take care of themselves; now his aim is to see that the soft parts are ready to resume their functions immediately union is complete taking due precautions in the meantime to prevent undue disturbance of the fractured ends. This is a most important fundamental change in the treatment of fractures and I call special attention to it before speaking of the treatment of individual fractures because it applies to fractures and dislocations in general and not to any special form; it is no doubt more essential in some forms than in others, but in all it is necessary if the best results are to be obtained. The practical results of this change in treatment are very substantial. Stiffness, pain, adhesions, and swollen limbs are no longer looked upon as inevitable when the sufferer from a fracture first begins to use the affected limb and a patient thus afflicted is apt to cast up against his medical attendant the fact that friends similarly injured but treated on more modern lines have escaped these drawbacks. Even out-patients at the hospital not infrequently require to be told "whether the splints have not been kept on too long" whenever they do not get well as quickly as they think they should. There is no doubt that better results can be obtained in the majority of cases by using the more modern methods, chief among which may be mentioned the use of the x rays, the employment of general anæsthesia, and the free use of massage and passive movements from an early period [illegible]

[illegible] greatly simplified diagnosis and [illegible] time before the diagnosis of almost any fracture in the body will be made by their help as a routine matter. In all cases in which any doubt arises in the surgeon's mind it is incumbent upon him to use this method if the apparatus be available and blame will certainly fall upon him should it turn out that an error of diagnosis has been committed when the matter might have been cleared up thereby in the first instance. All who have to deal with fractures must know how difficult it is to diagnose the existence of a fracture into a joint in the first place, and, in the second place, to say precisely the nature of the particular lesion. It is here that the application of the x rays to surgery finds one of its most important uses; it localises and defines exactly the direction and extent of the fracture, it makes clear the displacement, and it may still further aid the surgeon during the actual process of setting the fracture. Whilst, however, one can say much in favour of this potent aid to diagnosis and treatment, it is necessary to say a word in disparag[illegible] me to be consulted by patients [illegible] for malpraxis against their m[illegible] that he has set a fracture incompetently, basing their contention upon the uncouth appearance presented by the fractured ends in an x-ray photograph when really the result for all practical purposes was perfect. This, however, is a point upon which we may expect the public to become more enlightened shortly. Another point of some practical importance is that greenstick fractures in very young children cannot be traced as such by x ray photography. My experience at the Children's Hospital shows that undoubted fractures may not show any sign of solution of continuity upon the fluorescent screen; nevertheless, callus is thrown out in the course of a few days in the usual way and unless splints have been applied to prevent displacement the characteristic deformity due to the fracture is seen. The explanation probably is that the bone fibres are so soft that they bend without suffering any solution of continuity.

A second respect in which treatment has improved much of recent years is the more extended use of general anæsthesia in the treatment both of fractures and of dislocations. With a few exceptions, such as fractures of the jaw and dislocations of the semilunar cartilages, an anæsthetic should always be employed in the treatment of fractures and dislocations at the present day. It quiets spasm, it stops pain, it allows full muscular relaxation and thereby facilitates accurate coaptation, while, more important still, it keeps the patient quiet until the splints have been applied. Even though the surgeon be single handed it is well to use an anæsthetic; as soon as full anæsthesia is induced the administration can be stopped and the fracture or dislocation can then be reduced with ease before the patient comes round.

The most important improvement, however, that has been introduced into the treatment of fractures and dislocations in recent years is the use of massage and early passive movements. It used to be taught that movement of any kind delayed the union of a fracture, although a little consideration of the behaviour of a fracture of the ribs or the jaw in the human subject and the majority of fractures in animals is sufficient to disprove this view. The process by which this method reached its present status has been one of gradual development When massage was introduced into general surgery it was found very valuable for the stiffness and œdema so often met with when a patient who had been the subject of a fracture began to get about. The combination of this massage with passive movement was so successful in the treatment of these ill-results of a fracture that they gradually began to be used earlier and earlier in order to obviate their occurrence, until in recent times they have been commenced in the very earliest stages—that is, from the receipt of the injury. French surgeons use this method largely to the exclusion of treatment by splints; in many of their cases splints are dispensed with altogether and massage and passive movements are relied upon entirely from the first. The best results will probably be obtained by combining the two methods and by keeping the seat of fracture immoveable by the use of splints, while the mobility of the soft parts is assured by the use of massage and passive movement from the very first.

The rationale of the method is quite clear upon a little consideration. In any fracture there are two distinct lesions produced besides the solution of continuity in the bone itself; on the one hand, there is a tearing of the muscular or tendinous structures in the vicinity of the fracture; on the other hand, there is extravasation of blood due to the injury of the vessels. Both these lesions require attention; the effused blood can best be limited and its absorption hastened by the use of massage, begun from the very beginning. Massage, however, is not sufficient for the treatment of the torn muscular or tendinous structures; the tendency of these structures to become adherent to the seat of fracture, to one another, or to their tendon sheaths must be counteracted by passive movement begun quite early—so early, that is to say, that adhesions are either non-existent or are quite supple and plastic. It may be taken for granted that the slight vibratory movements imparted to the seat of fracture by the performance of these passive movements are in no way detrimental to the union, and it must therefore be obvious how much superior this method is likely to be to the older plan of prolonged immobility, not only of the fractured ends, but also of the soft parts and the joints in the vicinity. Another very important function, both of the massage and the passive movements, is to prevent the muscles wasting, so that the patient begins to get about, when union of the fracture is complete, with a much more vigorous limb than he would be likely to have otherwise. An obvious objection to this method is that it is not very easy to learn and that it generally requires to be carried out by the medical man himself, who can ill afford the necessary time it requires, or else by a skilled masseur whose fees are proportionately high. Granting this, however, much may be done by the medical man himself and the rest can be taught to any really intelligent person.

A regular routine should be adopted in all cases of fracture. In the first instance perfect coaptation should be made under an anæsthetic and some form of retentive apparatus applied in such a manner that it leaves the seat of fracture either exposed or else accessible without disturbing the fractured ends. The apparatus should fix the joint above and the joint below the fracture, but not those beyond, such as the fingers or the toes, as passive movement has to be begun in them at once. If there be no muscular spasm the limb may be left undisturbed until the following day. Smooth rubbing over the area of the fracture is very useful in allaying spasm and in promoting the patient's comfort and therefore, when spasm is present, the part should be gently rubbed after the fracture has been set and the limb fixed upon the splint. The rubbing should be done by grasping as much of the circumference of the limb as possible in the palm of the hand and rubbing it upwards as smoothly, gently, and evenly as possible. This rubbing is repeated on the following day for ten minutes or a quarter of an hour or so and again on the next day; it it be done quite gently and smoothly it soothes the patient in a remarkable manner. On the third day the rubbing is followed directly by that is to say, of the fingers in the case of a fracture of the passive movement of the smaller joints beyond the fracture—forearm or of the toes in a fracture of the leg. This combined massage and passive movement of the smaller joints is persisted in for the next two or three days, at the end of which another addition is made to the treatment—namely, the joint below the fracture is very cautiously moved. Passive movement of the joint above may be left with advantage to a somewhat later date. Thus the sequence of events is something like this: for the first two or three days simple rubbing over the area of the fracture alone; then from the third to the sixth or the seventh day massage is followed by passive movements of the toes or fingers, as the case may be, while to this are added from the end of the first week onwards movements of the wrist or ankle; lastly, the knee or the elbow may be moved after the end of the third week. The limb need not be disturbed in any way for the movements of the fingers or toes; when, however, the wrist or ankle has to be dealt with the limb must to some extent be taken down and allowed to rest flat upon the splint whilst one hand grasps the region of the fracture firmly and the other cautiously moves the joint. Grasping the region of the fracture in this way keeps the ends of the bones in proper position and no fear need be entertained of endangering the union in any way. When it comes to moving the knee the limb must be taken off the splint entirely and it is well in this case to support and to steady the fracture by some sort of moulded apparatus surrounding it.

At first the massage and passive movements should be practised only once a day and for a few minutes only at a time. They may be, however, gradually increased with advantage both in range and in duration until, finally, they occupy half an hour or more twice daily. In the third week the fracture will be sufficiently consolidated to be taken off the splint—surrounded at first by the moulded splint referred to above if the fracture be in the leg—and can then be turned first on one side and then on the other so as to allow all the muscles of the part to receive due attention from the masseur. After the end of the third week the union will be so far advanced that splints may be entirely dispensed with, or at the most a light casing may be applied in the neighbourhood of the fracture to support the parts, and this casing should be removed whenever the massage is applied. After a fracture treated in this manner the patient will be able to use the limb soon after the third week if it be in the upper extremity, whilst if it be in the lower extremity he will be able to walk about firmly and usefully as soon as consolidation has so far advanced as to allow the weight of the body to be supported upon it; this will be after the end of the fifth week.

In the case of dislocations also the present-day treatment shows considerable advance upon that in use a short time ago. The old plan was to immobilise the limb for a considerable time after reduction of the dislocation in order to allow the torn ligaments to unite and so to retain the joint surfaces in proper apposition. A little reflection will show that this view is not correct, since the real factor in keeping the joint surfaces in apposition is not so much the capsule, which after all is only a weak structure, but the muscles surrounding the joint. If the joint be kept immobile long enough for the rupture in the capsule and ligaments to unite so firmly as to prevent recurrence of the dislocation two serious troubles will ensue. In the first place there will be considerable adhesions in the joint, not only between the torn ends of the capsule and the articular ends but between the articular surfaces themselves. The other and more serious accident is the wasting of the muscles surrounding the joint entailed by the immobilisation. The muscles waste and become feeble through disuse and when the patient attempts to use the limb after the apparatus is taken off the muscles are powerless to ward off the various shocks that the joint must receive and the liability to recurrence of dislocation is greatly increased. If, however, instead of immobilising the limb early passive movement, massage, and even active movements be employed, nothing but good is likely to accrue. In the first place the muscles will not waste; in the second place adhesions will not form; whilst, finally, there is little liability to recurrence of the dislocation, at any rate so long as the patient does not attempt to move the joint in the particular direction in which the dislocation occurred. Everyone will realise the difficulties met with in a dislocation of the shoulder in an elderly subject treated by immobilisation The treatment of this particular dislocation will be specially referred to later.

After these few preliminary words concerning the more modern treatment of fractures and dislocations in general I will try to describe as briefly as possible the appropriate treatment of various forms of fractures commonly met with.

FRACTURES OF THE CLAVICLE.

These common fractures, although usually satisfactory in their ultimate results, often give much trouble during the early days after the injury, and the method of treatment which is still in common use—viz., Sayre's method—does not meet these difficulties in the most satisfactory way. The plan which I have adopted and which I have found to be much more satisfactory is a combination of massage with the old method known as the "handkerchief" method. In this two handkerchiefs are folded around a roll of cotton-wool until they are about the thickness of a perineal strap and these are looped around each shoulder so that the handkerchief passes over the point of the shoulder and beneath the axilla. A firm pad about the size of the closed fist is fastened in the axilla on the affected side in order to lever out the head of the bone and the handkerchiefs are then knotted or sewn together in the middle line behind the shoulders after firm traction has been made upon them, care being taken to see that the handkerchief on the affected side does not pass over the region of the fracture. This is really a form of figure-of-eight bandage and pulls the shoulders well back in a very efficacious and simple manner. A large elbow sling is next put on and gentle, smooth massage is made over the seat of the fracture from the neck downwards to the point of the shoulder. The massage should last five or ten minutes in the first instance and should be repeated twice daily for the first few days. When the patient is erect no other apparatus is necessary; when he is recumbent it is well to pass another handkerchief transversely round the trunk to fix the affected arm lightly to the side. It will be found that this method causes very little pain and spasm; the rubbing relieves the spasm almost directly and the forcible pulling back of the shoulders prevents the irritation caused by the fractured ends pressing backwards upon the structures of the neck In three or four days' time the patient may dispense with the sling at times and should be encourged to practise underhand movements, the forearm being put back in the sling from time to time. The massage is used for a week or ten days, gradually increasing in frequency and duration, and at the end of that time the patient can generally dispense with all restraining apparatus, except possibly a wrist sling in which he rests the fore-arm for a short period. Overhand movements should be attempted at the end of a fortnight and gradually increased in range and direction.

COLLES'S FRACTURE.

This, which is one of the commonest fractures met with in practice, is also one that gives rise to more anxiety than many others. The trouble may sometimes arise in setting the fracture but in the majority of cases the important point is the disability which the patient suffers afterwards from the stiffness about the wrist and the fingers and it is in this particular fracture that the modern plan of passive movement and massage produces its most brilliant results. As an example I may quote two cases that came before me only to-day in the out-patient room. The first patient, a burly mechanic, came to ask if his wrist had been broken, as he had been told that it had been. He had fallen on the outstretched palm eight weeks before he presented himself. Examination showed the typical deformity of a bad Colles's fracture and an x-ray photograph showed a fracture in the usual situation extending into the wrist-joint. The patient had the most perfect movement both in his fingers and in the wrist-joint and he declared that he had never had any medical treatment at all and that all he had done himself was to work his wrist about and to rub it; he said that he was unable to afford the time to lie up and had to go on with his work which he had done from the time of the injury uninterruptedly. He said that he had a good deal of pain on the first day but that subsided readily when he rubbed it and from the time of the accident to the time that he presented himself at the out-patient department he had never worn any apparatus of any kind, not even a sling. The other patient complained of stiffness of the fingers; he also had sustained a Colles's fracture which had been treated immediately and had been excellently reduced, but the splints applied had extended to the tips of the fingers and had been kept on for six weeks. The result was that there were adhesions in all the tendon sheaths and apparently extensive adhesions in the wrist-joint itself. The first case I have mentioned emphasises the point that is being more recognised every day—viz., that the disability after a Colles's fracture depends not upon irregularity of the fractured surfaces or upon bad coaptation so much as upon adhesions in and around the wrist-joint—mainly in the tendon sheaths surrounding the joint—and the same case shows how, in spite of very marked deformity, the use of the hand and the wrist can be perfectly preserved by the painstaking application of massage and passive movement

A safe way of treating this form of fracture is to set the bone as accurately as possible after having reduced any impaction present, preferably under an anæsthetic. An anæsthetic is not absolutely necessary in these cases but is always advisable, as, owing to the proximity of the wrist-joint, perfect coaptation is important. After reduction has once been properly effected there is little tendency for the recurrence of the displacement, as the fractured surfaces are quite broad and not easily displaced from one another. As to splints, the form in common use known as Carr's is perhaps the most comfortable, but straight anterior and posterior splints do equally well provided that the former does not reach lower down than the transverse crease of the palm. Massage over the seat of the fracture applied to the dorsal aspect of the limb should be used from the time the limb is secured on the splint and at the same time active and passive movements of the fingers should be practised. The back splint must, of course, be removed to allow of the massage. Before the end of the first week passive movements should be made in the wrist; at first the joint is merely extended as it lies on the splint, while the seat of the fracture is steadied by the other hand, but by the seventh day the limb may be taken right off the splint, the seat of fracture grasped in one hand, and passive movements of the wrist made with the other. Some time during the third week it will be possible to leave off the splint altogether, the arm being carried in a sling and perhaps being supported by a good, firm leather wristlet. Active movements of the wrist joint should be encouraged from the end of the first week.

POTT'S FRACTURE.

Pott's fracture shares with Colles's fracture the distinction of being a perpetual source of anxiety to the surgeon as to the restoration of function of the limb after the fracture has consolidated. Like Colles's fracture it is pre-eminently suited for treatment by massage and early passive movement, and in it, as in Colles's fracture, the use of a splint may be reduced to a minimum. The first point in the treatment of a Pott's fracture is to reduce the outward and backward displacement of the foot, which may be very marked. Manipulation usually suffices to correct the displacement if the knee and thigh be fully flexed during the process; *this relaxes the tendo Achillis* and allows the [illegible] h. Should [illegible] cement an [illegible] reduction of the dislocation may be prevented by the interposition of some structure, such as the tibialis posticus tendon, between the two bones and then nothing will avail but an open operation by which the obstruction may be hooked out of the way. This, however, does not concern us here. Should it be deemed inadvisable to administer an anæsthetic or should the patient refuse to take one, the spasm that is opposing reduction may sometimes be sufficiently allayed by gentle massage from the heel upwards to the knee for five or ten minutes to allow reduction to be effected.

When the astragalus has been got back into position it should be kept there by some suitable form of apparatus. This is all that the apparatus need aim at doing, for the fracture of the fibula and the internal malleolus that will probably be present also are of secondary importance. Perhaps the best plan is to put the limb upon an external lateral splint with a foot-piece at right angles and to let it lie upon its outer side with the knee flexed; this has the advantage of leaving a great portion of the limb exposed so that rubbing and passive movement can easily be performed with a minimum of disarrangement of splints. A simple back splint with a foot-piece at right angles is not a useful form of apparatus as the displacement is primarily lateral and not posterior; two lateral splints will do perfectly well. Massage is begun from the first and passive movement of the toes from the second day. It is of primary importance in these cases to prevent stiffness in the ankle or pointing of the toes and hence passive movements of the ankle should be begun within three or four days of the receipt of the accident. If care be taken to prevent lateral displacement of the foot by grasping the ankle firmly in one hand, the other may be inserted beneath the heads of the metatarsal bones and made to raise the front portion of the foot. These passive movements of the toes and ankle should be persisted in for 10 to 14 days when the patient may discard his splint or at most may wear a light poroplastic or millboard splint moulded to the outer aspect of the limb. From this time onward the range and direction of the passive movements are increased and active movements are also practised, until at the end of four weeks the patient will be able to walk quite well, bearing all his weight upon the limb. In this case it will be unnecessary to devote any attention to the knee-joint.

The old plan of treating Pott's fracture was to put the limb up in a plaster of-Paris casing which was worn for from four to six weeks or even longer. The result was that adhesions made their presence manifest in the ankle-joint immediately the patient began to get about and lameness resulted. Besides this, the condition of the muscles of the leg was bad, œdema and discolouration of the extremity followed, and the time that elapsed before the patient regained perfect use of his limb—if, indeed, he ever did so—was as long as, if not longer than, the period for which the limb had been confined for the healing of the fracture. It may be said that with proper treatment a patient suffering from an ordinary uncomplicated Pott's fracture should be able to walk without pain immediately the fracture is sufficiently consolidated to bear his weight.

DISLOCATIONS OF THE HUMERUS.

The chief obstacle to reduction in any form of dislocation of the shoulder is muscular contraction which keeps the head of the bone out of place, *therefore the first thing to be done is to overcome this*. The best method of doing so without unnecessary damage to the soft parts or further laceration of the torn capsule is to administer an anæsthetic. The spasm is at once controlled and the dislocation will become reduced either spontaneously or after very little manipulation. The surgeon will generally find that if he administers an anæsthetic soon after the occurrence of the dislocation reduction has spontaneously taken place by the time the patient is fully under its influence. It is quite safe to give an anæsthetic and to reduce the dislocation single-handed, since directly the patient gets under to the surgical degree reduction can be effected in a few seconds by simple manipulation.

The important point, however, is the after-treatment. It used to be the custom to immobilise the joint for a long time in order to obtain union of the torn capsule. Experience shows that this is quite unnecessary and that union of the capsule will occur in spite of even active movements. The most important danger to be guarded against is the wasting of the muscles surrounding the joint, as this greatly increases the tendency to recurrence of the dislocation when the patient begins to use the limb again. The best plan is to employ careful smooth rubbing of the muscles about the articulation immediately after reduction, while the elbow is put into a sling and the affected arm is fastened lightly to the thorax by a suitable belt or bandage in order to prevent the patient from abducting the limb. Underhand passive movements may be practised from the second or third day and the patient should be urged to perform them for himself also. The only movement that must be guarded against is that in which the dislocation occurred—viz., abduction of the limb—and the patient must be warned against doing this for at least a fortnight after the accident. The reason for this is that if abduction be made, the weakened deltoid fails to oppose the adductor muscles which will therefore draw the head of the bone inwards towards the chest and out through the existing rent in the capsule. If this treatment be vigorously carried out the patient will be able to use the arm well in two or three weeks without any fear of the displacement recurring, a decided contrast to the feeble, useless joints so often seen after a dislocation of the shoulder treated by prolonged immobilisation, and a very marked contrast indeed to those distressingly frequent cases in elderly subjects where reduction is followed by severe adhesions and almost complete immobility of the joint.

DISLOCATIONS OF THE ELBOW.

There is little to say about dislocations of the elbow; perhaps the most important point is their correct recognition. It is not uncommon to find a dislocation either entirely overlooked or only partially reduced or confounded with a fracture. In all these cases an x-ray photograph will show the true nature of the affection at once and it is in injuries about the elbow joint that this aid to diagnosis finds perhaps its most useful expression. The dislocation should be always reduced under an anæsthetic; the old plan of forcibly flexing the joint around the knee is, although generally effectual, clumsy and painful and may give rise to lacerations of the joint structures which are better avoided. If an anæsthetic be administered, however, reduction can be effected with a minimum of trouble and damage directly the patient is under its influence.

The after-treatment presents few points of importance, the nature of the articulation being such that there is little tendency for a recurrence of the displacement. It will be sufficient to put the forearm in a sling and to practise gentle massage, followed after the second or third day by passive movements in the direction of flexion and extension, pronation and supination. Flexion and extension should not be carried too far for the first week, as otherwise the dislocation may recur, especially during forced flexion. The patient should be able to use the limb perfectly in about a fortnight after the occurrence of the injury.

DISLOCATIONS OF THE SEMILUNAR CARTILAGES OF THE KNEE-JOINT.

Although this designation is applied to a large class of cases met with in practice it is well to remember that the true cause of the mischief is not necessarily due to a displacement of a semilunar cartilage at all. Symptoms quite identical may follow nipping of the synovial membrane between the articular ends of the bones either in the subjects of chronic synovitis or even in those whose synovial membrane is apparently perfectly healthy. The semilunar cartilage may be detached from the tibia either along its convex border or at one end, or in other cases again it may be split transversely or longitudinally. Time does not allow me to go into the exact cause of the mischief but it may be roughly said that as a rule the lesion is produced by some violent rotary movement of the femur upon the tibia, the result of which is to displace the semilunar cartilage, which at the same time is considerably bruised. The symptoms are exactly similar, both in kind and often in degree, whether the cartilage be misplaced or merely bruised; there is the acute sickening pain when the structure is nipped between the bone ends, the sudden giving way of the limb, so that the patient often falls to the ground, and, as a rule, there is the characteristic "locking" of the joint in the position of semi-flexion. This phenomenon may not always be present, but it is worth while remembering that it may be met with in the bruising of the synovial membrane as well as displacements of the semilunar cartilage. After the patient has straightened the limb or has had it straightened for him an interval elapses, at the end of which acute synovitis with effusion takes place; this lasts for a certain length of time when it gradually clears up and the patient is able to get about, sometimes with an apparently sound knee and at others with a tender or aching spot. As a rule the accident is repeated after a short time; it may have all its former intensity, it may even be worse, while in some cases it may never recur at all. Each succeeding attack leaves the capsule of the joint weaker and weaker and also leads to increasing atrophy of the thigh muscles owing to the prolonged and repeated immobilisations of the joint necessitated by the recurrent attacks of synovitis. Finally, the patient becomes disgusted with this semi-invalid condition and the knee-joint is opened and the semilunar cartilage or the enlarged synovial fringes are removed.

The treatment of dislocation of the semilunar cartilage has been developed considerably in recent years and, although the more purely surgical treatment—viz., the excision of the semilunar cartilage—has *pari passu* been brought to a high pitch of perfection, nevertheless it is probable that in the near future we shall see these operations less often done than is the case at present and more cases permanently cured by less radical measures. The most important point, if the surgeon sees the case at the very outset, is to replace the cartilage should this have been dislocated. This is done by still further flexing the already semi-flexed knee, placing one finger or thumb firmly over the region of the protruding cartilage, pressing the latter back, and at the same time vigorously extending the knee. This usually allows the cartilage to slip in with a distinct snap when the knee is easily extended and can be moved fairly easily. It is important to remember that this cannot always be done, especially when the damaged structure is a fringe of synovial membrane and not a displaced semilunar cartilage. It will then happen that the attempts at reduction fail and the knee remains semi-flexed with a tender swelling between the bone ends. In these circumstances the best plan is to give an anæsthetic and gently to attempt reduction; it may, however, turn out that complete extension of the limb is impossible even under full anæsthesia and, if this be the case, it is very important not to persist, as reduction is probably mechanically impossible and the swelling that prevents the limb from being fully extended is a bruised synovial membrane into which there is effusion of blood. The limb will come straight as the swelling subsides.

The next point in the treatment is to subdue the acute synovitis that is practically certain to follow the injury to the joint. Some surgeons are in the habit of sending the patient to a gymnasium at once and of moving the limb vigorously, even during the period of acute synovial inflammation. This is, I think, wrong, and a short period should be devoted first to the treatment of the effusion into the joint. The limb should lie comfortably on a back splint and some evaporating lotion—such as spirit, lead, or lead and opium lotion—should be applied; at the same time massage of the thigh and leg muscles is practised without raising the limb from the splint. This should be done at once and persisted with until the swelling has subsided, which will probably be in the course of a week; no passive movement, however, should be adopted during this period. The massage is a most valuable auxiliary to the rest and evaporating lotions; it is primarily designed to prevent wasting of the leg and thigh muscles which is so rapid and so constant a phenomenon after the immobilisation of the joint for this injury. It also promotes absorption of the synovial effusion and it stimulates the circulation in the part, but its principal function is to prevent muscle waste and to maintain the tone of the muscles and thereby to facilitate the return of the capsule to its normal size as the effusion subsides. This important point was overlooked a few years ago when these cases were treated by prolonged immobilisation and the result was that the muscles wasted to an extreme degree, so that when the patient got about again he always had a feeling of insecurity in the joint and the ligaments and capsule were so feeble that the accident recurred on slight provocation.

Active and passive movement should be begun when the effusion has become absorbed—generally after the end of the first week—and must be persisted in for a long time. The movement should be entirely confined to flexion and extension; it is very important that no rotation of the tibia upon the femur should be allowed. The passive movements should be preceded by massage. The patient may walk about with the limb restrained by an elastic knee-cap or a bandage which will serve to remind him that the joint is unsound and he may practise gymnastic exercises in the form of flexion and extension; these should mainly take the form of pedal exercises which strengthen the muscles of the thigh and leg. Massage should also be practised daily for half an hour or more at a time and this treatment should be continued until the capsule has once more become normal and there is no wasting of the thigh muscles; it is never safe to leave it off until then.

In cases treated on these lines good results will be obtained in a large number that are seen from the first and in many no second attack will ever occur. If the original injury was *a partial displacement of the semilunar cartilage* this structure may become fixed in place again and recurrence of the accident is then guarded against by strengthening the muscles of the articulation. If, on the other hand, the case is one of bruised synovial fringes, the rest and massage will lead to the disappearance of the enlargement and a cure will result.

Cases are not infrequently met with in which either the above treatment does not succeed in preventing subsequent trouble or in which the patient only comes under notice after the condition is well established and there have been several previous attacks. In these circumstances the question if anything short of operative treatment can be done will have to be decided and the applicability of apparatus must arise. It may be said here at once that no form of apparatus is any real good. The various forms of knee trusses are of no value whatever; the pad that is supposed to press back the semilunar cartilage is quite useless, for the cartilage as a rule is not in any need of being pressed back, seeing that it is separated from the head of the tibia and probably lies loose somewhere between the articular ends The only form of apparatus of any use whatever is one designed to prevent lateral bending of the knee, which is in itself a potent factor in allowing displacement of the cartilage, but apparatus of this kind should only be used when, for instance, the patient refuses operation or when it is considered inadvisable to perform one.

Concerning the operative treatment I need say little and concerning the actual steps of the operation I shall say less. The operation consists in opening the joint freely and in removing as much of the displaced cartilage as can be got at. It has been recommended to suture a displaced cartilage back into place, but it is probably better to abandon this method in favour of the simpler and more radical method of removing the offending structure The patient gets on exceedingly well without the semilunar cartilage and its removal does not affect him injuriously in any way, while if it be the real cause of the symptoms its removal prevents any chance of recurrence. A point of great practical importance, however, and one that is not sufficiently recognised *is that it may be necessary to do more than remove* the cartilage. In cases that have lasted a long time and have been the subject of several attacks of synovitis the synovial membrane becomes so hypertrophied that large fringes hang into the joint cavity, especially in the region of the ligamentum mucosum and the ligamenta alaria and get nipped between the bone ends, so that the symptoms may be reproduced even after complete removal of the cartilage. Before proceeding to close the wound, therefore, after the cartilage has been removed, careful search must be made for [illegible] the ligamentum patellæ, and [illegible] nipped off. The operation in skilled hands is safe and successful, but it must never be forgotten that it is not enough merely to open the joint and to remove the cartilage or the synovial fringes and then to consider the patient cured. Most of these cases are only submitted to operation after repeated attacks of synovitis and the capsule of the joint is in a very relaxed condition and the muscles are greatly wasted through the continual attacks of inflammation and its consequent immobilisation The patient will therefore require to be put through a regular course of massage and exercises after the operation in order that the tone of the capsule may be restored by improving the condition of the muscles surrounding the joint. The treatment, indeed, will closely approximate to that already sketched out for a case of displacement of the semilunar cartilage seen immediately after the receipt of the injury. It is very rare to get recurrence of the symptoms after the operation In the few cases in which they are known to have occurred the explanation has generally been that enlarged synovial fringes have been left behind. In some cases the real origin of the mischief has been an osteo-arthritis which has progressed in spite of the operation.

REMARKS ON 50 CONSECUTIVE CASES OF PERFORATED GASTRIC AND DUODENAL ULCER TREATED BY LAPAROTOMY.[1]

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THE fiftieth operation at St George's Hospital for perforation of a gastric or duodenal ulcer was performed in June of this year. Having had the opportunity of observing and taking notes of the majority of these cases during the last six years I thought that it would be interesting to review the cases as a whole, especially in regard to certain points, such as the question of premonitory symptoms, the incidence of complications, and the after-results. For permission to use the cases I am greatly indebted to the physicians and surgeons under whose care they came. Few subjects have attracted more attention during the past few years than the condition of perforated gastric or duodenal ulcer and the number of recorded cases is now very large. In a condition of this kind, the operative treatment of which is comparatively new, it is important that cases should be reported systematically and it is unfortunate that more use cannot be made of the vast amount of material available in the wards of the large general hospitals. Cases of the greatest interest are relegated to the hospital "Reports," if such are published, or more often remain in the hospital case books and are buried in oblivion. The value of hospital statistics, faithfully recorded, is obvious. *A long series of consecutive* cases, which *includes the failures as well as the successes*, the unfortunate cases as well as the surgical triumphs, cannot fail to give more accurate information than a collection of cases from the medical journals. It is notorious that the ways of human nature are such that the cases which find their way into the medical press are conspicuous by the absence of the correct proportion of failures. A series such as the present one possesses further value in that it represents the practices of many surgeons and the results of widely different methods.

In this paper, which I have the honour to read before you to-night, acute perforations of duodenal ulcers have been grouped with those of gastric ulcers, as the general aspect of the cases is very similar; on the other hand, an entirely different clinical picture results with subacute or chronic perforation and no cases of this nature are included in the series. Three cases have been admitted into hospital in which no operation was performed owing to the condition of the patient being too desperate for surgical interference; and in two instances patients were brought in dead, death having speedily occurred during the initial shock. In these latter cases the rent in the stomach wall was large and the peritoneal cavity was flooded with material from the stomach. In these 50 consecutive cases the stomach was the seat of [illegible] In [illegible] ales, [illegible] with [illegible] this series, however, in which liver dulness was noted as absent before operation, the colon was found in front of, and considerably compressing, the right lobe of the liver.

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[1] A paper read before the Royal Medical and Chirurgical Society on Nov. 24th, 1903.

It has been stated that the presence of a well-marked area of stomach resonance in the left hypochondrium contraindicates perforation of the stomach. It was, however, frequently noted during the operation that the stomach was distended with gas and sometimes greatly distended when the perforation was small or valvular. The extent of gastric resonance is therefore of no diagnostic value. I may here mention that in two cases seen shortly after perforation I was struck by the fact that sweating, though present over other parts, was more intense by far over the epigastrium.

The situation of the perforation is shown in the accompanying diagram. During operation it is often very difficult to be certain as to the exact position of the ulcer, more especially when there are many adhesions or much lymph around, and discrepancies upon this point are frequently found in the accounts of the operations and the post-mortem reports. The diagram shows that perforations most commonly take place in ulcers situated close to the lesser curvature and are rather more frequent towards the cardiac than the pyloric end of the stomach. On the other hand perforating ulcers close to the greater curvature are comparatively rare. Five of the ulcers occurred on the posterior wall, close to the pylorus; the rents were usually large and the gastric contents had escaped through the foramen of Winslow into the greater sac of the peritoneum. The duodenal perforations all occurred in the first part of the duodenum, six on the anterior wall and two on the upper and posterior wall.

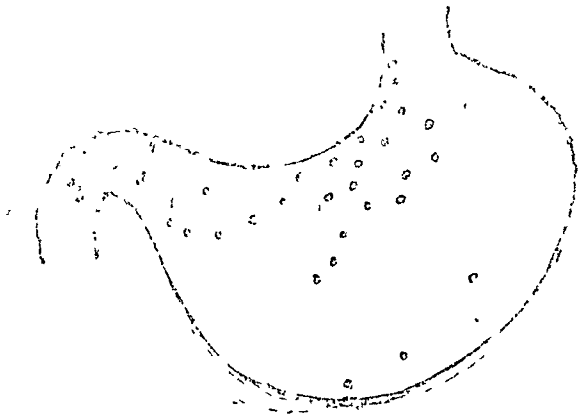

Diagram showing the situation of ulcers on the anterior wall of the stomach and the duodenum.

The number of instances in which perforated duodenal ulcers have been successfully sutured is still so small that details of two cases in this series may here be referred to. The first case has already been mentioned as an example of the "latent period" or period of repose; it has been published in detail elsewhere.[2] The second case occurred in a female, aged 22 years, with a history of old but not recent indigestion. Eight hours after taking some aperient pills she was suddenly seized with agonising pain, felt at first in the right hypochondrium and later spreading over the entire abdomen. She felt sick but no vomiting occurred. The pain continued and morphia was given; the bowels acted scantily after an enema on the third day, when she was admitted into hospital. Her condition was then masked by morphia; pain was referred vaguely to the right side; the abdomen was hard, rigid, and tympanitic all over, immobile, but not much distended; liver dulness was diminished. Laparotomy was performed about 68 hours after the onset of symptoms and free gas with foodstuff was found in the peritoneal cavity. A small perforation in the first part of the duodenum was discovered and occluded by a purse-string suture, strengthened by four Lembert stitches. The peritoneum was thoroughly irrigated and she was discharged four weeks later after an uneventful convalescence.

The possibility of saving the patient's life even in the most desperate cases is further illustrated by a case in which a perforated gastric ulcer was successfully treated 72 hours after the onset of symptoms. The case is a remarkable one for there was intense general peritonitis and the patient's condition before operation was so precarious that surgical interference seemed scarcely justifiable.

The incidence of complications arising after operation will next be discussed. Of the 24 cases in which the patients recovered definite complications occurred after operation in 13, whilst in the fatal cases in which the patients survived the first 24 hours after operation complications developed in eight. In the two cases in which perforated duodenal ulcers were successfully sutured the patients recovered without complications; empyema was present in one of the fatal cases. It appears that in more than half of the successful cases complications may be expected during the period of convalescence, and, further, that complications are often multiple and are more commonly noticed after than during the first week.

TABLE III.—*Incidence of Complications.*

	Non-fatal cases.	Fatal cases.
Parotitis	4	1
Pleurisy, plastic or serous	6	9
Empyema	—	2
Pneumonia	1	2
Pulmonary abscess	—	1
Thrombosis	3	—
Hæmatemesis	1	2
Hæmorrhage from another ulcer	—	1
Nephritis	1	—

Inflammation of the parotid gland occurred in five cases, being bilateral in two and involving the gland on the left side in the other three. It was first noticed on the second, third, fifth, sixth, and sixteenth days respectively and in the bilateral cases the onset of inflammation on the two sides was separated by an interval of two days. Suppuration—a very unusual event in these cases—occurred in both glands in the first case operated upon at St. George's Hospital; the right parotid had become inflamed on the second day and the left on the fourth day, and pus was discharged from both ears on the ninth day. Incisions were made and the resulting sinuses persisted until death six weeks later.

No definite relation to the absence of feeding by the mouth is noticed, three of the patients in whom this complication occurred having had food by the mouth for more than 24 hours. Mr. B. N. Tebbs, of St. George's Hospital, has very kindly given me figures relating to the incidence of non-specific parotitis. Of 32 cases occurring in this hospital during the last ten years 21 followed operation upon, or disease of, the stomach.

	Cases.
Uncomplicated gastric ulcer	11
Perforated gastric ulcer	5
Excision of gastric ulcer	1
Gastrostomy, gastro-enterostomy, &c.	4
Total	21

Pleurisy is by far the commonest complication, occurring in six of the successful cases and being found in 11 of the 21 cases in which the chest was examined post mortem. As would be expected, the left side was most commonly involved; the actual figures are—both sides, five cases; left side, ten cases; right side, two cases. The pleurisy was usually of the dry fibrinous variety (11 cases) and limited to the diaphragmatic area. In two fatal cases, however, an empyema was present. It seems probable that the pleurisy is often due to the transmission of toxic products through the diaphragm and not to the presence of micro-organisms, for the effused fluid is usually sterile and empyema is uncommon. This is illustrated by a case which occurred two years ago.

CASE 6.—The patient was a female, aged 23 years. On the fifth day after operation friction was heard in the left lower axillary region; this was followed by signs of effusion into the pleural cavity and on the eleventh day the pleura was aspirated and 21 ounces of serous fluid were withdrawn. Microscopically this was found to contain a very large number of highly active leucocytes, whilst cultures made from the fluid proved absolutely sterile. The temperature remained high and irregular and rigors occurred. An empyema was suspected and the pleural cavity was opened in the mid-axillary line on the sixteenth day. Only clear fluid, however, was found and so the diaphragm was punctured. *This led to the discovery of a large sub-diaphragmatic abscess* containing a quantity of very foul pus.

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[2] THE LANCET, March 29th, 1902, p. 890.

Amongst the other complications are the following. Thrombosis occurred in three cases, the left external saphena vein being involved twice, and the deep veins of the left leg in the other case; the symptom was first noticed on the fourteenth, sixteenth, and seventeenth days respectively. Severe hæmatemesis occurred in three cases, two of which ended fatally; death in one case was due to blood inhalation during vomiting, the trachea and bronchi being found full of blood post mortem. Reference has already been made to a case in which severe hæmorrhage from perforation of the *gastro duodenal artery* by a duodenal ulcer proved fatal 11 days after successful suture of a perforated gastric ulcer. Hæmaturia and albuminuria were noticed on the seventh day in a female, aged 28 years, although as far as could be ascertained this condition had not existed before. Albumin and renal casts with a few pus cells were present in the urine *for six weeks*, at the end of which time the urine became normal.

All the symptoms and physical signs of perforation may be presented and yet the stomach may be found intact when the abdomen is opened. Such cases must occur in the practice of any hospital or of any surgeon of experience, for undoubtedly the correct treatment *is to explore whenever perforation is suspected* A small incision above the umbilicus will at once decide the question and involves practically no risk in itself, whilst a few hours of delay may be sufficient to make operation futile. These cases may be divided into two classes—those in which some other peritoneal lesion is found and those in which nothing abnormal is discovered. I have the notes of seven such cases. All the cases occurred in young females with histories of gastric trouble; the symptoms and signs pointed to perforation of the stomach and operation proved that this had not occurred. In three cases no abnormality of any kind was discovered; one case was especially interesting as she was admitted at exactly the same time as another patient with exactly identical symptoms, which proved in the latter case to be due to a perforated gastric ulcer. Another patient, a highly neurotic woman, aged 28 years, who had already had laparotomy performed twice, was admitted in the middle of the night with acute abdominal symptoms. In the fourth case nothing was discovered beyond some blood-stained œdema of the gastric attachment of the omentum. In the fifth case the peritoneal cavity contained blood-stained fluid; the pelvis was examined *through a second incision and apparently* rupture of a small ovarian cyst was the cause of the condition The sixth and seventh cases proved fatal. In one the abdomen was full of odourless turbid serum and a most careful search failed to reveal the source of the infection; the stomach was most certainly intact; no necropsy was performed. The other was a case of acute appendicitis with general peritonitis in a young dyspeptic girl in whom all the physical signs were most intense in the epigastric region. The reverse *condition, of course, is more common—namely, the simulation of appendicitis by a perforation of the pyloric* end of the stomach or duodenum, owing to the downward gush of fluid, and in four cases in this series the primary incision was made over the region of the appendix. It is interesting to note that in two of the three cases in which there was no intra-abdominal lesion the symptoms occurred shortly before the onset of the menstrual period. I have seen several other cases in which neurotic women have presented acute *abdominal symptoms at this time; the clinical* picture of perforated gastric ulcer may be closely simulated, but, generally speaking, there are not the *severe collapse* and intense pain at the outset and constitutional disturbance is not so marked. The symptoms clear up with the onset of menstruation. It would be interesting to hear of other cases of this nature.

[illegible] ulcers are present in other parts [illegible] is well illustrated by examination of the fatal cases. In 13 of the 21 cases in which necropsies were performed other peptic ulcers were present and it is quite possible that small ulcers may have been overlooked. In two instances *four ulcers* were present in addition to the one which had perforated. Their most common situation was exactly opposite the peforated ulcer. Although no cases of double perforation occurred, in one instance a second acute ulcer of the perforating type was found to have reached the peritoneal coat of the stomach.

In regard to the details of the operations it is found that general irrigation of the peritoneal cavity was employed in 31 cases, local irrigation in nine cases, and in the remainder *sponging only was relied upon*; with each of the three methods the mortality was the same—namely, about 60 per cent. A further point brought out by a study of the cases is the *increasing tendency to dispense with drainage.* This is a question upon which surgeons differ greatly and is one well worthy of discussion. The difficulty in securely closing the perforation in deeply seated ulcers was frequently found to be diminished by the preliminary separation of adhesions to the liver and surrounding parts and by the use of cleft palate needles: the line of suture was strengthened in six cases by omental grafts or plugs and in three cases by a similar use of masses of lymph. In a case in which the perforation was deeply placed near the œsophageal opening and stitching was impossible owing to the friability of the surrounding gastric wall, strips of gauze were passed down to the ulcer; no further escape of gastric contents occurred and an uneventful recovery followed.

In conclusion reference must be made to the *after condition of the patients.* Do the symptoms of gastric ulcer recur or is the patient cured by operation? The question is one of practical importance, for certain authorities recommend that a posterior gastro enterostomy should be *performed after the perforated ulcer has been dealt with if the* patient's condition will bear it. This operation would be exceedingly difficult, or perhaps impossible, if attempted at *a later date, and so it is urged that it should be done at* once in order to complete the patient's cure. Regarding the matter from a theoretical point of view we might expect the symptoms of ulceration to recur if the perforation be simply sutured. These ulcers are known to be usually multiple and the local conditions which favour ulceration still exist. In practice we find that *this is not the case; the after-results* are surprisingly good. During the last summer I have written to each of the 24 patients in the successful cases. An investigation of this kind is always difficult, for hospital patients of all kinds, and domestic servants in particular, are constantly changing their address and so are readily lost sight of. I was able, however, to trace 17 of the 24 patients. The reports of these cases may be summarised as follows. In 11 cases there had been no return of gastric symptoms of any kind and the patients had been quite well since the operation; two had married and had had children; and in four cases dyspeptic symptoms were complained of, two being readmitted into hospital for short periods. The point which I wish to emphasise here is that the symptoms were characteristic of dyspepsia and not of gastric ulcer; the pain was of a dull, aching, diffuse character and in no case was there vomiting or hæmatemesis. One patient came under treatment one and a half years after operation for œdema and superficial varicose veins of the leg; *this case had been* complicated by thrombosis and was satisfactorily treated by an elastic stocking; there were no gastric symptoms. Another patient was recently seen seven years after operation. She was suffering from congestive dysmenorrhœa and the pelvic organs were found to be extensively matted by firm adhesions; slight peristalsis of the intestinal coils was also visible through the abdominal wall. She had been married for five years and was sterile. It seems highly probable that in this case the pelvic *peritonitis, with the* subsequent dysmenorrhœa and sterility, dated from the gastric perforation. The number of cases is small but the results point conclusively to the fact that the great majority of the patients are cured of their gastric ulcers if they survive the primary operation. Dyspeptic symptoms occur in a small proportion of cases and are readily amenable to medical treatment Gastro-enterostomy is therefore unnecessary; in any case there are many arguments against its immediate use in cases of perforation. *It materially increases the* duration of the operation and rapidity is essential if the patient is to have her best chance. In itself the operation involves an increased risk; the parts are in the worst possible condition for a complicated plastic operation; and finally, as I have said, it is unnecessary. I have already referred to a patient who died from hæmorrhage from a duodenal ulcer on the fifteenth day after suture of a ruptured gastric ulcer. In this case it is possible that a *gastro-enterostomy might* have checked the progress of the duodenal ulcer and prevented the fatal hæmorrhage; but the, case is quite an exceptional one and forms no argument for the routine performance of gastro-enterostomy.

TABLE IV.—*After Condition of the Successful Cases.*

No gastric or other symptoms	11
Œdema of the leg following thrombosis	1
Symptoms due to peritoneal adhesions	1
Dyspepsia (no symptoms of gastric ulcer)	4
Not traced	7
Total	24

Grosvenor-street, W.

CLEFT-PALATE AND HARE-LIP; THE EARLIER OPERATION ON THE PALATE.

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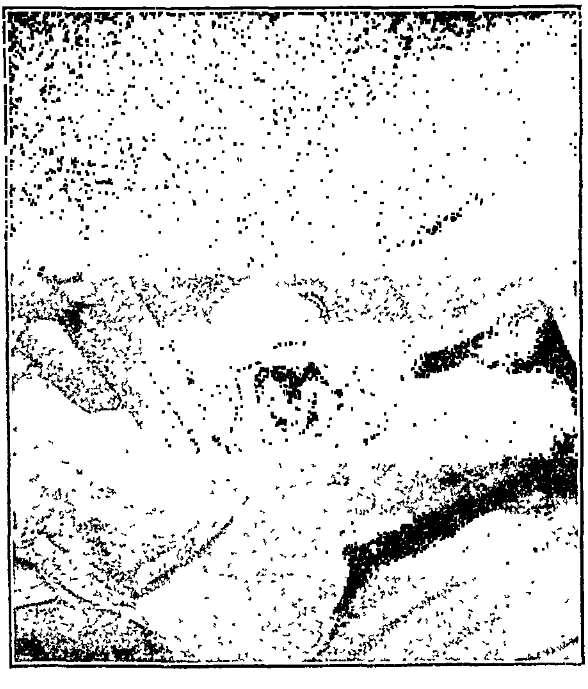
FOR about 20 of the years that I was upon the active staff of the Hospital for Sick Children, it was my practice to operate upon hare-lip in early infancy but to postpone the treatment of the cleft-palate until the child was two, three or four years old. This plan of procedure was, indeed, a very general one. It had been adopted for several reasons—the fissured lip was dealt with before the cleft-palate because experience had shown that if the infant were in a fair state of health he could confidently be trusted to stand the shock of that lesser operation. Moreover, it was thought that if the gap in the lip were soundly closed the anterior part of the palatine cleft would keep on growing narrower up to the time of the operation on the palate. The palatine cleft was left uninterfered with because it was thought that at this tender age the infant would not be likely to survive the shock of the prolonged operation for its closure, accompanied, as it must be, by a very considerable loss of blood.

FIG. 1.



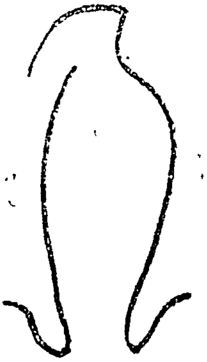
Cleft-palate and hare-lip in an infant aged three months.

A few years ago my attention was directed by my colleague at St Mary's Hospital, Mr. Morton A. Smale, to the method of treatment of cleft-palate which he had seen Dr. Brophy adopt at Chicago. Dr. Brophy not only operated upon the palate before the lip in early infancy, but he dealt with the palatine cleft in an original and very radical manner, namely, by boldly thrusting the maxillary and palate bones together in the middle line.

Since becoming more fully acquainted with Dr. Brophy's method I have cordially adopted it, and though I realise that it is not unattended with risk, still I consider the advantages associated with it are so great that the extra risk may be unhesitatingly accepted.

By way of illustrating Dr. Brophy's method, I will briefly describe it as carried out in the case of a male infant whom Dr. D. Bennie Hewat recently sent to me from Cape Town. The infant was three months old on Feb. 3rd, 1903, the day that I first saw him. He was a miserable-looking object, and he weighed but six and a half pounds. When he cried, the mouth and naso-pharynx showed as one large cavity (Fig. 1) which the maxillary processes very ineffectually attempted to separate. Indeed, for so small an infant, the cleft was enormous—which is much the same thing as saying that the horizontal processes of the maxillary and palatine bones offered but scanty material for the formation of a roof to the mouth. This is not shown in the illustration, but the width of the gap in the lip more than suggests that the palatine cleft was a wide one. Its exact width, as determined by a pair of compasses, is shown in Fig. 2. The cleft extended into the right nostril. The vomer was adherent to the left maxillary process.

FIG. 2.



Cleft of palate extending into the right nostril in an infant aged three months.

Before the operation, a warm enema of peptonised beef-tea with a little brandy was given, and the infant was swaddled in Gamgee tissue. The operating-table was made almost as high as an ordinary mantel-shelf, so that the surgeon might carry on his work without having to stoop too much. Chloroform was the anæsthetic, which Mr. Henry Davis gave on a small mask. The tongue was drawn forward by a long suture, and the mouth was kept open by a modified Smith's gag.

The operation was begun by paring the edges of the cleft, and after this I tried, but ineffectually, to thrust the maxillæ towards each other by firm pressure with the fingers and thumb. Next, following Dr. Brophy's directions, I raised the cheek, and, by a strong curved needle in a handle, passed a silk suture across the nasal fossa, above the level of the hinder part of the alveolar processes. The end of a thick silver wire was then hooked on to this suture, and, by pulling on the latter, the wire was made to take its place. The wire suture thus lay above the horizontal processes of the palate bones, where it could be seen through the cleft. Similarly, a wire suture was taken through the maxillæ above the front part of the cleft. Two small, oblong leaden plates, with a hole drilled near each end, had already been prepared, and one of them was then laid along the outside of the right maxilla, under the cheek, the end of the hinder wire being passed through the posterior hole, and the end of the front wire through the anterior hole. The right ends of the wires were then twisted together from left to right, the plate being closely applied against the maxilla, after which the twisted ends of the wires were pressed down flat. The ends of the wires under the left cheek were then similarly treated, and as they were being twisted up the maxillæ were squeezed together, or, rather, another vigorous attempt was made to squeeze them together. But I could not move them. So, in accordance with Dr. Brophy's advice, I then incised the mucous membrane over each malar process and, introducing a scalpel, divided the maxillæ sufficiently to enable me to thrust their palatine processes into the middle line. After this it was at once seen that the width of the gap in the lip was much less, and that the lateral halves of the soft palate were brought quite close together. Fine wire sutures were then passed through the freshened borders of the entire cleft.

The infant was very ill for two or three days, and the union of the sutured borders was only partial, but the front of the cleft was solidly closed, and a useful bridge held securely at the junction of the hard and soft palate. Subsequently, by the aid of three small supplementary operations, the cleft was entirely closed with the exception of a spot of the size of a rabbit shot about a quarter of the way along the line of suturing. (This I closed just before the child was about to depart on his journey home to the Cape.) On May 5th, after he had been for a visit to the seaside, I operated on the hare-lip, his weight being then 12 pounds. The present condition of the infant is shown in Fig. 3.

FIG. 3.

Appearance of the infant after operations on palate and lip.

In a letter dated Oct. 13th, 1903, Dr. Hewat sends me the report of his examination of the child on his return to Cape Town. He says that he deems the result an excellent one both as regards the palate and the lip, "very much better than I thought possible on account of the gap being so large and there being so little tissue available for the purpose of filling in."

In this particular case the cleft was so wide that when I had with difficulty approximated the anterior parts of the maxillæ I was afraid to deal with the hinder part of the cleft as thoroughly as I had intended. In ten days time, however, I did a little more, and after another ten days I vivified and sutured the sides of the soft palate and uvula the opposed borders of which were lying quite close to each other.

The essential, and at the same time the most difficult, part of Brophy's operation is the approximation of the maxillæ Brophy, however, apparently finds little trouble or difficulty with it. He says: "If we are unable to close the fissure with these wires, if from lack of time or from firm resistance of the parts it cannot be done, there is a further method to be employed which will obviate these difficulties. With your knife, after the cheek is well raised, divide the mucous membrane just over the malar process. Here insert a knife in a horizontal direction," dividing the bone freely but damaging the mucous membrane as little as possible. The lower parts of [illegible] and on again twisting up the [illegible] cleft is closed by their approximation.

A priori I should have expected that this thrusting inwards of the maxillæ would have determined the occurrence of a contracted palate. Up to the present I have been unable to inform myself on this matter, but Brophy, who speaks from ample experience, affirms that this is not so. He argues that the alveolar process develops with the eruption of the teeth, and that in due course the teeth of the upper jaw will be found antagonising those of the lower jaw "in a normal way." But should this antagonism not take place, Brophy, speaking *ex cathedrâ*, as professor of dental surgery, says that the arch can be expanded and the [illegible] did not [illegible] r jaw, it [illegible] dental surgeon to insure this taking place. But even if the arch were ultimately found comparatively small, that defect would be more than counterbalanced by the fact that, owing to the approximation of the hinder ends of the maxillary processes, the surgeon had been enabled to form a soft palate without the occurrence of tension, and without interfering in any way with the (palatine) attachments of the tensor palati, the palato-pharyngeus and the levator palati.

After operating by the old method, it is quite a common experience to find the velum as tight as a drum as soon as the sutures are inserted, and if it were so left not many hours would elapse before the edges tore themselves asunder. But of course the surgeon does not leave the adjusted velum in that condition. He relieves it of all tension either by the method of Fergusson or Pollock, or in some other way. The plan which I follow is that of making a free incision from before backwards through the entire thickness of each half of the velum near its lateral attachment. And when the cleft has been wide, the available tissue of the soft palate scanty, and the tension, therefore, considerable, it takes no little courage to make these lateral incisions sufficiently free. Subsequently, whether the line of sutures holds, or whether it breaks down, these lateral incisions gradually fill up. But inasmuch as they fill up with granulation tissue which is eventually converted into scar tissue, the muscular or aponeurotic fibres of the velum cannot escape permanent damage, which must surely have a prejudicial effect upon those delicate movements of the soft palate which make for clear articulation. To what extent this injury may be responsible for the imperfect results—so far as intonation is concerned—which sometimes follow even an entirely successful operation upon a wide palatine cleft, one cannot say. But I must regretfully admit that in some cases in which I have secured a perfect closure of a wide palatine cleft at the age, say, of three or four years, [illegible] the clearness [illegible] much to be desired, even though considerable care might have been expended over the vocal education. And if to this damage to the soft palate must be ascribed a fair share of the defect in the intonation of later years, Brophy's modification in operating is an important and valuable one. For when the halves of the hard palate have been forcibly approximated, the borders of the soft palate hang so close together that their adjustment can generally be effected without tension, so that it is unnecessary to make lateral incisions, or in any other way to interfere with the insertion of the tensor palati or with any other element of the velum. In some cases it may be advisable to steady the adjusted halves, and to relieve them of all tension, by the use of a large suture of silver wire the ends of which are secured by a split shot. This keeps the insertion of the tensor palati temporarily at rest.

Inasmuch as vocalisation is greatly dependent upon the anatomical integrity of the soft palate, and as Brophy's method enables the velum to be repaired with less interference with it than does any other operation with which I am acquainted, it might be advisable somewhat to sacrifice the hard palate to the soft if sacrifice were demanded. And this, Brophy affirms, is not the case. He says, indeed, that the palate with a congenital cleft is too large for the lower jaw to the extent of the width of the cleft, and that the approximation of the superior maxillæ is in itself advantageous.

And just as the approximation of the hinder part of the maxillary processes gives assistance in the closure of the cleft in the soft palate, so does the approximation of their anterior part simplify the subsequent operation on the hare-lip.

In conclusion, I would urge that, serious as is the operation on the palate the infant may be expected to survive it.

I have been surprised at the way in which the infants stand it. Brophy goes as far as to say that "the shock following the operation is not so great if performed within the first month, as it would be later in childhood." Of this I am by no means sure, however.

That, inasmuch as the maxillæ are closely approximated, the halves of the velum can be stitched together without tension and without the need of interfering with the attachment of the muscles of the soft palate.

That, as the approximated halves of the soft palate can be sutured without interference with the muscles of the palate, the prospects of securing a natural voice are greatly increased.

That, as the maxillæ have been brought together in front, the subsequent operation upon the hare-lip is rendered much easier of performance, and a more artistic result is obtainable.

Great Cumberland-place, W.

NOTE ON THE RESPIRATORY MOVEMENTS IN HEMIPLEGIA.

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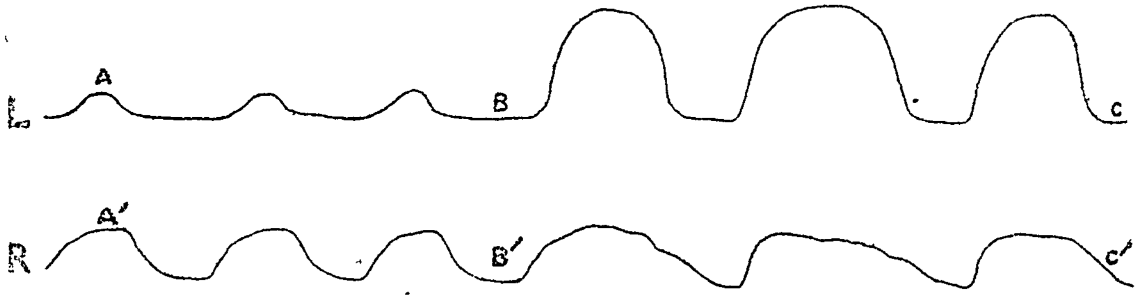
IN THE LANCET of 1895[1] and of 1899[2] Dr. J. Hughlings Jackson pointed out that many cases of hemiplegia gave support to his hypothesis "as to the great differences of the nervous mechanism for the two very different services, organic (respiratory) and animal (voluntary), of the respiratory apparatus." Dr Jackson observed that in some cases of hemiplegia the uppermost part of the costal region of the thoracic cage moves slightly more on the paralysed side of the body in respiration proper (ordinary breathing) and slightly less on that side in voluntary expansion of the cage (deep or forced inspiration). Taking as an illustration a case of left hemiplegia his explanation of these differences in the movements of the thoracic cage is as follows: "The greater amplitude of movement of the left upper cage in respiration proper is, I suggest, owing to destruction of some fibres from the cortex which are for *continuous* inhibition of the left respiratory (medulla) centre; the less amplitude of voluntary expansion of that left upper cage is, I suppose, owing to destruction of some motor fibres from the cortex which, evading the respiratory centre, pass direct to certain left anterior horns and by these act on the intercostal muscles."

Without attempting to discuss how far this explanation is correct I wish to bear witness to the accuracy of the clinical observation which appears to have been somewhat overlooked by subsequent writers. During the last few years I have examined a large number of cases of hemiplegia, both recent and old, and in at least 60 per cent. of them the movement of the upper part of the thoracic cage during ordinary breathing was a little greater on the hemiplegic than on the other side of the body. This difference is indicated in the accompanying tracing which was obtained with the help of my house physician, Dr C. O'Neill, who devoted much time and care to the arrangement of a suitable apparatus. This consists of two air tambours which by means of indiarubber tubes are brought into communication with recording tambours, the levers of which inscribe the movements of the thorax upon a revolving cylinder. Each air tambour is held in position on the chest by a leaden tube which is attached to a firm stand. The tubes being flexible each tambour can be placed evenly on the surface of the chest.

The case from which the tracing was taken was that of a man, aged 50 years, suffering from right hemiplegia of six months' standing. He fell one morning in getting out of bed and it was then found that his right side was paralysed. The attack was not attended by loss of consciousness. On admission to the infirmary last October the hemiplegia was well marked; he was unable to stand and when in bed the movements of the right leg were very feeble. The distribution of the paralysis in the right arm differed from the common type, there being slight power to move the fingers and to flex and to extend the elbow but complete paralysis of all movements at the shoulder joint. The right side of the face was affected and the tongue on protrusion deviated towards the paralysed side. There was no anæsthesia; the speech, which was impaired for a time after the attack, was quite natural. On placing the hands in symmetrical positions on the upper part of the chest, the slight excess of movement on the right side during natural breathing was at once noticed. The movement had more amplitude and it began before and came to an end after that on the left side. When, however, the patient took a deep voluntary breath the excess of movement was on the left side. These variations affected also the lateral movements of the chest, as shown by grasping the lower costal regions. The above observations were confirmed by my clinical clerks and others before they knew anything about the case. It is, indeed, of importance to obtain observations regarding the thoracic movements in any case of hemiplegia from persons who do not know the nature of the patient's ailment and whose judgment, therefore, is an unbiased one.



Respiratory movements in a case of right hemiplegia. R, right side. L, left side. A B and A′ B′, Normal respiration. B C and B′ C′, Forced respiration.

Manchester.

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[1] THE LANCET, Feb. 2nd (p. 274), 16th (p. 394), and 23rd, 1895 (p. 476).

[2] THE LANCET, Jan. 14th, 1899, p. 79.

A CASE OF ARTERIAL THROMBOSIS OF GONORRHŒAL ORIGIN.

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IT has been clearly established by a number of exact observations that an acute gonorrhœal urethritis may be the starting point for a grave septicæmia which may be purely gonococcal or mixed or due to some concomitant organism and that as complications of such systemic infection certain lesions of the vascular system not infrequently obtain. Among these endocarditis and myocarditis are the more usual, thrombo-phlebitis has been noted but is relatively uncommon, whilst arterial thrombosis in such a sequence has, so far as I can ascertain, not hitherto been described, yet that it may occur is apparent from the following example which came under my cognisance whilst pathologist to the Manchester Royal Infirmary.

A man, aged 20 years, was admitted to the Manchester Royal Infirmary, under the care of Mr. W. P. Montgomery, suffering from early dry gangrene of the left leg. He gave the following history. Four days previously to admission he had a slight shiver, became feverish, and in consequence took to bed. After three days he complained of his left leg being cold and painful, especially so in the heel, and also of some pain in the left side of the abdomen. The condition of the leg had come on quite insidiously and became progressively worse. On admission to hospital his general appearance was clearly indicative of some grave general condition: he was pallid, the skin was clammy, and the temperature was 101·5° F. The left leg below the tubercle *of the tibia was cold, waxy, pulseless, and anæsthetic.* The three outer toes showed commencing mummification and the skin over the instep presented a patch of discolouration. The thigh was warm and apparently quite normal. The right leg also presented no obvious circulatory disturbance. The existence of a purulent discharge from the urethra was noted and the meatus was inflamed, but no definite history of gonorrhœal infection could be elicited. That such was the nature of the urethritis, however, was shown by the presence of the gonococcus in large numbers in specimens of the purulent material obtained from the urethra after death. Elsewhere there were no manifestations of other lesions; the heart and the lungs were normal, the spleen was not enlarged, and the urine, containing a trace of albumin and a small amount of purulent débris from the urethra, contained neither blood nor sugar. On the day following admission the general condition of the patient was worse, the evening temperature was 102°, and the left leg now presented considerable discolouration extending up to the knee. It was now noted that pulsation of the left common femoral artery at the pelvic brim could not be felt. On the next day the patient had a cachectic appearance and was sweating profusely. His temperature was 101·6°. Examination of the heart revealed a loud systolic mitral bruit During the evening he complained of his right leg feeling cold and on examination the femoral pulsation was found to be almost impalpable, whilst the limb below the knee was cold, pulseless, and anæsthetic. During the next two days the general condition became markedly worse, ending in coma and death four days after admission to hospital and eight days from the initial rigor. During the whole time blood was never present in the urine.

Necropsy.—Externally the body appeared to be well developed and fairly nourished. The anterior half of the left foot was mummified and the posterior part of the leg as high as one inch above the knee had a livid appearance. On the foot no sharp demarcation was noticeable between the mummified and livid portions nor on the thigh between the latter and the normal skin above. The right foot and leg were dry and livid but there was no indication of mummification. Elsewhere the skin was pale but otherwise normal. From the urethra a small quantity of purulent material was squeezed and removed for examination. With regard to the circulatory system, the pericardium was normal. The heart weighed ten ounces and was normal in form and size; the myocardium was flabby and somewhat friable; of the various cavities, the right auricle and ventricle were somewhat dilated, those of the left side were normal; in none was there any thrombus, old or recent, or any indication of such; the foramen ovale was closed; the valves were quite healthy. [illegible] changes in the myocardium with slight [illegible] were the only morbid changes [illegible] far as the origin of the renal arteries was healthy and free from clot, but below that situation it was completely occluded by firm, reddish grey, adherent thrombus. The upper end of the thrombus was inclined obliquely from the orifice of the left renal artery above down to the wall of the aorta below the orifice of the right renal artery. The left renal artery itself was also occupied by similar but rather softer thrombus extending into its several subdivisions in the hilum. The right renal artery was free from thrombus and appeared to be quite healthy. Below, the thrombus continued in its completely obstructing form into the common iliac arteries and along these into the external and internal iliac arteries on both sides. In the external iliac arteries it extended on the left side into the common femoral artery and on the right side to within half an inch of the pelvic brim. The internal iliac arteries and their secondary branches were similarly occupied by thrombus. The remainder of the arterial system was normal. The veins throughout were free from thrombus or other obvious lesion. With regard to the respiratory system, the lungs were the seat of passive congestion and the postero-inferior parts were somewhat friable; otherwise they were normal, as also were the pleuræ and the air passages. As to the digestive system, beyond fatty degeneration in the liver there were no features of note. The condition of the genito-urinary system was as follows. The right kidney was the seat of well-marked recent passive congestion. The left kidney, in consequence of occlusion of its artery, was almost completely necrosed; it was enlarged, weighed seven and a half ounces, was normal in shape, of a pale yellowish colour, and firm, its capsule being slightly adherent, and on section the whole parenchyma except a small area of cortex at the upper end and the tips of the pyramids presented the appearances of coagulation necrosis. The branches of the left renal artery in the hilum and one or two in the boundary zone were occupied by adherent, soft, red thrombus. The ureters and bladder were normal, the urethra was the seat of a well-marked purulent catarrh specially marked in its posterior part, and in the prostate one or two tiny foci of suppuration were visible on section. The genital glands and ducts were normal.

Microscopical examination.—Sections of various portions of the thrombosed arteries showed similar appearances. The lumen of the vessel was completely occupied by thrombus which in places, especially close to the walls, had a fibrino-cellular structure and in other parts had the appearance of more recent red clot. Of the arterial wall the adventitia and media were apparently normal; the intima, however, had in many plac[illegible] here and there remains of it [illegible] proliferating and degenera[illegible] which could be traced some [illegible] ous. Sections stained with the basic aniline dyes showed the existence of a few scattered diplococci—decolourised by Gram's method—in the peripheral portions of the thrombus. No cultural examination of the blood was undertaken either during life or after death.

The results of the pathological investigation of this remarkable case leave, I think, little doubt as to the causal relation between the gonorrhœal urethritis and the curiously localised arterial thrombosis which was responsible for the gangrene of the extremities. The precise pathogenesis of the thrombosis—a sufficiently striking event in such a situation apart from it [illegible] some consideration. The [illegible] suggested itself at the necro[illegible] deal with embolic obstructi[illegible] the left the more complet[illegible] lodged at the bifurcation of the aorta and that this had induced secondary thrombosis. Further consideration, however, rendered this view barely tenable. In the first place, the thrombus presented no such differentiation as would obtain under these conditions; secondly, its occurrence in the small intrapelvic branches of the internal iliac arteries and its limited extent in the external iliac arteries would be difficult of [illegible] grounds; and lastly, though specially [illegible] embolism elsewhere could be [illegible] ce of an embolus. Such a hypothesis would necessitate an embolus of considerable size and accordingly the possibility of a dislodged cardiac thrombus was inquired into, but neither in the left nor in the right cavities of the heart was there any indication of thrombus formation and whilst the absence of dilatation of the cavities on the left side precluded such a possibility the closed foramen ovale eliminated the slightly dilated cavities of the right side from being its source. It remained then that the thrombosis was a primary process depending on some alteration in the arterial wall and possibly on some [illegible] composition of the blood [illegible] irregular masses of red thrombus in the more central parts—would indicate that one had to do with an acute type of endarteritis with sequential thrombosis. The finding of gonococci in this situation points to that organism as the causal factor in the production of the initial lesion of the arterial wall.

As regards the method of infection two possibilities suggest themselves: (1) infection of small branches, possibly prostatic, of the internal iliac arteries and the development of an ascending gonorrhœal thrombo-arteritis; or (2) infection of the intima of the common iliac arteries by organisms present in the general circulation. The former possibility is difficult of acceptance in that it involves an ascending thrombo-arteritis against the strong blood stream; the second, receiving some measure of credence from the fact that the aortic bifurcation and the commencement of the common iliac arteries are commonly early situations for the appearance of the intimal lesions of atheroma, seems the more probable but leaves the ultimate distribution of the thrombosis somewhat ambiguous. Although no cultural examination of the blood was undertaken the clinical manifestations in themselves afford strong evidence of the existence of a gonorrhœal septicæmia, and of this the thrombosis must be regarded as a local complication.

Manchester.

A NEW SILVER SALT IN THE TREATMENT OF GONORRHŒA.

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DURING the last nine months I have had an opportunity of contrasting the results of different methods, or rather variations in the usual method, of the treatment of gonorrhœa. With each and every treatment I have seen good results. With each and every treatment I have seen cases which showed little improvement. On referring to the records of cases at the Lock Hospital, whilst there has been little or no change in the routine of treatment it is worthy of note that as regards the number and severity of complications there has been a distinct improvement. Of course, in reviewing several thousands of cases one can only speak in generalities. In comparing the effects of different remedies one must remember the different conditions for which they are applied. Thus, a method or remedy which gives excellent results in acute anterior urethritis may be quite useless and even harmful in cases of posterior urethritis. Certainly some cases of the latter condition may occur, not in spite of, but on account of, the treatment in the first phase of the disease. It is to avoid doing a possible harm where there is just a probability of not doing much good that some surgeons prefer not to interfere locally in the treatment of acute anterior urethritis. Others do not go so far as always to taboo local treatment. Preferring to reserve more active local measures until the discharge has been diminished they commence with the administration of balsamics, of which pulvis cubebæ seems to be with them the most popular. It is only when one comes to look at the results in a special hospital with several thousands of cases, that one is struck with the fact that the best results in the aggregate have been obtained by a combination of medicinal and local treatment. I must confess that during the earlier months of my work here I was inclined to ascribe the best results to treatment simply with pulvis cubebæ (two drachms three times a day after food in a tumblerful of water). When in addition the bowels were freely opened with saline laxatives it was not uncommon to have patients reporting that the discharge had ceased in a fortnight. The presence of "floaters" in the urine, however, indicated a continuance of treatment. Though cases remained free from obvious discharge for three weeks the persistence of flocculi in the urine, together with the frequency of relapses, showed that to secure the best results in this condition something more was required than mere medicinal treatment.

On going into the cases of ordinary acute anterior gonorrhœal urethritis treated with resin of copaiba or sandalwood oil, together with injections of sulphate, sulphocarbolate or permanganate of zinc (two grains to the ounce) one found that once the discharge had ceased "floaters" more speedily disappeared from the urine and a permanent cure was more frequently obtained. Certainly relapses were comparatively infrequent as compared with those cases which had received no local treatment. The usual routine was to continue the injections for one week after the cessation of the discharge, gradually reducing the strength by the addition of warm water. Medicinal treatment was continued for at least two weeks after that. As a rule when this was carried out, the restrictions as to total abstinence being rigidly observed, there was no return of the discharge, certainly not of the patient for treatment (so frequent an occurrence when medicine only was given). To effect a cure in six weeks with this treatment is considered an unusually good result.

With regard to the efficiency of the different constituents of injections there is little to choose among those in ordinary use. As many cases of acute anterior gonorrhœal urethritis are now cured within a month by systematic irrigation, for urethral injections to maintain a reputation for efficiency and rapidity it will be necessary to show that similar results can be obtained by this method, which is simpler and can be carried out by the patient himself. It has long been recognised that if in the treatment of gonorrhœa we could introduce into the urethra some solution which would inhibit or even destroy the viability of the gonococcus and at the same time cause no injury to the delicate mucosa we should practically have solved the question as to the most efficient remedy in the local treatment of gonorrhœa. Such an injection, whilst killing the gonococcus *in situ*, must at the same time not aggravate the local inflammatory condition. A suspicion never ought to arise in the event of sequelæ, such as strictures, that the caustic action of the injection may have been a factor in their origin Injections in ordinary use when sufficiently strong to act as antiseptics are also caustics. When not sufficiently strong to be caustic their antiseptic powers are only slight.

If it were possible to test the bactericidal properties of these remedies, as regards the gonococcus, in the laboratory by direct experiment some definite information might be obtained, but as man is the obligatory host for the gonococcus our means of estimating their value is limited to clinical observations of the results of treatment of the disease in man. As antiseptics for destroying, or disinfectants for inhibiting the growth of, other organisms, such as the pyogenic cocci, more easy of cultivation for experiment in the laboratory, it is known that in the strength used for urethral injections the ordinary sulphates have little power. The solution which in former days gave most promise as a urethral antiseptic was silver nitrate, but even in the strength of two grains to the ounce this salt cannot be used with impunity owing to its caustic action. As the gonococcus may be said to have an intracellular habitat and is found in the submucosa it is necessary for the application to penetrate to that layer.

The introduction of salts of silver in organic combination marked a distinct advance in the treatment of gonorrhœa by injections. But even protargol, which contains only 8 per cent. of silver, cannot be used without discomfort and even damage to the mucous membrane in a strength above 2·5 per cent. Of course, one cannot but admit that it is possible to effect the destruction of the gonococcus with a limited amount of damage to the urethra which is reparable. It was soon evident that the limitations of protargol, though not so quickly reached, were in the main those of its predecessors. The synthetical preparation of another proteid salt containing 30 per cent. of silver suggested a more potent bactericide. This salt in a solution of 5 per cent. was said to cause no pain when applied to the conjunctiva. It was shown to possess high germicidal and penetrating properties. Ophthalmic surgeons spoke highly of it in the treatment of gonorrhœal conjunctivitis. On being injected into the urethra it was shown to be non-irritating in strengths of solution much higher than in the case of those salts in ordinary use in the treatment of gonorrhœa. This salt—known as argyrol—is a combination of silver with a proteid extracted from wheat. It is very soluble in water. Unlike inorganic silver salts it neither coagulates albumin nor precipitates chlorides. An extensive trial of this salt in the United States in the treatment of gonorrhœa has established its claim to recognition. It has also found many advocates in Germany. One is sometimes just a little dubious of remedies which have originated in the United States, sometimes unjustly so, as in this instance. There is sometimes, however, just a little suspicion, to say the least, of exaggeration in the way some preparations have had their virtues vaunted and boomed. But when authorities like Chetwood, Keyes, Martin, and Christian join in their testimony as to the good results of treatment with argyrol one must at least grant it a fair trial. Christian[1] of Philadelphia gave an account last year of 49 cases of which a complete record had been kept and the discharge microscopically examined The direct effect upon the amount of the discharge was as follows Prompt cessation in 31 cases, more gradual reduction in 14 cases, and very little in three cases Gonococci disappeared in two days in four cases, in four days in eight cases, in six days in eight cases, in eight days in six cases, in ten days in ten cases, in 14 days in eight cases, and persisted over three weeks in five cases Thus in 4 ompletely disappeared from the With regard to the duration (that nine cases were cured in two weeks 17 cases in three weeks, seven cases in six weeks, and three cases in eight weeks

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[1] Medical Record, vol. lxii., 1902

Swinburne[2] of New York reported the results of treatment in 350 cases of gonorrhœa in all stages of the disease He sums up his results thus "This drug has decided gonococcidal powers, it has a decided effect in reducing and allaying the inflammation of the disease, it can be used safely in almost any strength and at any stage of the disease I have not seen any unpleasant symptoms due to the use of the drug" (In some cases a solution of 20 per cent argyrol was used)

In June and July of the present year a few cases of gonorrhœa treated at the Lock Hospital with injections of argyrol, combined with the internal administration of resin of *copaiba gave results sufficiently good to suggest* a further trial As a test of efficiency the effects of injections were observed without any medicinal treatment other than some simple saline aperient A case of gonorrhœal *acute anterior urethritis (No 4405 of the out patient* department) treated first on Sept 2nd for a discharge of four days duration with copaiba and injections of zinc sulphate, reported slight improvement at the end of a week *A film showed gonococci in the discharge* on Sept. 9th From that date no medicine was given Injections thrice daily of a 5 per cent solution of argyrol was the sole treatment The urethra having been washed out with warm water, the injection was held in the urethra for five minutes On Sept 16th this patient reported that after using the injection for two days the discharge had ceased Flocculi were however, seen in the urine A film of the deposit, obtained by allowing the urine to stand over night in a tall cylindrical vessel showed gonococci still present On the 30th the patient reported that there had been no return of the discharge even after taking beer No "floaters" were seen in the urine No gonococci were found

Another case in which argyrol was the only treatment was
that of a man, admitted as an in patient and discharge of
five weeks' duration In this case I was ab v that al e bacterio
scopic examinations daily On Oct 2c term commenced
injections of argyrol, 5 per cent, ever l greate ours The
urethra before each injection was washe olescents th a weak
solution of boric acid Two drachms (at all ag solution
were used at each injection and retained clic the t es in the
urethra Next morning after seven injec ood name was no
visible discharge "Floaters were, h suggest present in
the urine and gonococci were found Or ycles 5th the urine
was clear Thus after seven days' trea orge this patient
vork atte has had no
ly con curre twice a day
ited
with Dr charge of 14
days' duration was put on argyrol Afte ree days treat
ment the discharge quite disappeared re fortunately, as
soon as the discharge ceased the patient l d o the hospital and
as to this ca nen
idoors with ar er rol was irrigated
This was a l
rheumatism with a chronic gleety discharg
responded to other treatment for four
admitted on Nov 22nd, his urine was quite normal by the 29th

The last patient *treated in hospital* had a *gonorrhœal* discharge (a third attack) of two months' duration After two days of argyrol injections there was no visible discharge This man's urine however, did not become clear and free from flocculi until *after* 26 days treatment with argyrol com of cubebs and salol

patients worthy of special mention is that of a patient who first came under treatment at the Lock Hospital on August 18th with a gonorrhœal discharge which had lasted "off *and on*" *for* two years This man having contracted the disease in America had been treated at Chicago and also by residence at the hot springs Arkansas He was put on a 10 per cent solution of argyrol on Nov 3rd A fortnight *later he reported* the cessation of the discharge after one week s treatment by injections combined with sandal wood oil Another case was that of an out patient (No 950) who had been treated from August 31st until Oct 21st with *copaiba and* injections of sulphate of zinc 16 days' treatment with argyrol stopped the discharge, of which there has not been a return up to the present date (Dec 7th) In six out of *other ten cases treated with argyrol I have* seen excellent results following an early stoppage of discharge

In five out of seven cases of acute anterior urethritis, where *treatment* was *commenced* early *in first attacks*, a cure was practically assured within a month By a cure I mean that the urine was clear, normal, and free from gonococci and that after discontinuing treatment for six *weeks there was no relapse The cases which gave no* improvement were all cases of chronic gleet in men who had become *habitues* of the hospital and in whom it was tried as a forlorn hope These cases had responded to no previous *treatment and certainly* did *not come under the category of* acute anterior urethritis

It is claimed by our American *confreres* who have published such convincing proof of the efficacy of this salt *in the treatment of gonorrhœa that its superiority over* other silver preparations as a bactericide lies in its high percentage of silver Whether this is capable of explanation by the theory of ionisation is a question for a chemical physicist *In support of the statement that its effect on the mucous membrane* is bland and non *irritating* patients told me that after using argyrol pain on micturition ceased They expressed a preference for this injection when others had been used *previously I have seen no complications during* its use Chordee had not to be treated in any case in which argyrol was used The only objection to the use of this salt which has come under my notice is its cost which certainly prohibits its *extensive use in hospital and dis*pensary practice where the more standard remedies give sufficiently good results at a very small outlay Like other silver preparations it causes stains on linen and underclothing These are *however, easily removed* by a *solution* of iodide of potassium and warm water With regard to rapidity of action and permanency of cure however, I have seen no results from other injections which equal or even approach some *obtained by argyrol It may be of interest* to mention that I have seen this salt used with benefit in a solution of 50 per cent for tertiary syphilitic ulcers and syphilitic lesions of the mucous membrane of the tongue, mouth and *nose*

With regard to posterior urethritis the method of treatment which seems to give most chance of success is one of intravesical irrigation The technique may be that known as Janet s with or without the *modifications of apparatus introduced* by Valentine or Chetwood For those who like myself do not care for complicated apparatus an ordinary douche tin (shaped like an inverted cone) an indiarubber tube five *feet long an ordinary burette clip and a glass* nozzle give very good results That many complications are said to have been caused or aggravated by this treatment is an allegation to which my attention has been often drawn *In the only* case which has so far come under my notice if the epididymitis could honestly have been ascribed to the treatment, it was rather manipulation than the method itself which Certainly one would hesitate to allow the t to experiment on himself with this treatment ho e er I am inclined to think that with care in use and a simplifying of the complicated apparatus, often *advocated* but seldom seen in this country this method is destined gradually to supersede older methods of treatment many of which exc pt in the hands of the most skilled in ur genitary practice only tend to aggravate a condition difficult to treat successfully at any time However good the results from local treatment one must continue medicinal treatment As far as I have been able to judge fr m the results at the London Lock Hospital pulvis cubebæ resin of copaiba, and sandal wood oil all re equally well

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[2] Ib l October 19.2

1 Ib ?

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THE AFTER-HISTORY OF A CASE OF EXTRA-GENITAL SYPHILIS; CHANCRE AT THE INNER CANTHUS; INTERSTITIAL KERATITIS IN THE PATIENT AND IN ONE OF HER CHILDREN.

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A YOUNG woman, aged 21 years, came under my notice at the Royal Infirmary, Sheffield, in August, 1882, for a chancre of the inner canthus. Previously she had been a healthy girl. At that time she was a nurse and among the children under her charge was a baby, aged five months, who had had—and, indeed, had at the time of her attendance—a rash on her body, also thrush, a sore nose, and snuffles. The nurse was in the habit of fondling and kissing the child a great deal. The chancre at the inner canthus involved the integument at the commissure and both eyelids and was about the size of a shilling. The gland in front of the ear and the submaxillary glands were indurated. It had begun as a pimple six or seven weeks before she came under observation. On her face was a scanty papular rash; she had sore-throat with slight ulceration of the left tonsil and her hair was falling out. Later she suffered from mucous tubercles on the vulva. (The case was recorded in vol. iii. of the Transactions of the Ophthalmological Society of the United Kingdom.) At the time of inoculation the patient was engaged to be married and it had been intended that the marriage should take place immediately. She was advised to defer it. About ten years later I again saw the patient and found that in consequence of what was said to her the marriage had been postponed, but only for nine months. She had had six children and never until the last time had she gone to full time with them. The first child was born at seven months, the second at eight months, the next three births were also premature, and there was a miscarriage between the fourth and fifth births. The sixth child was healthy until she was about ten months old, when she suffered from convulsions and she had since then been paralysed on the left side. There had been no subsequent pregnancies. The patient herself was well and was by no means as old-looking as many at her age would be. Beyond an attack of rheumatic fever her health had been good. Th healing of the chancre had left some epiphora, but beyc that to the casual observer it had *occasioned but little* alteration. There was no evidence of the husband having suffered at all from syphilis.

The infant who had occasioned the inoculation was brought to me in 1889 in consequence of her suffering from interstitial keratitis. The child had an almost typical appearance of face, with crushed-in nose and Hutchinson's teeth, and she later became afflicted with the deafness met with in cases of inherited specific disease. The history of syphilis in the father (then deceased) was complete and the mother was syphilised before she became pregnant with this child. The father died in 1885 and there were no children subsequently to the one specially mentioned.

Two or three years ago one of the children of the original patient, a boy, aged nine years, came under treatment for interstitial corneitis The condition occurred first in one eye and subsequently the other eye became similarly affected.

At the latter end of March of the present year (1903) the original patient herself came to me with typical interstitial keratitis in the left eye from which she has since recovered. She gave the following history with regard to her children. She had had two miscarriages, seven stillborn children, and four children born alive. There were, as already mentioned, five still-born children before one was born alive. This last, a girl, is now aged 14 years Of the children born alive, one died when eight weeks old, another is paralysed on one side, a third is the one mentioned above as having been under treatment for keratitis, and the fourth is healthy.

The above case is an interesting one for many reasons among which are the following: (1) the situation of the chancre; (2) the characteristic history of the patient's children; (3) the fact that one of the children came under treatment for typical interstitial keratitis; and (4) the circumstance that the patient herself suffered from interstitial keratitis which is only rarely met with in instances of acquired syphilis and which is *additionally* interesting in this case from the complete history that can be recorded and from the late appearance of the keratitis.

Sheffield.

NOTE ON THE SIMULTANEOUS OCCURRENCE OF TWO ACUTELY DEVELOPED CUTANEOUS LESIONS.

BY H. W. SYERS, M A., M.D. CANTAB.

A FEW weeks ago a boy aged nine years was brought to me in the out-patient room of the Great Northern Central Hospital suffering from a rash on the legs of two or three days' standing. He was a well-grown boy and complained of much pain and tenderness over the front of the tibiæ. As I anticipated, the malady proved to be erythema nodosum, and a severe form of the affection, as both shins were practically covered with the lesions. I was then informed that there was yet another rash of a few days' duration situated on the front of the abdomen and extending round the waist. Examination revealed the presence of numerous dark red papules in the locality mentioned, each of about the size of a pin's head. The rash was not present elsewhere. Some slight irritation was complained of, but otherwise this rash has been unattended with symptoms. It was not possible to form an accurate diagnosis as to the nature of the second rash and I contented myself with treating the erythema nodosum.

Three days later I again saw the patient. The erythema was in process of resolution but the spots on the abdomen and around the waist were much more numerous and presented the same characters as before. He came again a week after his first attendance and now the nature of the second rash was perfectly obvious: it was psoriasis. Many of the spots were covered with white scales and not a few had run together into sheets which were not, however, of any great size. At this time the erythema nodosum had prac lly died away but much *pigmentation* was left. The b ever ing through a perfectly typical attack of psori canno urly acute, but the elbows and knees are not mucou h, in any way affected. rse, one this case, as in many others I have seen, struction y of rheumatism even of the typically to the ur hat malady, and the heart was perfectly at the lim d the child ever suffered from chorea. ached, were previous attack either of psoriasis or erythe al prepa n.

In my exp t. of the case is unique. I have never seen the simultan salt ir evelopment of two distinct cutaneous affections suc when those which occurred in this case. A patient may b high ering from cutaneous syphilis and may then contract geons es and the two eruptions may co-exist. In the same onju eczema may be complicated with other maladies, but howe ve never before seen the rashes of psoriasis and o ghe thema nodosum co-existing in the same patient. he t

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A CASE OF S ERSISTENT SUPERFICIAL NASAL HYPERÆMI IN A MAN, AGED 21 YEARS, CURED BY REMOVAL OF ADENOIDS.

BY V. H. WYATT WINGRAVE, M.D. DURH., M R.C.S. ENG.,
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THE patient complained of intense and persistent redness of his nose of two years' duration. The onset was gradual and he could not associate it with any particular cause. He was a teetotaler and a very moderate smoker and he enjoyed excellent health. Nasal respiration was free and nothing abnormal was to be seen by anterior rhinoscopy. The tip, the alæ, and quite two-thirds of the nose were of an intensely vivid red colour, somewhat shiny, but not swollen, tender, or painful. Being subject to indigestion the patient was forbidden tea and was treated with alkaline tonics and saline aperients. After two months' treatment he showed no improvement, but a prominence of the supranasal vein being noticed the nasopharynx was examined by the mirror and finger, revealing a large crop of adenoids. Their removal was soon followed by diminished redness of the nose, the prominent veins disappeared, and in one month the organ became normal in [illegible] that it affords a striking [illegible] between the supranasal vein and adenoids during a period of life in which neither are commonly found and further increases the already long list of troubles due to neglected adenoids. The subject is of further interest with regard to its pathology which admits of several interpretations. First there is the mechanical, in so far that the adenoids themselves directly interfere with venous return, thereby producing the prominent supranasal venous arch in infants, so often the subject of superstitious dread. Further, again, their interference with breathing leads to a general increase of venous pressure which the vessels in question specially show. A second view is that the adenoids are responsible indirectly by causing a reflex inhibition of a local vaso-motor influence. This may be the interpretation in the present instance, while the first view will be more applicable to children.

Devonshire-street, W.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Discussion on Functional Albuminuria.

A MEETING of this society was held on Dec. 14th, Dr. F. DE HAVILLAND HALL, the President, being in the chair.

The PRESIDENT opened a discussion on Functional Albuminuria. He began by pointing out that it did not lie in the power of hospital physicians to do much to settle the question as to the ultimate fate of individuals suffering from intermittent albuminuria but that it was the general practitioner, who had the opportunity of knowing the family and personal history of their patients, to whom they must look for assistance. The late Sir George Johnson and Dr. Clement Dukes were quoted in favour of the view that albuminuria [illegible] term "functional [illegible] greater exception [illegible] scents," as cases [illegible] t all ages and in [illegible] c, the term suggested by Dr. F. W. Pavy, was not a good name to apply to the condition, as it would seem to suggest that the abnormal condition recurred in regular cycles irrespectively of outside conditions. Though Sir George Johnson had previously described the condition the attention of the profession was first focussed on the occurrence of intermittent albuminuria by a paper contributed to the Guy's Hospital Reports in 1878 by the late Dr. Walter Moxon who brought forward a series of 19 cases. Dr. Moxon concluded his paper with the following remarks: "The occurrence of the albuminuria at a period of life when the sexual system is completing its development, and, further, when its aptitudes are not always under normal control, may raise questions of causation of a kind difficult to obtain certain answers to. Starting so near each other and with so much of close relation in their development, and with common rights of way, so to speak, over not always normally governed apparatus, disturbances of the sexual system might be allowed as likely to reflect disturbances on to the urinary system." The condition designated by Dr. Moxon as remittent albuminuria had also been termed orthostatic or postural albuminuria. Its characteristic feature was that albumin was absent on rising in the morning but appeared after breakfast. In the later part of the day it might again be absent. It had been attributed to a want of tone in the vascular system. The effect of meals on albuminuria varied. In some of the so-called cases of functional albuminuria the amount of albumin was usually not influenced by diet, but in other cases the urine lost all trace of albumin under the influence of an exclusive milk diet and again became albuminous after a meal of solid food. On the other hand, there was another class of case in which exercise and even the erect position of the body had more influence than food in the production of albuminuria. Functional albuminuria might occur at any age but it was most frequently met with at the period of adolescence. It was more common in males than in females. It was usually met with in persons who supposed themselves to be in perfect health, but in some cases languor and palpitations were complained of. The presence of the albumin was often detected in systematic examination for life assurance or previously to entry into the services. The need of a careful microscopical examination of the centrifugalised deposit in order to exclude nephritis was insisted on. As regards the causes of albuminuria in the apparently healthy the following were mentioned: an excessively nitrogenous diet (eggs for example), cold bathing, and violent exercise (such as playing football, bicycling, riding, running, or marching). The sexual factor was also considered. The opinion was expressed that chemistry would yet throw more light on the subject of albuminuria and it was thought that one of the by-paths to be investigated was the state of the blood.

Dr. J. ROSE BRADFORD defined functional albuminuria as the occurrence of albuminuria in the apparently healthy. He then discussed as possible causes of the condition latent renal disease of an organic character, the subsidence or onset of renal disease, and accidental albuminuria due to spermatorrhœa or the presence of a discharge such as gleet. It might also be associated with diet, posture, exercise, fatigue, or bathing. Posture was the most important of these. The only clearly established pathological cause of albuminuria was some toxic agent—metallic poisons, ptomaines, and bacterial toxins, substances present in the blood of all animals. But these were obviously absent in most cases of functional albuminuria. Reflex vaso-motor mechanisms of a complex character were called into play when the body assumed the upright position. Posture was probably the main cause of functional albuminuria. Postural variation in the amount of albumin was observed even in organic albuminuria.

Dr SAMUEL WEST concurred with the previous speaker in defining functional albuminuria as albuminuria in the apparently healthy. Albuminuria was never physiological in the sense that it could be shown by the ordinary tests on the urine of any and every one. By delicate tests and repeated examination the percentage of apparently healthy persons affected with albuminuria might reach as high as 40, but in half of these it was nucleo-albumin and in another quarter the trace of albumin was very minute. Thus 10 per cent. were left in which albumin could be found by testing in the ordinary way. The frequency of functional albuminuria varied greatly with age, being fairly high in children, and rising gradually from the age of 25 throughout the rest of life. Among schoolboys and young adults there were two groups—in one the subjects were florid, vigorous, with good or high pulse tension; in the other, pale, flabby, with low pulse tension. These groups probably differed in pathology and prognosis. Of these boys most got well; in some the albumin persisted without other sign of ill-health. In a few signs of renal disease developed. There was no reason in either of these cases to refer the albuminuria to sexual development, still less to masturbation. Statistics proved that functional albuminuria increased the risk to life, especially as age advanced. Throughout life the relation of these cases to granular kidney was important, and thus the association of albuminuria with arterial thickening was very suspicious even in the young. So far as life assurance was concerned the rule was correct—above 40 to reject, between 30 and 40 to increase the premium, between 20 and 30 to make a substantial addition, and to reject all cases with thickened arteries as well as albuminuria. He arrived at the conclusion that functional albuminuria was, strictly speaking, never physiological but always pathological, though not always renal.

Dr. PAVY demurred to the use of the term "physiological," though the term "functional" as applied to albuminuria might be appropriate, just as there might be functional [illegible] disease of the stomach [illegible] disease. He could not [illegible] incipient stage of organ[illegible] cases for upwards of 15 years. Posture was a prominent factor in causation of the condition. Diet did not, in his experience, play an important part; excessive exercise, however, was important as was over brain work. An unstable vascular system was often present and in such cases fully explained the occurrence of functional albuminuria.

Dr. A. E. GARROD recalled the circumstance that Dr. K. A. H. Mörner (Stockholm) had shown that nucleo-albumin, formed by a combination of serum albumin with chondroitin-sulphuric acid was a normal constituent of the urine. Dr. Garrod also referred to oxaluria as a definite cause in his experience of transient albuminuria and even hæmaturia might occur in some of such cases as the result of a surfeit of rhubarb or strawberries. In short, the proteid-retaining mechanism of the kidneys, whatever it was, was a lax one and many of the albumoses easily slipped through. Consequently a very slight departure from normal might easily allow the transudation of serum albumin. The prognosis of functional albuminuria was certainly favourable in a great many cases and Dr. Garrod doubted if it ever developed into granular kidney or other serious organic disease. Nevertheless, local or partial disease of one or other kidney was a possible cause which should be borne in mind.

Mr. H. G ARMSTRONG had studied the condition during 20 years at Wellington College. He would divide functional albuminuria into three varieties: (1) occasional, which was an extremely frequent condition; (2) intermittent, which occurred in from 10 to 15 per cent. of the boys; and (3) permanent, of which kind he could only remember about six cases. Mr. Armstrong did not connect the condition with masturbation. Certain symptoms might be associated with functional albuminuria, and especially fainting; and in his view such cases were often emotional in origin, improvement taking place when the patients were allowed to work and to play games.

CLINICAL SOCIETY OF LONDON.

Congenital Narrowness of the Pyloric Orifice a Cause of Chronic Gastric Disease in the Adult; Seven Cases Successfully Treated by Operation.—Gastro-enterostomy for Simple Ulcer of the Stomach and Duodenum.

A MEETING of this society was held on Dec. 11th, Dr. FREDERICK TAYLOR, the President, being in the chair.

Mr. A. ERNEST MAYLARD (Glasgow) read a paper on Congenital Narrowness of the Pyloric Orifice a Cause of Chronic Gastric Disease in the Adult, illustrated by seven cases successfully treated by operation. In operating upon several cases of chronic gastric disease; a very typical form of narrowing of the pyloric orifice had been observed. While there was nothing externally to be noted, on internal examination a uniform sharp, ring-like constriction of the pylorus was found to exist. In some cases the ring was too narrow to admit the insertion of the apex of the finger. The construction put upon this condition was that it resulted from an over-development of the pyloric valve, which normally gave an orifice of from 12 to 15 millimetres in diameter. By excessive reduplication of the mucous membrane the valve might measure from two to ten millimetres. The condition was not one to be confounded with the more generally known congenital stenosis of infancy, where there was always hypertrophy in addition to the constriction. The patients were usually young adults who had suffered for years from gradually increasing gastric symptoms, quite indefinite at the onset but becoming more distinct later, and sometimes definitely suggesting pyloric obstruction. Dieting and medicinal treatment usually produced marked improvement but a return to the usual mode of living caused a recrudescence of all the symptoms. Gastric dilatation was sometimes present and was usually found to depend upon any temporary deviation from, or indiscretion in, the needful careful attention to diet. The history of seven cases was given. The patients were of the female sex, the ages being 20, 21, 27, 27, 27, 31, and 46 years. In all the symptoms had commenced insidiously and were at first of a simple dyspeptic character but afterwards showed more marked gastric disturbances. In five out of the seven cases the patients were in good social position and in two they were members of very healthy families. All were under the normal standard in stature and build but presented otherwise no defective physical or constitutional features except such as were dependent upon the gastric condition. In two the symptoms had existed as long as could be remembered. In all treatment had been tried by several medical men by various measures, usually with temporary improvement, but never with any permanently good result. Operation had been undertaken in all cases with the object of giving the stomach physiological rest, the chronicity of the complaint and its intractableness to all conservative treatment being considered a sufficient reason for operation. Posterior gastro-jejunostomy had been carried out in all. Improvement took place almost at once in some instances but not till a few months afterwards in others. Four out of the seven patients were at the end of a year's time practically cured of a condition that had existed for years. Two were still improving and one only recently operated upon was rapidly progressing favourably. In conclusion, Mr. Maylard said that he thought the condition of congenital narrowness of the pyloric orifice a by no means uncommon one. In its comparatively slighter forms it possibly accounted for many cases of gastric irritability in middle age or young adult life, and should always be considered as a not unlikely cause in young adults in whom no other explanation could be given for the chronicity and intractableness of the dyspeptic symptoms. The symptoms were always temporarily relieved by dieting. Of the three operations which might be practised for its relief—pyloroplasty, pylorodiosis, and gastro-jejunostomy—the last was considered the best. It had been employed in all the cases narrated and when executed with due regard to the normal anatomical relation of the stomach to the first part of the jejunum and the proper function of these viscera it gave the best possible results.

Mr. B. G. A. MOYNIHAN (Leeds) read a paper on 100 Cases of Gastro enterostomy for Simple Ulcer of the Stomach or Duodenum. The patients had been operated upon up to Oct. 1st, 1903. Two cases among them had been fatal. 85 patients were operated upon for chronic ulcer with intractable dyspepsia or dilated stomach with one death. 15 patients were operated upon for profuse and recurring hæmorrhage with one death. There were 56 females and 44 males. The youngest patient, a female, was aged 17 years; the two oldest, a male and a female, were each 62 years. The average age was 35 years. In ten cases the induration around a chronic ulcer was so marked that the presence of a "tumour" was recorded. In 58 cases the presence of a single ulcer or of the scar of a single ulcer was noted. In seven the ulcers were described as being multiple. Duodenal ulcer was found alone in nine cases, duodenal ulcer with one or more gastric ulcers being present in 13 cases. Hæmorrhage was the immediate and determining cause of operation in 15 cases. In all of these there had been symptoms of stomach troubles for a shorter or longer time before the onset of the bleeding. Several of these patients were in a desperate condition. In all these patients gastro enterostomy alone without the excision of the ulcer was performed; in not one of them was there any trace of renewed bleeding after the operation. Gastric tetany was observed in greater or less severity in five cases. In three it was slight and affected only the hands and forearms and the calf muscles. In two the patients experienced the utmost agony. The importance of oral and gastric antisepsis was emphasised. In 92 of the cases the result of the operation had been from the first as satisfactory as could be wished. Appetite had soon returned and food has been taken in any quantity with relish. All these patients had gained in weight, the gain varying in amount from seven pounds to four and a half stones. In the remaining six cases the after-history had not been so good. In every one of these hyperchlorhydria was pronounced before the operation and had proved a source of pain and inconvenience afterwards. Of the six patients three had improved greatly under medical treatment continued for from three to five months and were now quite well, one was almost well, and two were still under treatment. The last three had all been operated upon within the past eight months.—Dr. H. BATTY SHAW asked whether Mr. Moynihan had known a peptic ulcer to form after the operation of gastro-enterostomy. An American author had shown that it might occur experimentally in dogs.—Mr. J. H. MORGAN remarked on the fact that both these valuable papers came from surgeons practising in the north of Great Britain. Was there anything in the diet to account for this? Mr. Moynihan's result of a 2 per cent. mortality was most satisfactory.—Mr. A. E. J. BARKER had always regarded gastro-enterostomy as by far the best operation for gastric ulcer and the results now laid before the society fully confirmed this view. As to the cases of pyloric stricture brought forward by Mr. Maylard, the congenital origin of these must remain an open question. Dr. *Norman Moore* had brought the matter before that society, but the congenital origin of such cases was always a little doubtful. Pyloritis and peripyloritis might cause pyloric constrictions, just as gleet might be followed by urethral spasm and hypertrophy. He considered that suturing was a better method than the employment of mechanical appliances.—Mr. ERNST MICHELS asked Mr. Moynihan what percentage of cases of gastric ulcer were operated on out of the total *number seen.*—Mr. C. R. KEYSER asked whether the inferior method might not be regarded as better than superior gastro-enterostomy and advocated the employment of a single layer of sutures.—Mr. LEONARD A. BIDWELL, referring to the cases of pyloric stenosis, said that his experience led him to believe that Mr. Maylard's cases were due to repeated spasm of the pylorus of possi [illegible] near to him any e [illegible] As regards Mr. M [illegible] subsequent history and what proportion of them had relapsed.—Dr. H. A. CALEY asked Mr. Moynihan what proportion of his cases had been treated by rectal feeding, diet, and other medicinal measures before operation was resorted to.—*Dr. EDMUND CAUTLEY did not think* in regard to Mr. Maylard's cases that the narrowness of the pylorus could be definitely stated to be congenital or sufficient to cause the *condition of the stomach found. Had there been any* stricture he would have expected that there would have been definite hypertrophy of the muscular walls of the stomach adjacent to the *pylorus. He* asked what Mr. Maylard thought was the natural size of the pylorus and suggested that it varied considerably in different individuals. Possibly the symptoms and the dilatation of the stomach were dependent on *gastric conditions arising from* unsuitable food or alcohol. In regard to Mr. Moynihan's cases it seemed remarkable that such a large proportion should need operation.—Dr. J. W. RUSSELL (Birmingham) referred to 86 cases of gastric ulcer attended with hæmatemesis He had traced the after-history of about half of these. Of those so traced about 45 per cent. had suffered no relapse and had remained well, *10 per cent. were subject to periodic* relapses, and about 45 per cent. were in a miserable condition with persistent vomiting. These last would be suitable for operation.—Mr. A. PEARCE GOULD congratulated Mr. Moynihan on his success but asked if gastric ulcer did not *relapse after operation*, narrating *one case in* which the results of operation had been disappointing. Mr. MAYLARD, in reply, said that his chief reason for considering that his cases were of congenital origin was the extreme regularity of the feeling of the pyloric opening and the fact that thickening was absent. He thought people in good social position were less likely to give way to excesses in unsuitable diet. It was not possible to obtain a trustworthy gauge of the size of the pyloric aperture post *mortem.—Mr. MOYNIHAN, in reply, stated that he thought* there was hardly anything worse than the bad tea and bread consumed by many northerners. The proportion of cases operated upon to those seen by him had been about 25 per cent. As far as he could judge, the surgeon saw the cases somewhat earlier in the north than in London. That much suffering might be avoided by timely operation he was convinced.

EPIDEMIOLOGICAL SOCIETY.

Sleeping Sickness.

A MEETING of this society was held on Dec. 11th, Dr. B. A. *WHITELEGGE, the President, being in the chair.*

After the transaction of formal business Dr. LOUIS W. SAMBON, lecturer at the London School of Tropical Medicine, read a paper on Sleeping Sickness. *He began* by referring to the recent spread of the disease in Africa and specially its extension to the Victoria Nyanza and its islands. He then gave an account of the history of the study of the disease, *from the first* researches of Winterbottom made exactly 100 years ago to those of Castellani, Bruce, Brumpt, and Manson. As a sequel to the reference made to Castellani's discovery of a trypanosome in sleeping sickness, Dr. Sambon proceeded to give a history of the gradual acquaintance of observers with the genus trypanosoma, mentioning the trypanosomas of surra, nagana, mal de caderos, dourine, and the African gall sickness. He then mentioned the discovery of a trypanosome in man by Nepveu, Ford, and Dutton. He said that as soon as Castellani discovered a trypanosome *in sleeping sickness the idea of a fly* as the carrier of the infection came very naturally to all those who had any knowledge of trypanosoma disease. The first to publish any definite opinion on the matter, not merely as a hypothesis, but as the outcome of the *concurrence of* well-established *facts*, were Brumpt and himself. It would be idle to discuss priority in the matter. *He expressed his views* in an article on sleeping sickness which was *published in the Journal of Tropical Medicine* on July 1st, 1903 Brumpt's observations were published on July 2nd. However, the idea had come to both simultaneously and independently the day they learnt that a *trypanosoma* had been discovered in cases of sleeping sickness. Brumpt spoke of glossina morsitans. He (Dr. Sambon) specified a West African species, and more especially glossina palpalis; but he attached no great importance to this because he had books and specimens at hand, while Brumpt was in the wilds of the Congo. Besides various species of the germs, glossina might be capable of transmitting sleeping sickness just as various species of anopheles were able to disseminate sub-tertian fever. Their respective communications did not merely suggest a glossina as the carrier of sleeping sickness because a trypanosoma had been discovered in the disease, and because nagana was *known to be disseminated by glossina, but they were* chiefly intended to support Castellani's discovery by a number of facts derived from the study of the distribution and *life-history of tsetse flies on one side* and the distribution and epidemiology of sleeping sickness on the other. At first Castellani's discovery met with little favour in this country. At the last meeting of *the British Medical Association at Swansea he was the only* one to uphold a causal relationship between Castellani's trypanosome and sleeping sickness. His opinion was based on the analogy between the course, symptoms and anatomical features of sleeping sickness and of the various trypanosoma diseases of cattle generally considered and, more specially, on the striking connexion which existed between the peculiar *distribution of sleeping sickness* and that of tsetse flies. Dr. Sambon stated quite clearly that he could see no morphological distinction between Castellani's trypanosome and trypanosoma Gambiense. He pointed out that the so-called posterior extremity of the trypanosome was in reality *its anterior extremity* and that view had been endorsed by Professor Blumhard, Dr. Geart, and others. He expressed the *opinion that the glossina did not merely carry* the trypanosomes as suggested by Colonel Bruce, but played the part of an alternative host. Considering the very remarkable mode of development which obtained in tsetse flies he further suggested as a working hypothesis that nagana and sleeping sickness might be transmitted not directly by the fly that sucks the blood of *infected animals*, but by its progeny as was known to be the case in the transmission of red-water *fever by rhipicephalus* annulatus and in the transmission of the malignant jaundice of dogs by hæmaphysalis leachi. After minutely discussing the two reports on sleeping sickness by Colonel Bruce and Dr. Nabarro, Dr. Sambon criticised the former's experiments with regard to the transmission of this disease by tsetse flies. Other experiments were made to determine whether the Uganda tsetse fly (glossina palpalis) did carry sleeping sickness. Five monkeys were submitted to the bites of tsetse flies. The flies were previously fed on cases of sleeping sickness and then on *the monkeys eight, 24, and 48* hours after. Hundreds of flies were used in each experiment and after a period of about two months trypanosomes were *found in the blood of the animals experimented upon.* A second set of experiments with flies was then carried out to ascertain whether tsetse flies freshly caught in the vicinity of Entebbe did carry the trypanosomes of sleeping sickness. *Three monkeys were submitted to the bite of* large numbers of flies caught in the vicinity of the hut-tax labourers' camp in Entebbe. All these monkeys showed trypanosomes in their blood after a period averaging between a fortnight and a month. The experiments made by the commissioners with tsetse flies collected at Entebbe and fed on susceptible monkeys after *being fed on cases of sleeping* sickness had been almost unanimously accepted as proving that the trypanosomes of sleeping sickness were transmitted *from the sick to the healthy* by the glossina palpalis and that the fly carried the parasites much in the same way as the vaccinating needle carried the infection of vaccinia from child to child. He did not doubt in the least that the glossina palpalis was a carrier of sleeping sickness; indeed, he had been the first to suggest it. But to his mind the experiments made by Colonel Bruce and his colleagues did not prove the point. In the first place he (Dr. Sambon) did not consider it proved that the fly carried the infection by mere transference. The experiments made by Colonel Bruce with glossina pallidipes and nagana, those made by Rogers with various tabanidæ and surra, and those made by Theiler with hippoboscidæ and gall-sickness only proved that a fly disturbed while sucking the blood of a trypanosoma-infected animal might convey the disease to a healthy animal by means of its blood-soiled proboscis, just as malaria might be conveyed by a needle soiled with infected blood. But this mode of transmission did not seem to be the usual one. It did not explain why nagana was carried exclusively by a glossina and not by the many other blood-sucking animals which attacked horses and cattle outside the fly-belts. It did not explain why sleeping sickness was likewise confined to the tsetse zone and not communicated by the blood-sucking insects and acaridæ which swarmed in the huts of the natives. But there were many other objections against the commissioners' experiments at Entebbe. Those gentlemen did not rear their flies in the laboratory, they collected them at random, and they knew for certain that these flies were already infected because in the second set of experiments they also infected the monkeys they were made to bite soon after being caught and without being previously fed on cases of sleeping sickness. That the trypanosomes which they conveyed were those of sleeping sickness was not in any way proved; on the contrary, the commissioners informed them that they had examined some oxen at Entebbe and found in the blood of those animals a trypanosome which was neither trypanosoma Brucei nor trypanosoma Gambiense. And who could say how many other species of trypanosomes were to be found in the blood of the mammals, birds, batrachians, and fish of Uganda. A very striking fact was that whilst the monkeys bitten by the flies not fed on cases of sleeping sickness contracted the infection within two or three weeks, those bitten by flies fed previously on cases of sleeping sickness did not contract it until after about eight weeks. That proved that the flies did not get the parasite from the blood of the sleeping sickness patients who, as a rule, had hardly any in their peripheral circulation, but that on biting those patients they emptied themselves of some of the parasites they were carrying. Those experiments would have to be repeated in a thoroughly scientific way. Meanwhile he believed that the bond of association between Castellani's trypanosome and glossina palpalis was a far more intimate one. Lastly, Dr. Sambon referred to Sir Patrick's Manson's case of trypanosoma fever in a white woman. That case terminated with the characteristic symptoms of sleeping sickness, thus proving that trypanosoma fever was only an early stage of sleeping sickness and that a trypanosome was the cause of that deadly African scourge.

Sir PATRICK MANSON, having been asked by the President to open a discussion on the paper, said that he felt rather oppressed with a sense of responsibility in doing so. He could not but feel that the discussion was one of very great importance not only to Africa, where really it was a subject of primary importance, but to pathology in general, for the entrance of that protozoon into the field of pathology promised to give new light in places where darkness formerly obtained, and one must be extremely careful in expressing any view upon a subject just as it began to break upon the medical mind. He was especially pleased with the last part of Dr. Sambon's paper—that in which he expressed the hope that questions of priority would not occupy the meeting. They were always thorny subjects and they led to a good deal of bad feeling and so far as his experience extended never to any general profit. Sometimes on a Sunday he had an opportunity of contemplating the manners and customs of the fowl community, and his observations were generally taken between the morning meal and the afternoon meal when the fowls had picked up the last grain of maize and apparently had no chance of getting more food. But even in the community of fowls of that description some enterprising animal would wander from its fellows and by dint of perseverance would sometimes pick up a lob worm in some corner of its habitation. Almost before one had observed the fact that this fowl had made the discovery one also observed that this fortunate fowl was beset by numerous other fowls who rushed to share the profit. As a result the first fowl was very quickly deprived of its morsel and the second fowl succeeded in taking a little bit, and the third, and the fourth, and the fifth, until after a time it was found that the discovery had become the general property of the community with the result that the owner of the fowls, in the long run, benefited by getting a more wholesome and nutritious egg in the morning. He believed that that was a fair simile as to what happened in the field of discovery. One man got hold of a lob-worm and a hundred men could extract part of the *éclat* perhaps, but in the end the whole world benefited by the discovery. He had learnt a lesson in studying the cause of sleeping sickness. Dr. Sambon had told them already that a good many years ago he (Sir Patrick Manson) had found a peculiar parasite in cases of that disease. In a case that Sir Stephen Mackenzie gave him a chance of examining he found a new species of filaria in the blood. He was very much interested in the subject and he found a new parasite, a parasite which differed from the one that was suspected at the time to be the cause of the disease. Further, he was inclined to jump to the conclusion that the new parasite and the disease had an essential relation to each other. The conclusion seemed natural. As soon as he had made the observation he bethought himself how he should pursue the subject and he sent to Africa for specimens of blood from the natives. He sent 10,000 slides to Africa and got about 300 back. In those 300 a good many specimens came from cases of sleeping sickness and in every case of sleeping sickness he found the filaria perstans. By and by Dr. H. Grattan Guinness brought two cases of sleeping sickness to England for the purpose of studying them and put them at his disposal, and he was very much gratified to find in the blood of those cases also the filaria perstans. With evidence of that sort at his disposal he thought it would be beyond the power of resistance of most human natures to say that filaria perstans was not the cause of sleeping sickness. Thank heaven, he resisted the temptation and said that the filaria perstans was very likely to be the cause. However, after pursuing the subject further, he learnt that the same parasite was found in British Guiana and he was somewhat disappointed, because at that time they had no knowledge of sleeping sickness having visited British Guiana. He wrote to a friend there and asked him if he knew of a case resembling it in British Guiana. Writing back his friend said that a native patient had been brought to him suffering from somnolence from which he had great difficulty in waking him. That seemed to encourage the idea that possibly sleeping sickness might exist there and its existence there would further endorse the possibility that the filaria perstans was the cause of the disease. By and by Dr. G. C. Low and Dr. A. Castellani went out to Uganda from the Royal Society to test the connexion of the filaria perstans with sleeping sickness. Their first reports were distinctly in favour of regarding that parasite as the cause of the disease. In one district they found something like 95 per cent.—he did not know the exact figures—of the natives suffering from sleeping sickness due to filaria perstans infection. Subsequently on extending their observations they made the disconcerting discovery that in another district where sleeping sickness was extensive the filaria perstans was scarcely ever found, thus destroying at one stroke the hypothesis on which he had ventured to think he might derive a little credit. Now he was very glad to disallow any connexion between the filaria perstans and sleeping sickness. But as regarded the connexion of the trypanosoma Gambiense with sleeping sickness he thought they should still bear in mind his experience in connexion with the filaria perstans. His belief was that sleeping sickness was caused by the trypanosoma Gambiense, but he could not say that it had been proved. His belief at one time was that sleeping sickness was caused by the filaria perstans but he could not say then that it had been proved. He still thought there was room for further proof on the subject of the distinct and definite connexion between the trypanosoma Gambiense and sleeping sickness. He believed that that parasite was the cause of the disease but he did not know for certain. A case to which Dr. Sambon referred of a man who died from sleeping sickness was another reason for their belief in the relationship of that parasite to, and its being the cause of, the disease. But even that was not sufficient for the scientific mind. They could understand that coincidence even in that case might have something to do with the matter. When Dr. Castellani's and Colonel D. Bruce's discoveries were first made public he was extremely sceptical as to the origin and relationship of the two parasites. For this reason: Colonel Bruce distinctly stated that 28 per cent. of the general population of Uganda, apparently healthy people, had got the trypanosoma Gambiense in their blood. Now sleeping sickness was a disease which certainly predisposed the human body to many kinds of parasitic invasion. In consequence of the paralysing effects of the disease and the indifference of the patient to what went on outside him the carriers of parasites (such as flies, fleas, bugs, and the like) might bite him in that condition with impunity. They could understand that a patient affected with the indifference and languor so characteristic of sleeping sickness would be extremely prone to be bitten in that condition and therefore he was just the person who would exhibit the parasite in his blood. In the same way he was specially subject to invasion for the same cause by the filaria perstans. At the same time that evidence was not what would be regarded as satisfying in science. But when that poor lady in whom Dr. C. W. Daniels had found a good many months ago a trypanosoma Gambiense long before she had exhibited the symptom of languor characteristic of sleeping sickness—a parasite which was evidently the initial cause of her disease when on the Congo—when that lady developed it he thought they had much more definite proof than anything supplied from Uganda or elsewhere. There was no opportunity of her being bitten—nor was there any opportunity for subsequent infection following the primary infection—by the animal, whatever it might be, that introduced the poison. Therefore that case, he thought, was one of great importance. It was not complete proof that that parasite was the cause of the disease. Until they had obtained a pure culture of the trypanosoma from her blood the subject was still one on which they should keep an open mind as to the cause of the disease. In his opinion the strong probability was that that parasite was the cause of the disease but he could not say that the point was essentially and conclusively demonstrated as yet. He hoped that the cultivation experiments made lately by two American scientists in the growth of trypanosoma Gambiense in pure culture and also by Colonel Bruce would be confined to the decision of the question. Until the thing was positively decided one way or another he thought that one incurred a certain amount of responsibility and danger in advising anything in the way of extensive public measures with a view of counteracting the influence of the trypanosoma Gambiense in connexion with sleeping sickness. One would be advising extensive public measures on what might be only speculation and that was somewhat dangerous ground for men to go upon who were responsible for conducting public affairs. Therefore he would urge those interested in that question in connexion with parasitic disease to undertake cultivation experiments and then if they found that the pure culture of the trypanosoma Gambiense injected into monkeys or—if anyone was sufficiently self-sacrificing—into the human being in his own person, if they found that that pure culture produced the symptoms of sleeping sickness, then he would say that the thing was practically proved and he would be content. He would like to point out one or two other things in that connexion which were noteworthy. Colonel Bruce had distinctly proved —and his experiments had been repeated in Paris and elsewhere—that certain species of monkeys were susceptible to trypanosoma infection. That being so, was there any proof that the monkeys of Uganda had got sleeping sickness? He did not think that the experiments by Colonel Bruce of injecting the blood and the cerebro-spinal fluid of patients infected with sleeping sickness into monkeys and subsequently injecting blood from a man with trypanosoma fever, but without sleeping sickness, into the blood of monkeys,—he did not think that those experiments were conclusive at all as to the connexion of the trypanosoma with sleeping sickness. Supposing they assumed that sleeping sickness was an independent disease, depending upon a specific germ, then if they injected two specific germs into a monkey they might induce two diseases, say, trypanosoma fever and sleeping sickness. Or supposing they had a patient suffering from plague and at the same time from relapsing fever, and they took a little of his blood in a hypodermic syringe and injected it into another man's veins and it produced two diseases, plague and relapsing fever, and they found the bacillus pestis and the bacillus spirillum, it would not necessarily follow that the one bacillus was the cause of relapsing fever and the [illegible] experiment as [illegible] trypanosoma [illegible] from those w[illegible] there were [illegible] any epidemic of the disease amongst those animals. He would make one more remark. Dr. Sambon had observed that there was a correspondence between the area in which polyadenitis of the negro was noticed and the sleeping sickness area. He did not know whether Dr. Sambon had seen Dr. C. Christy's report, but Dr. Christy asserted that a large area of country in which the natives were extensively affected with polyadenitis was absolutely free from sleeping sickness. In his mind evidently polyadenitis was not associated with the disease.

Professor E. RAY LANKESTER said he would venture, as one who took a great interest in the subject from a natural history point of view, to make a very few remarks. His own interest in the matter began with the study years ago of the trypanosoma which occurred in the blood of the frog and he believed he was the first to state that and to write about it. He doubted whether it really was right—although he saw that a competent naturalist took the opposite view—to call these parasites in mammalian blood trypanosomas. Might he say that he listened with great pleasure to Sir Patrick Manson's statement which seemed to him to be an extremely interesting account of his views on the subject under discussion and to show a really scientific attitude of mind. Sir Patrick Manson entertained strong presumptive opinions with regard to the filaria perstans but did not commit himself about it. He thought also that Sir Patrick Manson's attitude in regard to the trypanosoma Gambiense was absolutely correct and sound, that was to say, there was strong evidence in favour of the trypanosoma being the cause of sleeping sickness but the question was not what he could call proved. The possibility of another parasite being present in the blood had to be borne in mind. They were getting to know such extraordinarily minute and varied parasites in the blood of the mammalia in tropical countries that they had to be very careful as to the conclusions that they might form. He would further say that he thought it was not desirable to discuss questions of priority by the present occasion. He thought that Dr. Sambon should correct a statement in his paper by a reference to the reports by the commission of the Royal Society in which he would find that Dr. Castellani did not examine those patients, 70 per cent. of whom had the trypanosoma in their blood, until Colonel Bruce arrived. It was Colonel Bruce who initiated the investigation, he having observed the trypanosoma in five cases scattered over some four months—between November and February. But that was a matter which really was not of much interest for the Epidemiological Society. Another point had struck him. Dr. Sambon seemed inclined to claim a kind of priority in suggesting that the glossina palpalis was the carrier of the trypanosoma. Of course, it occurred to many. There was nothing in it. The real interest in the matter was Colonel Bruce finding the glossina palpalis which was not previously known. It was not known that the glossina palpalis really occurred on the shores of Lake Victoria Nyanza but he searched for and found it. [illegible] that a change went on in the interior of the [illegible] which everybody who had [illegible] course entertain. It was no use making a claim to priority in a suggestion of that kind. The suggestion was one which, in his opinion, was not worthy of being regarded as a matter of priority. He had no doubt that a great deal more would be done in the study of that particular trypanosoma in connexion with sleeping sickness and in other ways. They must not be impatient. He thought that a very extraordinary rapidity had been shown in the acquirement of knowledge about the relation of that trypanosoma to sleeping sickness when they remembered that it was only in the beginning of last March that these 28 out of 30 patients, or 70 per cent., were found to have it in their cerebro-spinal fluid and not much time had been lost in the investigation since then and it was still in progress.

Dr. M. E. BRUMPT (Paris), who spoke in French, said: The discovery of Castellani was for myself as well as for Sambon the point of departure of my hypothesis as regards the rôle played by the tsetse fly. Professor Manson doubted on absolutely scientific grounds whether the trypanosoma was the cause of sleeping sickness and whether also it was not that another germ was injected at the same time as that of the trypanosoma. I believe, however, that I am able to say after my researches in Africa and those which I have carried out in Paris in collaboration with Dr. Wurtz that there is an absolute coincidence between the appearance of the trypanosoma and the symptoms of sleeping sickness.

The discussion was adjourned to Jan. 15th, 1904.

EDINBURGH OBSTETRICAL SOCIETY.

Fœtal Thyroid Hypertrophy.—Thyroid Extract in Puerperal Eclampsia.

A MEETING of this society was held on Dec. 9th, Dr. N. T. BREWIS, the President, being in the chair.

Dr. W. E. FOTHERGILL (Manchester) read a paper on Hypertrophy of the Fœtal Thyroid with Maternal Eclampsia. He regarded these two conditions as independent of one another. The eclampsia had been treated with thyroid extract. The case was also one of the five recorded instances of hypertrophy of the thyroid gland in the child following the administration of chlorate of potassium to the mother during pregnancy. The patient was 37 years of age and of gouty Derbyshire ancestry. She was married at 27 years of age, went abroad, and had been under many medical men for dysmenorrhœa. She had two early abortions and a third pregnancy ended at the fourth month in May, 1899. She again became pregnant till November, 1901, but it ended in an incomplete abortion for which she was curetted. Her fifth pregnancy began in April, 1902, while she was wearing a pessary, but this was removed and one or two small sponges were inserted into the vagina during the day if necessary; these afforded her great relief if pain and discomfort were present. As Dr. Fothergill thought it probable that the repeated abortions were due to placental thrombosis he prescribed ten grains of chlorate of potassium and ten minims of tinctura ferri perchloridi with glycerine and quassia thrice daily. This was begun immediately pregnancy was recognised and was continued throughout the gestation, which was undisturbed. The urine was examined several times and was found to be quite normal on Dec. 3rd. It should be noted that the patient's thyroid gland appeared to enlarge to about the usual extent during this pregnancy. On Dec. 7th there was slight swelling of the hands and feet and on the 16th the urine contained 0·2 per cent. of albumin. Five grains of thyroid were given twice daily and she was put on vegetarian diet. On the 25th she had eaten goose and plum pudding and felt ill afterwards, suffering from headache and vomiting On the 29th she passed no urine and that evening two eclamptic seizures occurred. Half a grain of morphia was given hypodermically and hot-water bottles were applied followed by profuse perspiration. Next day she was drowsy and restless and vision was impaired; no urine had been passed, so water was injected into the rectum, calomel was given, and nine five grain thyroid tabloids were administered during the next 24 hours. On the 31st the condition remained unchanged; rectal lavage was repeated and seven thyroid tabloids were given. Urine was passed that evening. On Jan. 1st labour began in the afternoon and at 9 P.M. the head was in the vulva. A little chloroform was given, the tough perineum was incised on either side, and forceps were used to deliver the head. A small female child was easily born; she cried freely immediately and some venous distension in the neck at once became visible. The child was found to have a large solid tumour representing the whole of the thyroid gland and this was covered by an enormously dilated venous plexus. The head and neck became more and more intensely congested and it became clear that the circulation as demanded by the pulmonary respiration could not be established. The child lived only for about one hour after birth. For 24 hours after labour there was complete anuria, but one and three-quarter pints were passed late on the evening of Jan 2nd. Thyroid substance was given to the extent of 30 grains. Next day the urine passed amounted to five pints. Another 15 grains of thyroid were given and its administration was stopped. The pulse-rate was 150. Next day, the 4th, five pints of urine were passed and the pulse fell to 110. After this her condition gradually became normal. At the necropsy on the child an almost angiomatous mass of vessels was found in front of the thyroid. The thymus was normal. The thyroid, completely freed of all other structures, weighed 25·8 grammes; its lobes were equally enlarged and the isthmus was nearly equal in size to one of the lobes. The lobes embraced the trachea, larynx, and œsophagus. Microscopic sections showed uniform structure of a glandular nature. The enlargement was due to overgrowth of all the tissue elements, especially the glandular. The average weight of the thyroid in an infant was from one to two grammes; this one was 25·8 grammes. This case seemed to show benefit from the thyroid treatment of albuminuria of pregnancy; if Dr. Fothergill had given more at first she might not have had eclampsia. He intended to give it a further trial. This case also illustrated the non-interference treatment of the gestation in eclampsia; he believed that labour should not be artificially induced in the presence of convulsions or coma; if labour began before or during the attack it should be conducted with care and patience but without unnecessary delay. Dr. Fothergill then quoted references bearing on the subject from the works and practice of Dr. J. W. Ballantyne, Sir J. Y. Simpson, Professor A R. Simpson, Dr. Angus Macdonald of Edinburgh, and Dr. J. T. Hewetson of Birmingham. Five cases in all had occurred where there was no congenital tendency and where the mother was taking chlorate of potassium. Many mothers took this drug without the child having goitre, but one should try to find out the reason why in certain cases the administration of chlorate of potassium should be associated with the thyroid enlargement in the infant. Experience showed that the administration of this drug in cases of habitual abortion was frequently followed by a full-time pregnancy. In cases of habitual abortion microscopic examination showed the presence of extensive thrombosis within the intervillous spaces of the placenta. Small doses of chlorate of potassium would appear either to reduce the coagulability of normal blood or to neutralise the effects of some form of toxæmia which favoured thrombosis.

Dr. H. OLIPHANT NICHOLSON read a paper on a case of Eclampsia treated by Large Doses of Thyroid Extract He recommended the use of thyroid extract as a prophylactic in the pre-eclamptic state, giving it in small doses of from five to 20 grains each day, the main object of the treatment at this stage being to re-adjust the processes of nutrition in such a manner as to complete more fully the metabolism of nitrogenous substances. In actual eclampsia thyroid extract was a valuable remedy, but it must be given in large doses before good effects might be apparent. The urine might be greatly diminished or suppressed and the really essential aim of any method of treatment was to get the kidneys to secrete again. In eclampsia the condition of the arteries and arterioles was one of profound constriction with resulting rise in blood pressure. Vaso-dilatation was the principle of treatment indicated. To induce vaso-dilatation very large doses must be given, 30 or 40 grains of the thyroid extract, and a second dose of from 20 to 30 grains might be required in six or eight hours if there were no evidences of improvement. A state of thyroid intoxication must be induced as rapidly as possible. When thyroidism was produced the renal arteries became relaxed and the secretion of urine commenced. The combination of morphine and thyroid extract was most successful as a means of re-establishing diuresis; morphine must also be given in good doses, as half a grain hypodermically. Dr Nicholson then detailed a case treated by morphine and thyroid extract in which the patient made a good and rapid recovery.

These papers were discussed by Professor SIMPSON, Dr. D. BERRY HART, Dr. JAMES RITCHIE, Dr. BALLANTYNE, Dr. J HAIG FERGUSON, Dr. H M. CHURCH, Dr. W. FORDYCE, Dr. GIBBONS of Boston, and the PRESIDENT.

Dr. FOTHERGILL and Dr. NICHOLSON replied.

HARVEIAN SOCIETY OF LONDON.—A meeting of this society was held on Dec. 3rd, Dr. W. Winslow Hall, the President, being in the chair.—Mr. C W Mansell Moullin opened a discussion on the Present Treatment of the Enlarged Prostate.—Mr. G. Buckston Browne thought that the satisfactory or unsatisfactory progress of a catheter case depended largely on the aseptic care used. Moreover, a distended bladder must be only gradually emptied. He could not agree with Mr. Moullin that after two years of catheter life the bladder lost its contractility. 11 years ago he performed a suprapubic prostatectomy on a patient who had used a catheter for 20 years. No catheter had been required since, the bladder acting perfectly. He was glad that Mr. Moullin only spoke of partial removal of the prostate; the prostate, being actually part of the bladder and part of the urethra, had never been removed in its entirety and never would be. Partial removal of the prostate, as performed now, was McGill's operation, and while too dangerous to be a routine operation was perfectly justifiable in certain extreme cases.—Mr. P. J. Freyer, who exhibited several specimens which he had removed entire in their capsules, said that antiquated and useless operations based purely on theoretical considerations were happily passing rapidly into the limbo of forgotten things. He was surprised that Mr. Moullin had made no reference to his (Mr. Freyer's) operation. He was quite satisfied with the progress which this operation had made in the last two and a half years. No operation was attended by more completely successful results and the mortality, considering the age and condition of the patients, was very small. It had also been proved that there was no such thing as atony of the bladder in connexion with prostatic enlargement, as in no instance had a patient failed to regain complete power of natural micturition. It was absurd to talk of McGill's operation as similar to his. No specimen of an entire prostate resembling those he exhibited had ever been placed in a museum before the date when his operation was placed before the profession. He believed that Mr. Shattock confirmed his views that the capsule was removed with the prostate. This, however, was a question of merely academic interest. Mr. Freyer's operation, while attended by a small mortality, gave complete and permanent cure of all the symptoms.—Mr. H. T. Herring said that the only cases that called for treatment were those that interfered with the function of micturition. He did not agree that the disease was markedly progressive or that bad symptoms must necessarily follow the use of instruments. Such symptoms did not arise from the prostate but from contamination of the urine with micro organisms The symptoms were rarely if ever increased by the habitual use of a sterile catheter. Mr. Herring denied that it was impossible for a patient to keep himself surgically clean —Mr. J. G. Pardoe considered that in the case of very aged men with tolerant bladders catheterism was the treatment of choice. As regards the loss of the expulsive power of the bladder he had never seen this after complete removal of the prostate in patients in whom catheter life had lasted for from six months to 16 years. As regards asepsis in catheterism [illegible] sibility in the large class of [illegible] work to perform for their [illegible] unable to procure assistance [illegible] the treatment of prostatic obstruction at present carried out was unsound and not based on sound pathology. Most symptoms were due to secondary contamination by micro-organisms introduced from without. Symptoms due to prostatic disease *per se* were those of slight difficulty and frequency of micturition, all other symptoms being due to cystitis, generally caused by dirty catheters, and occasionally arising from the posterior urethra where micro-organisms had remained after an attack of gonorrhœa. Treatment must therefore be directed first to the prevention of a posterior urethritis or to its cure; and secondly, to the prevention of chronic cystitis caused by dirty instruments. An instrument invented by Mr. Herring rendered catheterism practically safe —Dr. Horace Manders said that in his experience elderly men reduced to the constant use of the catheter did not show such universal tendency to sink and to die from sepsis. He had found that certain drugs, like salol, helped to prevent sepsis. He thought that male nurses ought to be more impressed with the importance of sterilisation and he did not agree that sterilisation could only be properly effected by boiling. The careful and scientific use of the catheter had prolonged many valuable lives, but a large number of cases could only be benefited by a total removal of the prostate —Mr. Mansell Moullin replied on the whole discussion.

DERMATOLOGICAL SOCIETY OF LONDON.—An ordinary meeting of this society was held on Dec. 9th Mr. Malcolm A. Morris being in the chair.—Mr. Morris showed a man in whom severe Lichen Planus of the Legs had developed after prolonged mental worry. The disease appeared nine months previously to exhibition upon the front of the ankles and crept gradually up the legs to the knees, assuming the hypertrophic type. Within the last few months the disease had also invaded the mucous membrane of the mouth.—Dr. T. Colcott Fox showed a child, aged ten months, suffering from Sclerema Neonatorum. The child was the youngest of 12 children, of whom nine were still living; he had suffered from no particular disorder at birth but had always been small. At the age of three months he had been taken to hospital on account of wasting and it was then pointed out to the mother that the skin of the trunk, especially the abdomen, was thickened and infiltrated. When shown the sclerema was gradually resolving and the skin gave a very peculiar sensation to the hand, some parts feeling thin and depressed, probably the normal parts, while others still gave the hard infiltrated impression. Dr. Fox suggested [illegible] of the presence of a slow septic [illegible] Penrose showed a case of Rough [illegible] r and a half years, coming on after a bad attack of Broncho-pneumonia. The patient had been tested on two occasions with tuberculin but without producing any reaction. Dr. Penrose said that he was familiar with the condition in tuberculosis but that this child was evidently free from the disease.—Dr. A. Whitfield said that the condition was known as pityriasis tabescentium and that it sometimes occurred in all wasting diseases, even in adults. He regarded it as a sign [illegible] t it was probably due [illegible] eir full cycle and conse- [illegible] of scales and follicular horns.—Dr. J. H. Sequeira showed: 1. A woman with a widespread Lupus Erythematosus over the head, the face, and the back. There were no history of tuberculous disease in the family and no evidence of it in the patient, but, on the other hand, there was the association with albuminuria which he had already recorded in several other cases. 2. A woman who had contracted Syphilis nine years ago and had for the last three years been affected with discoid patches and sheets of red infiltrated and œdematous eruption over the face and scalp. The eruption closely resembled seborrhœic eczema and he believed it to be a mixed eruption of syphilis and seborrhœa.—Dr. J. M. H. MacLeod showed a boy, aged 14 years, who had had an eruption which was almost certainly a local tuberculosis affecting the skin over the two inner left metacarpals and the ulnar side of the hand. The disease had existed since the age of 18 months and had greatly improved under treatment with radium.—Dr. E. G. Graham Little showed a man suffering from a small patch of Scleroderma one inch in its vertical and half an inch in its horizontal diameter, situated almost exactly in the centre of the hairy margin over the forehead. The disease existed nowhere else and had only developed four months ago. The diagnosis from lupus erythematosus was somewhat difficult.—Dr. S. E. Dore showed: 1. A girl with Ringworm of the Nails, in which the infection seemed to have occurred from the posterior fold into the matrix, only affecting the free margin later. Several nails were affected and the disease was of unusually rapid onset, having only existed two months 2 A man with a very widespread Pityriasis Versicolor affecting the whole of the trunk, the arms down to about halfway between the elbows and wrists, and the backs of the knees. The man was a profuse sweater —Dr James Galloway showed (1) a case of Rupioid Psoriasis and (2) a woman, aged 37 years, who had been affected with Scleroderma over the region supplied by the right supra-orbital for the last 20 years. It had gradually involved also the region round the right ala nasi and the inside of the nose. Now she had deafness especially affecting the left ear and this was found to be due to otosclerosis of the primary type.

LARYNGOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on Dec. 4th, Mr Charters J. Symonds, Vice-President, being in the chair.—Sir Felix Semon described a case of Epithelioma of the Larynx in which operation had been twice performed by thyrotomy and resection of crico thyroid membrane. The patient was a man, 58 years of age, who had suffered for a long time from albuminuria and chronic bronchial catarrh and had become quite aphonic. Examination revealed the presence of irregular nodular outgrowths on the anterior parts of both vocal cords. The probability of the growth being malignant, owing to the age of the patient, operation was decided on. On thyrotomy being performed the whole of the anterior and lateral walls of the larynx in the region of the vocal cords was found to be a mass of disease. This was removed together with the whole crico-thyroid membrane which was involved. The thyroid cartilage was found not to be affected. On microscopical examination the growth proved to be a squamous-celled carcinoma. The patient made a good recovery but two months after began to suffer from breathlessness and on laryngoscopic examination a greyish mass of what appeared like granulation tissue was seen projecting into the lumen of the larynx. The wound was reopened and it was found that recurrence had occurred on both sides of the middle line in front. The soft parts were removed from the thyroid cartilage, together with a U-shaped piece of the laryngeal framework and a small portion of the upper part of the trachea. The patient made a good recovery and had so far remained free from fresh recurrence. The case was noteworthy as illustrating first that chronic albuminuria and chronic bronchial catarrh were not necessarily contra-indications to radical operations of this kind; secondly, that the disease was very much more extensive than appeared on laryngoscopic examination; and thirdly, that if the disease extended beyond the precincts proper to the larynx the danger of recurrence was much greater.—Mr. Charters Symonds showed a man, 30 years of age, two and a half years after operation for Traumatic Rupture of the Trachea. There was an irritating cough which was relieved on the fifth day after the accident by the expectoration of a slough. No cartilage was found in the slough. About a month later he began to breathe with difficulty and stridor. An operation was advised with a view to removing the obstruction. On dividing the trachea in the median line the third and fourth rings were seen to be injured, one was broken and bent inwards; they had been also separated so that the trachea appeared lengthened and sharply bent inwards. The deformity was partly corrected by removing a part of the cartilage and sewing the adjoining rings together The sutures were placed so as to evert as much as possible the indented wall. The trachea was not closed. The wound was covered with gauze. A tube was not used. The patient made a rapid recovery and had suffered from no inconvenience since.—Dr. James Donelan showed a specimen and temperature chart from an inoperable case of Epithelioma of the Larynx in a man, 45 years of age, undergoing treatment by Schmidt's serum. There had been no rise of temperature and but slight constitutional disturbance. The local reaction had been marked and the growth had become decidedly smaller —Dr. H. Tilley showed a case of Complete Nasal Obstruction on the Right Side due to Chronic Dental Abscess arising from the roots of the incisor tooth and forming an external fluctuating swelling below the right nasal bone. When first seen the entrance to the right nasal cavity was observed to be filled by a fleshy mass resembling in its contour a much enlarged anterior extremity of the inferior turbinal but it was more resistant than the latter and did not appreciably diminish under the influence of cocaine. An adhesion bound it to the nasal septum. Puncture of the swelling internally by means of a hollow needle was followed by the discharge of a dark serous fluid containing cholesterine crystals. Under general anæsthesia the anterior end of the right inferior turbinal was removed and also two "dead" incisor teeth. The patient made an uninterrupted recovery.—Dr. H. Lambert Lack showed a man, aged 60 years, who had undergone operation six months previously for Epithelioma of the Epiglottis, Glosso Epiglottic Fossa, and Base of the Tongue with enlarged Glands on both sides of the neck. The cervical glands had been removed and also the primary growth (by subhyoid thyrotomy) at one operation. So far there was no recurrence.—Dr. J. Dundas Grant showed a case of Pharyngomycosis.—Cases and specimens were also shown by Major F. O'Kinealy, I M S, Dr. Scanes Spicer, Mr. F. Hunter Tod, Dr. E. Cresswell Baber, Dr. StClair Thomson, Dr. H. J. Davis, and Dr. G. C. Cathcart.

LIVERPOOL MEDICAL INSTITUTION.—The second meeting of the session of the Pathological and Micro scopical section of this society was held on Dec. 10th, Dr. R J. M. Buchanan being in the chair.—Dr. K. A Grossmann showed sections and lantern slides illustrating a case of Multiple Conjunctival Papilloma. The growths consisted of branched processes of the conjunctival stroma covered by many layers of epithelial cells.—Mr. W Thelwall Thomas showed sections of a Myeloid Tumour of the Lower Jaw removed from a patient aged four years; also an Adenochondroma of the Submaxillary Gland; a Ring of Thrombosed Hæmorrhoids removed by Whitehead's operation; and specimens illustrating Cystic Mastitis with Intracystic Papillomatous Growth and Fibro-sarcoma of the Abdominal Wall.—Dr. W. B. Warrington exhibited a large Blood Clot which had been found between the liver and the diaphragm of a patient suffering from Chronic Interstitial Nephritis. The hæmorrhage was not traced to any particular vessel and appeared to have been due to capillary bleeding from the peritoneal vessels.—Mr. Richard Williams and Mr. E. M. Stockdale showed sections of an Endothelioma of the Retina and of a Rodent Carcinoma of the Eyelid.—Mr. Hugh E. Jones and Mr. Stockdale exhibited sections of a Melano-sarcoma of the Choroid and of a Pseudo glioma of Inflammatory Origin.—Mr. Stockdale also showed a Liver with a rudimentary but lobulated left lobe.—Mr. A. W. Riddell showed a specimen of Radium prepared by Sir W. Crookes as a microscopic slide and known as the spinthariscope; under a half-inch objective and an ocular × 5 it showed the flashes only; with the eye-piece lens in addition the sparking was also seen.—Dr. Buchanan showed coloured illustrations of an Empyema Cavity, of a Heart with Aortic Disease, and a Brain with Cerebral Hæmorrhage. Dr. Buchanan also showed Films of Blood containing polychromatophilic red cells and discussed their relation to pernicious anæmia.—Dr. Warrington gave a short account of the Symptoms and Diagnosis of Combined Sclerosis of the Spinal Cord and illustrated the anatomy of the disease by preparations which had been made by Dr. J. T. Collier. Dr. Warrington considered that the symptomatology and anatomy of the disease had now been sufficiently defined to consider it a distinct disease with a recognised course and stages.—Dr. Glynn recalled the fact that Dr. Pierre Marie had described in his "Leçons sur les Maladies de la Moelle" a somewhat similar condition associated with combined degenerations of the cord which he attributed to vascular changes. The situations in which the sclerotic changes took place pointed to this vascular origin —Dr. A. S. F. Grünbaum thought that the fact that the grey matter escaped in the course of the sclerotic changes indicated that the vascular theory of the disease could not be sustained.—In the discussion of the specimens the following members took part: Dr. Buchanan, Dr. E. E. Glynn, Dr. Grünbaum, Mr. A. P. Hope Simpson, Mr. F. C. Larkin, and Mr. K. W. Monsarrat.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 1st, Mr. G. H. West Jones, the President, being in the chair.—Mr. S. Snell showed the following cases: 1. A boy (a file cutter), aged 15 years, with Optic Atrophy from Lead Poisoning. 2 A woman with Monocular Proptosis and Graefe's sign; there was no enlargement of the thyroid or tachycardia. 3 and 4 Two sisters one with Coloboma of the Iris and Choroid in each eye and the other in whom one eye only was affected. Reference was made to a boy, at present under observation, with double microphthalmos, coloboma of the iris and choroid in one eye and the remains of pupillary membrane in each eye. 5. A well-marked case of Diabetic Retinitis, with diabetes of long duration. 6. A woman with marked Albuminuric Retinitis. 7. An instance of Extreme Convergent Strabismus in a man. 8 Trachoma in an alien.—Dr. George Wilkinson showed two cases of Syphilitic Lesions of the Auditory Meatus.—Dr. A. J. Hall showed the following cases: (1) Exophthalmic Goitre; (2) Tertiary Syphilitic Eruption of the Legs; (3) Favus; and (4) Congenital Syphilide.—Mr. Richard Favell showed specimens of Tumours of the Uterus.—Dr. A E. Naish showed a case of Hæmophilia with hæmorrhage under the right iliac fascia. The patient was a boy, aged 17 years. The ankles, knees, and elbows had been frequently affected since the age of five years. The left knee was the seat of extensive osteo arthritic changes with enlargement of the bones and fixation in a flexed position. A large hæmorrhagic effusion had appeared suddenly in the right iliac fossa, accompanied by pain in the corresponding hip-joint. This mass had now completely disappeared, leaving the psoas muscle firm and thickened. The patient was the eldest of a family of four boys, three of whom suffered from the disease. One brother had died from a minute cut on the lip. His mother suffered from hæmophilia of a mild type.—Dr. Hall read a paper entitled "Some Remarks on Sudden Death," illustrated by pathological specimens He referred to the different conditions under which sudden death, apart from violence, poison, and drowning, occurred, and the difficulty of framing a definition which would cover such cases. Even if the term "*unexpected death*" were used it left out many cases. Specimens were shown illustrating various causes of sudden death, e g, pulmonary embolism, ruptured heart, ruptured aneurysm, meningeal hæmorrhage from cerebral aneurysm, syphilitic fibrosis of the heart, and pontine hæmorrhage. Reference was also made to sudden death in which nothing was found post mortem to account for it; pneumonia in the aged apparently of a mild type was also mentioned as dangerous, also alcoholism in women, and particularly the taking of strong purgatives by old people.

EDINBURGH ROYAL MEDICAL SOCIETY.—A meeting of this society was held on Dec. 11th, Dr. H. D. Shepherd being in the chair.—Dr. H. H. Littlejohn gave an address, illustrated by numerous statistical tables, on the subject of Suicide. Confining his attention chiefly to European countries he pointed out that suicide was more prevalent in central Europe than in the north or south. Saxony showed the largest number of annual suicides—viz., 392 per 1,000,000 living; Ireland, at the opposite extreme, had only 17. A curious fact was that the winter months were not those in which most suicides took place—May and June being the worst months in this respect. Suicide was more common in men than in women in the proportion of three to one, and the modes of death varied in the two sexes—women as a rule choosing those methods which were least disfiguring to the person. As regarded occupation, soldiers as a class gave far and away the greatest proportionate numbers of suicides. That the constant presence of means to the end was an important factor in determining a person to commit suicide, as in the case of the soldier, was shown also by the large number of chemists and medical men who perished by their own hand. An alarming fact was the increase in the number of suicides within recent years, an increase which was proportionately much greater than the increase in population.—Dr Littlejohn was heartily thanked for his address. —Dr. T. W. E. Ross showed a specimen of a case of Mediastinal Tumour in a boy, aged 15 years. The patient had a history of thoracic distress of only two months' duration. The tumour, which occupied almost the whole of the left pleural cavity, presented the appearance of a lymphosarcoma.—A dissertation on the Treatment of Cardiac Disease by Dr. A. B. Ross was read in his absence by Dr. H. J. Dunbar.

ULSTER MEDICAL SOCIETY.—The second general meeting of this society was held on Dec. 3rd at the Belfast Medical Institute.—Dr. W. M. Killen showed a man in whom for a considerable time the diagnosis lay between Cerebral Abscess from old Ear Disease or Tumour. The history of the case and the beneficial effect of iodide of potassium pointed in the direction of a tumour.—Mr. A. Fullerton showed a child the subject of Acquired Syphilis, the chancre being on the chin. He also exhibited a skiagram showing a Coin impacted in a Child's Œsophagus which he successfully removed by cutting down on the gullet and a skiagram of a Transverse Fracture of the Shaft of the Humerus treated by operation.—Mr. Robert Campbell read a paper on the Radical Cure of Hernia in Infants and Young Children. He had operated on 114 cases at ages varying from three weeks to ten years without a single death. There were 11 of them strangulated (two as early as three weeks). No recurrences took place and as to complications two rickety children had slight bronchitis, one wound suppurated and the stitches had to be removed, and in one case some blood clot appeared and one stitch had to be taken out.—An interesting discussion followed.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Dec. 9th, Dr. E. S. Reynolds, the President, being in the chair.—Dr. I Walker Hall and Dr. W. H. Brazil described the appearances of a Proliferative Cyst-adenoma occurring in connexion with the liver of a child, aged six and a half years. The tumour gave no symptoms during life. It was [illegible] surface of the liver and displaced th[illegible] lateral border. In structure it c[illegible] containing cysts lined by cubical or columnar epithelium It was in a condition of active proliferation, was entirely extrahepatic, and probably arose from aberrant bile ducts Several small tubes passed from the right hepatic duct to the substance of the tumour. These were found to consist of fibrous tissue in which were observed definite lumina lined by columnar epithelium.—Dr. Moore showed specimens of Cystic Disease of the Liver and Kidneys.—Other preparations were shown as card specimens and included a demonstration of Various Methods of staining Nerve Tissues.

SOUTH-WEST LONDON MEDICAL SOCIETY.—The monthly meeting of this society was held on Dec. 9th at Bolingbroke Hospital, Mr. E. F. White, the President, being in the chair. Notes of interesting cases were read as follows: Mr. H. Stanley Turner, a case of Middle-ear Disease; Dr. M. Mackintosh, a case of Abscess in the Lung; Dr. Donald F. Shearer, two cases of Loss of Power in the Right Leg; and Mr. A. G. Everard, a case of Scarlet Fever occurring in a patient for the fifth time. Mr. Eber Candwell showed a case of Empyema, a case of Tracheotomy for Laryngitis, a case of Perforating Ulcer of the Foot, and a case of Colles's Fracture. Mr E. W. M. Hearn exhibited a case of Spina Bifida in a child, aged 30 hours, and a case of Ovarian Tumour in a girl aged nine years.

Reviews and Notices of Books.

First Report of the Trypanosomiasis Expedition to Senegambia (1902) of the Liverpool School of Tropical Medicine and Medical Parasitology. By J. EVERETT DUTTON, M B., B Ch. Vict., and JOHN L. TODD, B A., M D, C M. McGill. With Notes by H. E. ANNETT, M.D., D.P.H. Vict., and an Appendix by F. V. THEOBALD, M.A. Published for the University Press of Liverpool by Longmans, Green, and Co., London. 1903. Pp 56. Price 10*s.* 6*d.*

THE subject of trypanosomiasis has lately attracted considerable attention in consequence of the investigations recently made in Uganda as to the causal relationship between trypanosomes and sleeping sickness. In 1901 Dr. J. E. Dutton found these organisms in the blood of a European who was suffering from an illness characterised by a peculiar combination of symptoms. The clinical picture presented was one which might be confounded with that of a tropical disease. Before the details of this case were published in the "*Thompson Yates Laboratories Report*," May, 1902, a trypanosome was found in a blood film taken from a native child in the Gambia, and the discovery of a second case of human trypanosomiasis made it probable that the first was not altogether a curiosity. The committee of the Liverpool School of Tropical Medicine realised the possible importance of this new parasite as a cause of disease and with characteristic energy despatched an expedition to Senegambia to make further investigations in the subject and the report of the members of that expedition—Dr. J. E. Dutton and Dr. J. L. Todd—now lies before us.

In the introduction we are informed that in this report only a very small portion of the work done in the Gambia on trypanosomiasis is described; there is sufficient, however, to form most interesting and instructive reading. The first section deals with Human Trypanosomiasis. An attempt was made to ascertain the distribution and prevalence of the parasite. The blood of no less than 1043 persons was examined but trypanosomes were only found in six instances. The investigators, however, are convinced that the percentage given by these figures is smaller than is actually the case. Their reasons for holding this opinion are the following: (1) many cases certainly escaped identification both because of the scanty numbers in which the parasites were seen in the cases examined and because of the periodicity of their absence or presence in the peripheral circulation; and (2) the majority of the natives examined were apparently healthy children and young adults who could be persuaded by small bribes to allow their fingers to be pricked; thus suggesting that adults are more liable to infection than children. The clinical symptoms yielded by the presence of the trypanosomes revealed no marked constant characteristic.

The next part of the report is concerned with Equine Trypanosomiasis. The first trypanosome which Dr. Dutton and Dr. Todd found while in the Gambia was in the blood of a horse and this is the only animal in which they were able to distinguish a pathogenic trypanosome. Out of 36 horses examined ten were found to be infected. From the careful inquiries made the following conclusions were arrived at: (1) equine trypanosomiasis in the Gambia is a very chronic disease; (2) it occurs throughout the colony and is possibly more prevalent near the river, especially during the rainy season; and (3) cattle and other domestic animals are not known to suffer from the disease.

Although a positive diagnosis of trypanosomiasis could only be made by a demonstration of the parasite, either by microscopical examination of suspected blood or by inoculation of that blood into unaffected animals, in several cases the condition was suggested by the listless expression of the affected animal and by the slight rise in temperature which was always present. Attempts to transmit trypanosomiasis from infected to healthy animals were uniformly negative. As the "results of inoculation of the Gambian human and equine trypanosomes in experimental animals" Dr. Dutton and Dr. Todd are inclined to believe that these organisms are not the same species but further experiments are necessary before a definite result can be arrived at. Some interesting observations are recorded as regards other forms of flagellata found in Senegambia.

LIBRARY TABLE.

Guy's Hospital, 1724–1902: A Tribute to its Founder and a Record of its Work. Illustrated. London: Ash and Company, Limited. 1903. Pp. 58. Price 2*s.* 6*d.*—In commenting upon this interesting book with its admirable pictures of life in the hospital we cannot do better than quote the first words of the preface as follows: "This book is sent forth in the hope that it may help to make better known the peculiar virtue and charm, the vastness and importance of the work, and the present grave wants of the hospital founded by Thomas Guy in his lifetime. Perchance it may discover a Thomas Guy of the twentieth century." When reading this statement we can hardly help picturing the gentle dove sent forth from the ark in the hope of finding solid ground or the brave emissary sent forth in search of help by a perishing band of once prosperous explorers. The book concludes with a short and interesting explanation of the present grave financial necessities of the hospital which we believe will be new to some at least of the younger generation. We can only give extracts from this well-worded account. From 1724, and for 160 years, this great foundation and its ministrations were an absolutely free gift to the people. But the time came in the early eighties when the disasters which had overtaken British agriculture fell upon the estates which represented the founder's endowment. With overwhelming rapidity, almost without warning, the income derived by the hospital from its rents went down to almost one-half. Here the very prosperity of the hospital in the past became a source of weakness. It had no list of donors, no annual subscribers; few, if any, wills contained provisions in its favour. Guy's, in short, had yet to learn the very A, B, C of how to beg. The amount asked for (£100,000) in 1886 was gladly given but by the year 1895 this was exhausted. The governors appealed again and Mr. Gladstone made the needs of the hospital quiver in the ears of the people. Amongst those who responded was his present Majesty King Edward VII. who publicly identified himself with the cause, became president of the hospital, inaugurated a re-endowment fund, and worked strenuously for its success. It is the simple truth that His Majesty's gracious and effective action was the salvation of the case and its memory will endure so long as Guy's Hospital endures. Disaster was stayed and an era of hope and progress began but always to the accompaniment of harassing financial strain. Over and above the struggle for daily bread came the demand and necessity for heavy expenditure on the permanent works and improvements; and thus, while Guy's Hospital had never done a greater work or done it more effectively than in 1902, the close of that year witnessed the hospital heavily indebted on capital expenditure and its assured income dangerously small. The last paragraph, we think, is worth quoting *in extenso*, as follows: "Yet the spirit of Charity is not dead. In this great metropolis, whose vastness hides suffering from view and deadens the sense of responsibility, that spirit, indeed, tends to slumber; but it will answer to a true, clear call. And so let these last words be the expression of a fervent hope, a firm trust, that old friends will be reanimated and new friends found in the days that are with us, to free from care Thomas Guy's glorious foundation, that sure refuge whither, through the long years since 1724, the poor and afflicted have turned for sympathy and healing like as unto a great rock's shadow in a weary land." We can only say that if this book does not find another Thomas Guy it ought to and we hope it will; in fact, if we may say so, Guy's seems not only to have learnt A, B, C but also considerably further down the alphabet.

Traité des Urines: Analyse des Urines considérée comme un des Éléments de Diagnostic. (A Treatise on Urines: the Analysis of Urines considered as one Element of Diagnosis) By Dr. E. GÉRARD. Paris: Vigot Frères. 1903 Pp. viii.–492. Price 7 francs.—This book is a very practical work which should be found useful to practitioners of medicine. That a careful analysis of urines both in health and disease can throw light upon many of the problems of disease there can be no doubt and Dr. Gérard gives a very full account of the many methods which are employed in analysis. The book is divided into three parts, the first of which treats of the analysis of normal urines and the second of the analysis of the urine as secreted in varying pathological conditions. Albumins are treated of first and then follow the sugars, acetones, blood, and the presence of digestive substances, such as bile, leucin, and tyrosin. Chapter XIII. deals with urinary sediments and thence to the end of the part the author speaks of the various modifications brought about in the normal constituents of the urine by pathological conditions. In Part III. the clinical urology of various diseases is dealt with. Altogether the book should be found of great use.

Practical Text-book of Midwifery for Nurses. By ROBERT JARDINE, M.D. Edin. Second edition. Edinburgh: W. F. Clay. 1903. Pp. 284, with 30 Illustrations. Crown 8vo. Price 6*s.*—The second edition of this work has been carefully revised and many alterations have been made. We notice that the author has left out the words "for students" in the title. In this he has been well advised since, as we pointed out in our notice of the first edition, the book is hardly a suitable one for the use of students. A new chapter has been added on Accidents to the Child during Delivery: Abnormalities and Diseases of the New-born Child. This contains a good account of the various accidents and ailments that a nurse may be required to recognise. The book should be of value to women intending to practise as midwives and is a good example of its class.

Essays and Notes on Hydrotherapeutics. By RICHARD METCALFE London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1903 Pp. 254. Price 3*s.* 6*d.* net.—Mr. Metcalfe, we gather from the appendix to his book and from the illustration which forms the frontispiece of the appendix, is the proprietor of a hydropathic establishment at Richmond. Hydrotherapeutics, like every other form of medication, have their uses when properly directed by an intelligent medical man. Mr. Metcalfe's views on the pathology of scarlatinal dropsy show that he at all events does not come under this category. On p. 16 we read: "Scarlatina being an eruptive disease of the skin obstructs the escape of the perspiration and causes the fluid to accumulate in the system. The kidneys will for a time succeed in relieving the patient. But if the skin is not speedily restored to its normal action dropsy is inevitable." The value of clean water to drink, of cleanliness, and of wet packs in certain febrile and other diseases is now fully recognised by the medical profession and although we can allow that hydrotherapy has its uses Mr. Metcalfe is evidently not the man to advise as to them.

Who's Who, 1904, and Who's Who Year Book, 1904. London and Edinburgh: Adam and Charles Black. Price 7*s.* 6*d.* and 1*s.*—This useful book of reference is published for the first time this year in two parts. The biographical portion appears by itself, while the tables of general information form a separate and much slenderer volume. "Who's Who" has now become indispensable to the furnishing of every editorial desk. The times in which we live make it necessary that accurate information should be quickly available about all sorts and conditions of men. We in the office of a professional newspaper feel this and our feeling is shared by the thinking world. Not so very long ago, say 25 years, we required information about few people that we could not obtain from the Medical Directory. Medicine has now enlarged its borders. Public health governs public policy, tropical medicine is a matter of imperial policy, the work of the engineer and the electrician dovetails with that of the chemist and the sanitarian, and the medical journalist must on occasion be expected to know the status and the past record of men who have distinguished themselves in any branch of their various provinces of life. We turn to "Who's Who" for assistance and it is easy to see that our fellow editors do the same, whatever the general or particular lines of their organs. Of the actual biographies, which form the compilation we thus commend, there is not much to be said when we remember that they are for the most part furnished by their subjects. The larger biographies do not necessarily set forth the careers of the greater men, while the confidences given to the public by some of the writers are laughable. Such blemishes do not, however, detract from the utility of the book, for it is always easy to distinguish the really important people from the others, even though the claims of the others to consideration are furnished in meticulous detail.

Manual of Diseases of the Eye. By CHARLES H. MAY, M.D., Chief of Clinic and Instructor in Ophthalmology, Columbia University, New York. Third edition, revised. London: Baillière, Tindall, and Cox. 1903. Small 8vo, pp. xv.-408, with 275 illustrations. Price 8*s* 6*d* net.—This edition of Dr. May's work has been revised without being enlarged. The chapters correspond with those that other authors have found convenient to divide the subject of ophthalmology into, as the mode of examination of the eye, the theory of the ophthalmoscope, the various diseases of each part of the eye and of its appendages, the refraction of the eye and the errors to which it is liable, the disturbances of motility, and ocular therapeutics. The accounts of the several affections to which the eye is liable are briefly but clearly and correctly given and no space is wasted in unnecessary details respecting the mode in which remedies should be applied or operations performed. The student is supposed to be familiar with the details of minor surgery. Recent methods are not neglected as, for example, the use of protargol and the subcutaneous injection of solutions of corrosive sublimate in cases of refractory ulcers of the cornea so strongly advocated by the late Professor Panas. The connexion between the retinæ, the fibres of the optic nerves and tracts, and the cerebral cortex is well given. The illustrations though numerous are a little coarse, especially in the case of those representing the normal fundus of the eye. The manual will prove a useful book for students.

The Living Temple. By J. H. KELLOG Battle Creek, Michigan, U.S.A.: Good Health Publishing Co. 1903. Pp. 568. Price 5*s.* 6*d.*—This work is a book on diet and hygiene written from a vegetarian standpoint. It contains some sense and a good deal of nonsense. There is no doubt that many people eat too much meat, many people drink far too much alcohol, and many people smoke too much or drink too much tea and coffee. But we do not believe that in northern climates, under modern conditions of work and society, that human beings can manage to live and to do their work upon a purely vegetarian diet. If we could all return to primitive conditions and live in Sicily or some of the South Sea Islands the case might be different. We are quite in accordance with the author as to his strictures upon modern bread made from flour which has nearly all the nutriment removed from it. It is a pity that a book which contains some really good advice should lay down counsels which cannot be followed under conditions of modern life.

Fungi, Protophyta, and Protozoa: their Relation to each Other, to Helminths, and to Disease, particularly Malarial Fever in the Tropics. By G. H. FINK, M.R.C.S. Eng., Major, I.M.S. (retired). Pp. 40 —In this little brochure the author, after referring to the work done by Laveran, Ross, and Manson in regard to the etiology of malaria, describes an outbreak of malarial fever that fell under his notice in the Bori Valley in South Afghanistan which was followed by epidemic infectious pneumonia. He attributes the outbreak to the impurity of the water and the scarcity of milk and having tested the water he was able to predict the occurrence of malarial cases in large numbers. Elsewhere he found that water swarming with mosquito larvæ was used for watering lettuces which were eaten raw and that malaria was prevalent. He also describes malarial fever in dogs and gives the modes in which spores may gain entrance into the body of these animals. Major Fink has a high opinion of the value of castor oil as a remedy in malaria. In this and other points we do not doubt his conclusions but the facts upon which he bases them are far too few and imperfectly worked out as they are here given to justify them. Finally, Major Fink should really attend to the orthography of the scientific names that he employs. Twice he spells "empusa" "empusca," and "filletia cares" is not the way to spell "tilletia caries," which, we presume, is the organism referred to

Whitaker's Almanack, 1904. London: 12, Warwick-lane, Paternoster-row.—The 1904 edition of this indispensable work contains as usual some new features. Such are a tabular history of consols and of the income tax, a special article on technical education, tables and articles bearing on the fiscal question, an account of the marriage laws of Scotland, and the laws referring to motor cars. There is also a political history of the world for 1902-03. The perpetual calendar has been struck out and its place has been supplied by a calendar for 700 years from 1752, the date of the introduction of the new style. The rest of the book is as good and as useful as ever and no higher praise can be given.

Whitaker's Peerage, 1904. London: J. Whitaker and Sons —This, we fancy, is the most complete peerage for its size that is published. The amount of information compressed within its 720 pages is enormous. The list of seats and residences now excludes all belonging to anyone under the rank of a knight and all of an official character. But the book is a worthy companion to the Almanack.

THE ETIOLOGY OF SLEEPING SICKNESS.

In The Lancet of Sept. 12th (p. 769) we drew attention to a Progress Report which had been issued by the commission which had been despatched by the Royal Society to Uganda to investigate the origin of sleeping sickness. We intimated the lines along which the inquiry had been conducted and also the results which had been already arrived at. Before proceeding to consider the further work of the commission it may prove interesting to refer to the events which led to its appointment. In 1902 Dr. G. C. Low, Dr. C. Christy, and Dr. A Castellani were sent by the Royal Society Committee to Uganda to study the disease. After some months Dr. Castellani reported that he had discovered a streptococcus which he announced to be the cause of the disease. Dr. Low and Dr. Christy were unable to come to any conclusion as to the etiology of sleeping sickness and returned home, having made certain observations as to the distribution and features of the disease. Dr. Castellani remained in Uganda in order to work out more fully the *history and nature of the streptococcus above mentioned*. The Royal Society Committee then determined to advise the Foreign Office to secure, if possible, the services of an observer of experience and proved skill—namely, Lieutenant-Colonel David Bruce, F.R.S., of the Army Medical Service, the discoverer of the blood parasite in the nagana or tsetse fly disease of South Africa. Lieutenant-Colonel Bruce, accompanied by Dr. D. Nabarro, reached Entebbe on March 16th. There they were met by Captain E. D. W. Greig of the Indian Medical Service. Dr. Castellani informed these gentlemen of the work which he had been doing, one especially interesting observation being that he had discovered trypanosomes in the cerebro-spinal fluid in five out of 15 cases of sleeping sickness. The results of Dr. Castellani's further investigations were published in No. I. of the "Reports of the Sleeping Sickness Commission," to which we referred in our annotation on Sept. 12th.

A "Further Report on Sleeping Sickness in Uganda" is now before us and bears the names of Lieutenant-Colonel David Bruce, R.A M.C., F.R S , David Nabarro, M.D. Lond , and Captain E. D. W. Greig, I.M.S. It was received on Sept. 30th, 1903. It states that in order to make it more easily understood and to prevent the necessity of constant reference to the previous "Progress Report," in certain places, not very numerous, extracts from the latter have been incorporated in the present report. It then proceeds as follows :—

> Since this further report contains a good deal of detail which may make it difficult to pick out easily the salient points, it may be well to point out at the outset that this report brings forward evidence to show :—
>
> 1. That sleeping sickness is caused by the entrance into the blood and cerebro-spinal fluid of a species of trypanosoma.
> 2. That this species is probably that discovered by Forde and described by Dutton from the West Coast of Africa and called by him *trypanosoma Gambiense.*
> 3. That the so-called cases of trypanosoma fever described from the West Coast may be, and probably are, cases of sleeping sickness in the earliest stages.
> 4. That monkeys are susceptible to sleeping sickness and show the same symptoms and run the same course, whether the trypanosomes injected are derived from cases of so called trypanosoma fever or from the cerebro spinal fluid of cases of sleeping sickness.
> 5. That dogs and rats are partially susceptible, but that guinea-pigs, donkeys, oxen, goats, and sheep, up to the present have shown themselves absolutely refractory.
> 6. T [illegible] the sick to the healthy by a [illegible] by it alone.
> 7. [illegible] and *Glossina palpalis* correspond.
> 8. That sleeping sickness is, in short, a human tsetse fly disease.

Many questions referred to in the Progress Report are elaborated in the report now under consideration. For instance, on the interesting point as to whether the so-called trypanosoma fever has any connexion with sleeping sickness the report states :—

> On the West Coast of Africa, during the past few years, trypanosomes have been found in the blood of several persons and the name trypanosoma fever has been given to that disease. The parasites have not been confined to the blood of natives, but at least three white people have harboured them. No suspicion of these being cases of sleeping sickness has been entertained by those in medical charge of them. The symptoms are different. Trypanosoma fever appears to cause little or no inconvenience to those harbouring the parasite, whereas in *sleeping sickness the disease* is a well-marked one and is invariably fatal. Can there be any connexion between the two?
>
> In March last Dr. Baker of the Colonial Service, who is stationed here, discovered trypanosomes in the blood of five natives, and Dr. Moffat, the principal medical officer, has also found them in the blood of a European.

Illustrative cases are given which go to show that there is probably a close connexion between the two diseases.

Another necessary point to determine was: "Does the blood of the general population contain trypanosomes?" On May 18th the commission received a telegram from the Royal Society, asking for statistics regarding the prevalence of trypanosomes in the general population (*a*) inside and (*b*) outside the sleeping sickness area. On a little consideration the importance of such an inquiry is seen. If the trypanosoma found in the blood of patients suffering from trypanosoma fever belongs to the same species as that found in sleeping sickness, then a larger percentage of the general population inside the sleeping sickness area should be found to harbour trypanosomes than those living in the non-sleeping sickness area. In fact, if the supposition be true there ought not to be a single trypanosoma found in the blood of persons living in a clean area. Because, if the theory that trypanosomes in the blood is merely the first stage of sleeping sickness be true, then all the cases in the non-sleeping sickness area cannot be in the initial stage, but scattered among them the observer would naturally expect to find some in the more advanced stage. In Entebbe the hut tax labourers supply ample material for such an investigation. There were some 1500 employed there and they came from all parts of the Protectorate. They remained at work in Entebbe for one month and then returned to their homes. During that time they were liable to contract sleeping sickness, but for the purpose of this inquiry natives from non-sleeping sickness areas, who had only been a few days in Entebbe, were chosen. Captain Greig also went over to Nairobi, in British East Africa, and examined 50 cases in an undoubted non-sleeping sickness area. The results of these examinations are given in accompanying lists in the report. These will be useful six months or a year hence in order to trace out and to learn the fate of the men whose blood now show trypanosomes, but who at present have no symptoms of sleeping sickness. 80 natives from the sleeping sickness area were examined, with the result that 23 were found to have trypanosomes in their blood, giving a percentage of 28 7. 117 were examined from non-sleeping sickness areas, but not a single trypanosoma was found. We agree that these results suggest that the trypanosomes found in the blood of seemingly healthy persons and in the cerebro-spinal fluid of sleeping sickness cases are identical and, further, that these trypanosomes are, in truth, the cause of the disease.

It is also natural to inquire whether any difference can be made out microscopically between the trypanosoma of sleeping sickness and that of trypanosoma fever. In the progress report it was stated that it would appear that the trypanosomes found in sleeping sickness are shorter, have chromatic dots more frequently, and the micro nucleus is situated nearer the end than in the other. Since the above was written an observation has been made which would seem to do away with any significance which the above differences in size and shape may seem to have. It is that trypanosomes from the cerebro-spinal fluid injected into the blood of monkeys become quite as long as the trypanosomes found in the blood of man, and the other differences also disappear. This would go to show that the trypanosomes merely find the cerebro-spinal fluid not as favourable for their growth as the blood and on this account are stunted.

An important series of observations was made to ascertain whether the trypanosomes are pathogenic to animals and whether any specific difference can be made out between them by means of suitable tests. A full report of the results of inoculations is given and forms a record from which valuable conclusions can be formed. The animals available for inoculation were monkeys, dogs, guinea-pigs, rats, donkeys, oxen, sheep, and goats. No animal was found which showed any marked susceptibility to the disease or in which the disease runs a rapid acute course, as is the case in nagana. The monkeys proved most useful and were injected subcutaneously, into the vertebral canal, and through the foramen magnum into the brain cavity with cerebro-spinal fluid and blood from many sources. Animals were inoculated with trypanosomes from the spinal fluid of persons suffering from sleeping sickness and from the blood of individuals who showed no symptoms of the disease. We quote an experiment from each class of case :—

> Experiment 1.—Monkey, male, pale-faced variety (*Macacus rhesus*) To note the effect of the subcutaneous injection of cerebro-spinal

fluid containing trypanosomes from a case of sleeping sickness. March 23rd, 1903. Injected 10 cubic centimetres of cerebro-spinal
the skin of the left side
of cerebro-spinal fluid on
this monkey was again
timetres of cerebro-spinal
blood
on 17
week
noon
the
ng of
n the
gn of
into
The
try-
this
monkey has shown symptoms of sleeping sickness. He sits all day long with his head sunk on his chest, evidently asleep. July 10th. Since the last entry the appearance of sleeping sickness has become more marked. The animal sits still all day with eyes closed and head sunk on chest. He is extremely emaciated but has no marked signs of paresis. He can still climb into his box. As he sits in this lethargic condition the muscles of the arms and trunk frequently show marked twitching, a symptom often seen in the last stages of sleeping sickness. July 12th. Died at 11.30 A.M.

The following table shows the presence or absence of trypanosoma in the blood.—

Date.	Parasites in blood.		
	Filaria.	Malaria.	Trypanosoma.
1903.			
April 7th		–	–
" 8th		–	–
" 9th		–	–
" 11th		–	–
" 14th			–
" 22nd	–	–	–
" 30th	–	–	–
May 7th			–
" 14th		–	–
" 21st		–	–
" 28th		–	+
June 4th		–	+
" 11th		–	+
" 18th		–	+
" 25th		–	+
July 1st		–	+
" 10th		–	+

death. The body is extremely

also seen to be tubercular. On removing the calvarium the dura mater
of the left cerebral hemisphere

This pale faced variety was brought by us from England. of them harbour malarial parasites as most of the local black-faced variety do. They seem to be more susceptible to the trypanosomes than the local species.

EXPERIMENT 60.—Monkey (*Macacus rhesus*). To note the effect of the subcutaneous injection of blood from a case of trypanosoma fever. April 15th. Injected subcutaneously two cubic centimetres of blood containing trypanosomes from Case 66. May 7th. Trypanosomes appeared in the blood for the first time, 22 days after injection. May 14th. The hæmatozoa are noted as being very numerous. July 2nd. Up to the present this monkey has shown no signs of being ill. To-day, however, he appears listless and less energetic. Temperature observations resumed. July 15th. For the last fortnight this monkey has presented the same picture of sleeping sickness as noted in the ca
He sits about
all day with his head su
p. He has
become emaciated and to
about the
face. July 16th. Died at

The following table shows the presence or absence of trypanosomes in the blood and cerebro spinal fluid:—

Date.	Parasites in blood.			Parasites in cerebro spinal fluid	
	Filaria.	Malaria.	Trypano-soma.	Filaria	Trypano-soma.
1903.					
April 15th		–			
" 23rd	–	–	–		
" 30th	–	–	–		
May 7th		–	+		
" 14th		–	+		
" 21st		–	+		
" 28th		–	+		
June 4th		–	+		
" 11th		–	+		
" 20th		–	+		
" 25th		–	+		
July 1st		–	+		
" 16th		–	+		+

Post mortem immediately after death. The body is much emaciated.
The axillary, inguinal, and lymphatic
ly there is no fluid found in
vities. There are no signs of
or lungs. On removing the
e normal. On reflecting this
nts a striking resemblance to

others are in the incipient stage of sleeping sickness.

Trypanosomes were also injected into dogs, but the native dog in Uganda is not very suitable as an experimental animal. Many of them die from ankylostomiasis before the experiment is finished and this disease is so common among them that it is difficult to obtain one free from it. The conclusion arrived at from a study of the few cases under observation was that the trypanosomes of sleeping sickness and trypanosoma fever can live and multiply for some time in the blood of the dog but tend to disappear sooner or later and that they show no difference in their action on the dog. Further, it would seem that a puppy is less susceptible than an adult, just as the calf is less susceptible to piroplasma than grown-up cattle.

Accounts are also given of the effect of the injection of trypanosomes into guinea-pigs, donkeys, oxen, sheep and goats. For the results of these experiments we refer our readers to the original reports.

The question is then asked: Are we dealing with one or more than one species of trypanosoma? As has been shown, no morphological difference can be made out between the trypanosomes found in the cerebro-spinal fluid of cases of sleeping sickness and those found in the blood of persons evidently in good health. Neither can any difference be detected in their behaviour when inoculated into various animals. More experiments are required and more results obtained before this question can be answered unhesitatingly but at present the evidence distinctly tends to show that we are dealing with one species of trypanosoma and that species is probably trypanosoma Gambiense, discovered by Forde and described and named by Dutton.

The next subject dealt with is the history and distribution of sleeping sickness in Uganda. The report proceeds :—

According to Dr. R. U. Moffat, C.M.G.,[1] principal medical officer, British East Africa and Uganda Protectorates, the first cases of sleeping sickness in Uganda were reported by the Drs. Cook, C.M.S. Medical Mission, Mengo, in April, 1901. These cases came from Busoga. On Dr. Moffat's return from leave in April, 1902, he was surprised to find that the disease had become epidemic in Busoga and that it had spread into the neighbouring parts of Uganda and Kavirondo.

He is of opinion that the disease is not indigenous to Uganda, but has been imported during recent times from the Congo basin. This, he thinks, "is no matter for surprise when we consider that the opening up of equatorial Africa has led to intercommunication between countries and districts which in earlier days were absolutely cut off from each other." He is inclined to explain the first appearance of the disease in Busoga by the fact that a large number of Emin Pasha's Soudanese, accompanied by a multitude of slaves from the Congo territories west of Lake Albert were brought in and settled in Busago. Dr. Hodges, who studied the question in Busago, thinks it first broke out there in 1896. Be this as it may, the disease is now widely spread round the northern shores of the Victoria Nyanza from Buddu on the west to south of Kavirondo Bay on the east. As far as I am aware the disease has not yet entered German territory.

As the first Sleeping Sickness Commission sent out by the Royal Society made this part of the subject—the distribution of the disease—an object of special investigation, it was thought unnecessary to pursue the subject further. Full details of the work done are not at present available, but for the purposes of this report it may be stated that this disease has a remarkable distribution, being confined to the lake shore and to the islands. How wide the strip of lake shore affected by the disease is differs in different parts.

Mr. Cubitt, assistant collector, Busoga, who investigated the distribution of the disease in his district, in a report to the commissioner, dated Jinja, June 14th, 1902, says, "it would seem to be a fairly accurate statement to ma[illegible] itself to the territories adjoining the [illegible] to 20 mile radius of the coast, and [illegible] suffer in proportion to the greater [illegible] have with the people living within that radius, while in those who have no trading transactions with the people of the lake there are found no traces of the disease." In the opinion of the Uganda Prime Minister, Apolo, a strip ten to 15 miles wide would cover the affected area and any cases found further inland are imported. The numerous islands which lie near the northern shores of the lake are also the seat of the disease. Between these islands and the mainland and for several miles inland a constant interchange of commodities and intercourse between the natives takes place.

There must be some reason for this peculiar distribution. It cannot be due to a food poison, as the natives outside this narrow strip have the same habits. Then, again, if the trypanosomes are the cause of the disease, which there is every reason to suspect, the infection cannot be conveyed in food or clothes or directly from man to man, but most probably must be ca[illegible] This led the commission to ask t[illegible] Does the distribution of sleeping [illegible] of any biting insect? On the analogy of nagana a tsetse fly was suspected. But the tsetse was not supposed to be present at altitudes of 3000 feet and upwards, nor was it known to be found in Uganda.[2] A short search in the Botanical Gardens, Entebbe, disposed of these objections. A tsetse fly very similar to the one met with in the fly country, Zululand, was found in numbers. For three months we have had on an average 400 tsetse flies brought into the laboratory every day by a few native children. These flies were caught on the lake shore in the immediate vicinity of Entebbe. This gave a lead. The Prime Minister and Regents were asked to meet the commission and have the matter explained to them. They at once recognised the fly as one known to the Muganda as kivu and said that it was found along the shores of the lake[3] They were supplied with several dozen nets, killing bottles, and boxes and on their part promised to have the distribution of the fly worked out. A letter was also addressed to the Bishops of Uganda, who kindly promised to obtain information from their missionaries. Every official and missionary in the country was then sent a specimen of the tsetse fly and informed by letter as follows :—

"Sleeping sickness in many ways, is very similar to the fly disease of South Africa. It is caused by the same kind of parasite and is possibly carried from man to man by some insect as the fly disease is carried by the tsetse fly (*Glossina pallidipes*). A species of tsetse fly (*Glossina palpalis*) is also found in Uganda, especially along the shores of the lake and in the islands. It is possible that this fly acts as the carrier of the infective agent of sleeping sickness. If this is so the disease can only occur in places where the fly is found. In other words, *no tsetse fly, no sleeping sickness.*

"In order to settle this question the distribution of this fly must be carefully worked out. To assist in this would you kindly send collections of biting flies from your district and answer the following questions: (1) Is the tsetse fly (*Glossina palpalis*) found in your district? (2) In what kind of place is the fly found—marsh, banana plantation, bank of river, shore of lake, forest, bush, or open places? (3) When does it bite, during the morning, mid-day, or at night? (4) Is it numerous? (5) What animals does it bite? (6) Does sleeping sickness occur in the same place, distinguishing, of course, between imported cases and those which have been infected on the spot?

"The best way to catch the flies is by means of a small butterfly net. *They can then easily be killed by a squeeze and* placed in a small envelope with the name of the place and date of capture written on it. I may add that the natives call the fly kivu, plural bevu. It is important that the position of the place in which these tsetse flies are found should be exactly laid down. This can be done by giving the latitude and longitude in degrees and minutes or by saying how many miles it is from a known place in a westerly or S.S.W., &c., direction. Still better would it be to make a tracing of the district and on this to map out the distribution of the fly and of the sickness. It is no use trusting to report. The flies themselves must be caught and sent here for identification. The natives use the word kivu for several varieties of biting flies. If no tsetse flies are found in the district please send specimen of any of the various biting bites or insects known to the natives."

During June, July, and August some 460 collections of biting flies were sent in from all parts of the Uganda. As each package came in the contents were sorted into tsetse flies and other biting flies. If the parcel contained one or more *tsetse flies* a round red disc was stuck on a map over the locality from which the flies had been sent. If, on the other hand, no tsetse were found a blue disc was fixed over the spot. In the same way and at the same time a second map was prepared to show the distribution of sleeping sickness. That is to say, if the note on a parcel of flies stated that sleeping sickness is prevalent then a red disc was placed over the locality, and if, on the contrary, no cases of sleeping sickness were reported a blue disc was affixed. Where cases were reported to have been introduced from some other locality and to have died out without any spread of the disease in the neighbourhood, then a yellow disc was used.

It is evident that two maps so prepared should show at a glance whether the distribution of sleeping sickness and *Glossina palpalis* corresponds or not. [illegible]s (see Figs. 1 and 2) are taken from the originals. [illegible]e third the size of the larger maps and the blue [illegible] are replaced by black. On comparing these tw[illegible] *the distribution of sleeping* sickness and *Glossina palpalis* is self-evident. The disease and the fly are limited to the shores of the lake and to the islands, except in Busoga where some of the red dots are seen in the centre of the district. The fly is also seen to pass up the Nile. This is probably due to the fact that the Nile is a great broad waterway, where it issues from the lake at the Ripon Falls and may be looked upon in its physical characters as an arm of the lake. The other Uganda rivers are mere swamps full of papyrus. As it appeared important personally to examine one of these so-called rivers to discover how far the tsetse fly could be traced up their valleys one of us (Dr. Nabarro) proceeded on July 4th to explore the Katonga river. An account of this expedition is given by Dr. Nabarro as follows :—

"This expedition proceeded by canoes from Entebbe to the Island of Bussi. The tsetse fly was not sought here as it had been previously found by Colonel Bruce. Then it visited the islands Zinga and Bunjako, in both of which the tsetse fly was easily found along the shore of the lake where there was *forest and short grass.* Sleeping sickness is prevalent on all three islands. Buganga was the next place visited and here, too, the tsetse fly was found as well as large numbers of tabanidæ. Sleeping sickness is prevalent in Buganga. We left Buganga and sailed round the Katonga bay to see if there were any channel up the Katonga river but we could find none, the so-called river being a papyrus swamp about 1200 yards wide. We then went further on and landed near Magambo where forest comes down to the edge of the lake. Here, too, the tsetse flies were caught in numbers and there were several cases of sleeping sickness in the neighbourhood. From Magambo we marched across the Kibikuta river (1800 yards wide) about two miles from where it enters the Victoria Nyanza. No tsetse flies were found there. Thence we marched to the Katonga river, which like the Kibikuta is merely a papyrus swamp. The left bank of the Katonga was explored from the lake shore, close to the mouth of the river, to a point about 13 or 14 miles up the river and no tsetse flies were seen. So far as I was able to *ascertain there is no sleeping sickness* in this district.

"The return journey to Entebbe was made by road, passing through Metala Maria and Kianjia. In neithe[illegible] flies found, though stomoxys and [illegible] numbers. These two villages are situated about two to three [illegible] from the shore of the lake, which here consists of a vast papyrus swamp between the mainland and adjacent *Islands* Bunjako, Zinga, and Bussi. No tsetse flies were found [illegible] close to this swamp. There is no sleeping sickness at [illegible]a. From Kianjia we went along the main road [illegible]half miles distant), where we found no tsetse fli[illegible] sleeping sickness. We then travelled by the porters' road for ten miles, *viâ* Busami and Gabongas, and did not find any tsetse *flies* until we reached the shore of the lake at 'the ferry,' near Entebbe. Here many flies were easily caught in the dense forest that there runs along the lake shore. I was informed that there were several cases of sleeping sickness in the 'Shambas' near the lake shore, but that there were none in the interior—at Busami or Gabongas."

The main points of interest in Dr. Nabarro's account are that the fly does not proceed up the swampy river valleys and that even on the coast behind papyrus swamps it is also absent. On the map this journey is shown by a series of red dots on the islands and on the shore at the mouth of the Katonga river, and by blue dots up the river and along the shore behind the islands. The space between the islands and the mainland is one huge papyrus swamp. In order to work *out more* minutely the habits of the *Glossina palpalis*, the peninsula on which Entebbe stands was taken in detail and carefully searched for the fly. The result of this showed that the fly is only found on the shore of the lake where there is forest. This forest is thick jungle with high trees and dense *undergrowth. The fly is* never found on open sandy beaches backed by grass plains, even although there may be some small *scrub* near the water's edge. It is never found in the grass of the grassy plains, even though the grass be long and tangled. It has not been found by us in banana plantations, nor at any time far from the lake shore.

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[1] Foreign Office Despatch, August 5th, 1902, Inclosure 2—Preliminary Notes on Sleeping Sickness by the Principal Medical Officer, June 17th, 1902. Inclosures 3 and 4—Dr. Hodges to Dr. Moffat, May 8th, 1902, and May 26th, 1902.

[2] Since the above was written I find that Mr. F. J. Jackson in a despatch to the Foreign Office, dated Sept. 27th, 1901, writes, "I may add that there is a species of tsetse fly found along the wooded portion of the lake shore here at Entebbe. It is plentiful in the Botanical Gardens."

[3] The tsetse flies found near Entebbe were sent to Professor Ray Lankester, the *director of* the *British Museum (Natural History)*, on March 25th and identified by Mr. E. E. Austen as *Glossina palpalis* (Rob. Desv.). He writes: "This is the West African species and its occurrence in Uganda is very interesting and was quite unexpected by me, though it is true that another species—*Glossina fusca*—occurs both in West and East Africa."

DISTRIBUTION OF SLEEPING SICKNESS AND GLOSSINA PALPALIS IN UGANDA

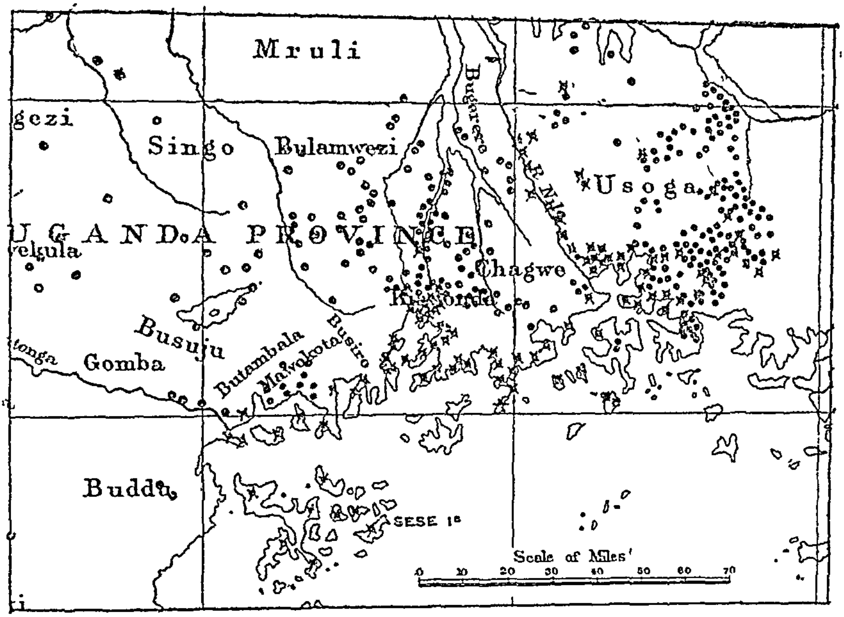


FIG 1.—The stars show the localities of the tsetse fly, the dots indicate the other biting flies

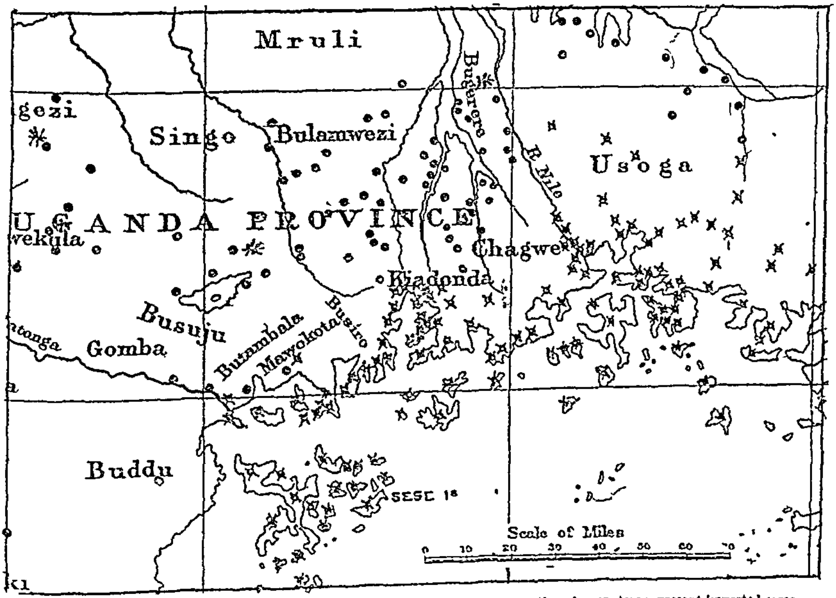


FIG 2.—The stars show the localities of sleeping sickness, the dots its absence The three larger stars represent imported cases

The habitat, then, of this fly in the neighbourhood of Entebbe is the shore of the lake where there is forest. In Uganda generally the same seems to hold good. In Busoga, on the other hand, it appears to be found inland, but what the physical characters of this province are which would account for this I have not learnt. The fly also passes down the Nile as far as Kakoge ferry some 50 miles north of the Ripon falls and it has even been received from Fajao on the Somerset Nile and from Tengri and the Achwa river, still further north and near Wadelai. It is important that the distribution of this fly should be fully worked up, but enough has been done to show that the distribution of this species of tsetse fly is, like sleeping sickness, confined to the shores of the lake and the islands. It is on the densely wooded shore of the lake that the half-naked natives of the mainland and islands meet in thousands to trade in fish, bananas, earthenware, &c. If the *Glossina palpalis* can act as a carrier of the trypanosoma of sleeping sickness, the circumstances could not be made more favourable than they are for the spread of the disease.

A series of experiments was next instituted to ascertain whether the Uganda tsetse fly (*Glossina palpalis*) can carry the trypanosoma found in cases of sleeping sickness to healthy animals. The animal chosen to carry out these experiments was the monkey. These are by far the most suitable animals to work with. They are easily procured, easily fed, and keep their health perfectly in captivity. The method used was simply to feed tsetse flies on a patient suffering from sleeping sickness and at varying intervals of time to place the same cage of flies on the monkey. The sleeping sickness patients did not seem to feel the bites of the flies, as they made no complaint or other signs of inconvenience. There were, as a rule, about 30 flies in each cage, but only those which filled themselves were reckoned as having fed. After certain details as to the methods adopted, the report continues:—

As the result of five experiments it may be considered proved that *Glossina palpalis* can convey trypanosomes from sleeping sickness cases to healthy monkeys up to at least 48 hours after feeding. We have seen that every third or fourth native in the sleeping sickness area carries trypanosomes in his blood, so that the fly has plenty of material to draw from. It may be objected that the parasites are so scarce in the blood that it is unlikely the fly will get hold of them. The same objection might be urged in regard to nagana, whose trypanosoma is probably scarcer in the blood of the wild animals than is the case in sleeping sickness. No doubt cases do occur among sleeping sickness patients, though rarely, in which the trypanosomes are fairly numerous. It is thought that they may be more numerous in the early stages when still confined to the blood than in the later stage of sleeping sickness. The observations on this point are as yet neither numerous nor exact enough to warrant any dogmatic statement.

The next series of experiments was made to find out if the ordinary wild tsetse flies, freshly caught and placed on healthy monkeys without any artificial feeding, will give rise to the disease. This is a still more important point and in this also the experiments are given in full. The flies were caught on the shore of the lake in the vicinity of Entebbe and when brought to the laboratory were immediately placed on healthy monkeys.

The following shows the results of one of the experiments:—

EXPERIMENT 94.—Monkey (*Cercopithecus* sp.). To ascertain if tsetse flies, freshly caught in the vicinity of Entebbe, are carrying trypanosomes.

May 13th, 1903. Blood examined. No trypanosomes. No malaria.

May 13th ...	Fed 31 flies.*	May 19th ...	Fed 20 flies.
„ 15th ...	„ 15 „	„ 20th ...	„ 13 „
„ 18th ...	„ 10 „	„ 21st ...	„ 16 „

Blood examined. Trypanosoma absent. Malaria absent.

May 22nd ...	Fed 20 flies.	May 25th ...	Fed 31 flies.
„ 23rd ...	„ 25 „	„ 26th ...	„ 18 „
„ 24th ...	„ 17 „	„ 27th ...	—

Blood examined. Trypanosomes *present*. Malaria absent.

* Freshly caught near Entebbe.

Three experiments (including the one we have quoted) gave positive results. To quote further from the report:—

The flies were caught in the vicinity of the hut-tax labourers' camp. These men to the number of thousands come to Entebbe and work for Government for one month in lieu of paying hut-tax. They live in rudely built grass huts near the shores of the lake, about a mile from Entebbe along the Kampala-road. Tsetse flies caught at this place and brought in cages to the laboratory have conveyed trypanosomes to three monkeys. What could be more suggestive? It is true that the trypanosoma conveyed to these monkeys may be a different species from that found in sleeping sickness, but taking everything into consideration the probabilities are that it is the same.

If this is so it would be interesting and instructive to know what percentage of the hut-tax labourers develop this disease on their return to their homes. It may possibly be an extremely small figure as these men are only exposed to the risk for a month and, as a rule, their work lies in the town where tsetse flies are never found. This is very different from the case of the natives who live all their lives on the edge of the lake and are exposed all the year round to the infection. In our opinion, if these hut-tax labourers were camped on suitable ground there would be little or no danger in their coming into Entebbe to do a month's work.

Up to the present we have received very few notices of the occurrence of cases of sleeping sickness, in non-sleeping sickness areas, supposed to have been contracted in Entebbe or on the lake shore. Five cases are reported by the White Fathers to have occurred at Kiambalangos Place, south of Hoima, and three cases in Bwekula by Mr. Lewin. These men are stated to have contracted the disease round about the Victoria Lake and have all died out without spreading the disease. Another curious case is reported by Major Harrison, K.A.R., at Nairobi, in British East Africa. The man was a bugler named Mahomed. He left Uganda in May, 1900, enlisted at Nairobi, British East Africa, on Nov. 7th, 1900, and died of sleeping sickness Feb. 18th, 1902. Dr. Wiggins also relates the case of an Askari or native policeman named Sullivan Khair, stationed at Fort Ternan, British East Africa, for two and a half years before he developed the disease. He came from Entebbe and except for a visit to Jinja, Busoga, 14 months before he died, he had not left Fort Ternan. Neither of these men set up infection among their comrades.

These cases hint at a long incubation period when the trypanosoma is confined to the blood and also to the need of the tsetse fly to act as intermediary between the sick and healthy.

In an appendix clinical reports of several cases are given. We append a typical one together with the reproduction of a photograph of the patient.

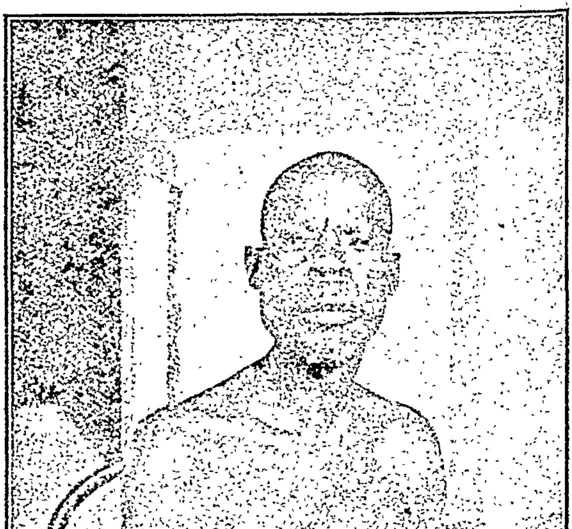
CASE 21.—Kidorme (male). Age 20. District, Bussi. Occupation, Leadworker. Food, Fish, Sweet Potatoes, and Bananas.

March 24th, 1903. Admitted to hospital. Patient states that his illness began with cough and pain in his chest and that he has been ill about three months.

April 7th. He is weak on his legs, being only able to totter along. There is tremor of the fingers. His pupils are equal and normal. His speech is indistinct, weak, and monotonous.

April 22nd. *General condition.*—He is well nourished. His gait is weak and uncertain; he walks carefully with bent legs. He is intelligent and the expression of his face is fairly bright. There is no œdema anywhere. The mucous membranes are normal. No trophic changes.

FIG: 3.



A case of sleeping sickness.

enerally enlarged, about the size of beans in
e does not complain of any pain. *Nervous*
memory are good. He lies about all day but
does not sleep much during the day. Speech rather weak and indistinct. Eyes normal. Tongue jerky. Tremor of lips and hands and generally of body. His sensibility to touch is normal, as also is his muscle sense. Knee-jerks are present. Ankle clonus absent. *Alimentary system.*—His appetite is good; tongue moist, furred; and gums are healthy. The liver and spleen are not enlarged. Bowels regular with use of medicine. *Circulatory system.*—Apex beat is imperceptible. Heart sounds weak. No bruit. Pulse 120; small, tension low, com-
ory system.—Nothing abnormal.

The following table shows the presence or absence of trypanosomes in the cerebro-spinal fluid and blood :—

Date.	Parasites in blood.			Parasites in cerebro-spinal fluid.	
	Filaria.	Malaria.	Trypanosoma.	Filaria.	Trypanosoma.
1903.					
March 28th					+
April 18th	+		+		
„ 22nd		–			

Post-mortem.—14 hours after death. Th[illegible] nourished young man of about 20 year[illegible] marked. A slight superficial bed sor[illegible] [illegible] it and the brain. [illegible] ickness appearance. The vessels are injected, the convolutions are flattened, and the sulci are filled with an excess of sub arachnoid fluid, giving them a ground-glass appearance. On section the white matter shows congested points, the lateral ventricles contain about six cubic centimetres of cerebro-spinal fluid, otherwise the brain appears healthy to the naked eye. *Thorax.*—No fluid in either pleural or pericardial cavities. *Heart.*—Weighs eight ounces. There is a slight excess of fat in the epicardium. There are no petechiæ and nothing abnormal, except a slight deposit of atheroma at the beginning of the aorta. *Lungs.*—Left weighs one pound There is some congestion of the lower lobe, otherwise the organ appears healthy. Right weighs one pound and is in the same condition as the left *Liver.*—Weighs three pounds two ounces. The surface is somewhat rough to the touch, like morocco leather. On section the lobules stand out rather prominently, due probably to dilated peripheral capillaries. There are dark ramifying [illegible] section the tissue appears healthy. *Alimentary system.*—The mesenteric glands are enlarged to the size of beans. The intestines appear healthy.

Remarks.—An ordinary uncomplicated case of sleeping sickness The accompanying photograph (see Fig. 3 was taken of Kidormo a month before he died, and it must be admitted his appearance is that of an ordinary healthy native.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Dec. 12th, Mr. JOHN TWEEDY, the President, being in the chair.

The Diploma of Fellowship was issued to 19 candidates.

On the recommendation of the court of examiners it was resolved :—

That the s[illegible] West Londo[illegible] be included [illegible] Members of [illegible] practice, aft[illegible] under the co[illegible] the Diploma of Fellow.

The Council also received a report from the court of examiners on the report of the visitor and inspector of the General Medical Council on the final examination of the Conjoint Examining Board in England. The report of the court dealt with all the complaints made by the visitor and inspector and showed that the suggestions made were all undesirable or impossible except that relating to the system of marking, as to which the court made some recommendations. The Council approved and adopted the report and directed that a copy of it should be forwarded to the General Medical Council as its reply to the criticisms of the visitor and inspector of the General Medical Council in regard to the final examination in surgery of the Conjoint Examining Board in England.

Diplomas were directed to be issued to the 72 successful candidates for the Licence in Dental Surgery. A report from the board of examiners in dental surgery was received. It referred to the undesirability of men who had passed in the dental section only of the examination for the Licence in dental surgery and who [illegible] the general section, being able to describe [illegible] the dental subjects, and it sugge[illegible] compulsory for candidates to p[illegible] before examination in the dental section. The Council adopted the report and directed that the necessary alterations should be made in the regulations.

The PRESIDENT reported that, in accordance with the unanimous recommendation of the board of examiners in dental surgery, he had authorised the board to hold in February, 1904, an additional examination in general anatomy and physiology, and general pathology and surgery (Part I. of the Second Professional Examination for the Licence in Dental Surgery).

These proceedings of the President were approved and confirmed.

A report was received from the committee on the annual report of the Council. It described the meeting, as already reported in THE LANCET of Nov. 28th, p 1521, and recommended the action to be taken on the resolutions passed at that meeting.

In reference to resolution No. 1 the Council resolved :—

That in the opinion of the Council it is not expedient to reopen the question of the representation of Members of the College on the Council.

In reference to the second resolution the Council resolved :—

[illegible] not expedient to reopen [illegible] of the College on the [illegible] e served by receiving a [illegible]

The Council also resolved that a copy of these resolutions of the Council should be sent to the respective movers and seconders of the two resolutions.

With reference to the motion proposed by Dr. W. G. Dickinson and afterwards withdrawn, the Council resolved that the minutes of the Council should be posted in the library and common room as well as in the hall of the College and that Section I. of the regulations of the Council should be amended accordingly.

It was resolved that the clause No. 4 of Section 23 of the rules relating to meetings of Fellows—viz , "A meeting shall be held in each year on the first Thursday in July after the annual election of the Council on that day"—should be suspended during the year 1904.

It was resolved that there shall be a Fellows' subscription dinner at the College on the day of the Council election and it was referred to a committee to make the necessary arrangements for July, 1904.

The PRESIDENT reported the delivery of the Bradshaw lecture by Mr. Henry Morris, the subject of the lecture being Cancer and its Origin. The best thanks of the Council were given to Mr. Morris for his lecture and he was requested to publish it.

A letter was read from Mr. Thomas Bryant reporting the proceedings of the General Medical Council at its late session. The best thanks of the Council were given to Mr Bryant for his services as the representative of the College.

A letter was read from the Clerk of the Privy Council forwarding a further memorandum from the Director-General of the Army Medical Service, with more detailed statistics as to the percentage of recruits rejected and the causes of rejection and asking that these documents should be taken into consideration. It was resolved to refer the documents to the committee appointed by the Council in July last and to request that committee to send a reply to the physical [illegible] committee [illegible] hase [illegible] S, for presenting to the College an engraving of Mr. Benjamin Harrison, formerly the treasurer of Guy's Hospital, and also for a case of instruments for ligaturing the subclavian artery, invented by Dr. Mott of New York and presented by Dr. Mott to Mr. Bransby Cooper.

On the motion of Mr. A. W. MAYO ROBSON and Mr. R. CLEMENT LUCAS it was resolved to appoint a committee to consider the relation of the medical profession to the coroner's court.

HOSPITAL FOR MID-CHESHIRE.—The Mid-Cheshire Joint Isolation Hospital authority, the first to be constituted in Cheshire, adopted plans on Dec. 4th for submission to the county council and the Local Government Board of a joint hospital for Northwich, Winsford, and Middlewich urban and Northwich rural districts. Estimates were presented showing that the cost, including the site, but exclusive of furnishing, &c , would be £13,537. The county council will bear one-third of the cost and will obtain borrowing powers from the Local Government Board. A small-pox hospital will have to be provided in addition on a separate site.

THE LANCET.

LONDON: SATURDAY, DECEMBER 19, 1903.

The Registration of Births and Deaths.

WE have received from the honorary secretary of the Leicester Medical Union a copy of a document entitled "Suggestions for an Act of Parliament to Extend and Amend the Law Regulating the Registration of Births and Deaths," and we congratulate the members of the Union upon having turned their attention to one of the most pressing of the medico-political questions of the day. All enactments governing domestic administration must from time to time be adapted to the ever-growing complications of national life; and the registration of births and deaths has remained unaltered since the consolidation of the Acts relating to the subject by the 37th and 38th of Victoria. In the course of the period which has since elapsed much knowledge has been gained with regard to the statistical value of correct registration, as well as with regard to the misleading character of the inferences likely to be deduced from careless and inaccurate returns, and, at the same time, our knowledge of the facilities for crime afforded by the present law has been materially increased. According to documents issued by the Registrar-General the uncertified deaths which were not made the subjects of judicial inquiry have amounted during the last ten years to something ranging from 1½ to 2 per cent. of the entire mortality of the kingdom; and not the least striking feature of the case is that this proportion differs widely in different parts of the country. During the last quarter, for example, there were no uncertified deaths in Rutlandshire, and the proportion was less than 1 per cent. in London, Surrey, Middlesex, Wiltshire, Somersetshire, Gloucestershire, Cheshire, the East Riding of Yorkshire, and Monmouthshire; but it reached 3·0 per cent. in Kent, 3·2 in Cumberland, 3·3 in North Wales, 3·4 in Bedfordshire, 3·5 in Derbyshire, 4·4 in Herefordshire, and 6·1 in Westmorland. The contrasts presented by urban districts were not less remarkable, for while the mean proportion in 76 great towns was 1 per cent., and while there were no uncertified deaths in Croydon, Willesden, Hornsey, Tottenham, East and West Ham, Southampton, Great Yarmouth, Derby, Stockport, York, Newport (Mon.), or Merthyr Tydfil, the proportion per cent. rose to 3·1 in Smethwick, in Bootle, and in Barrow-in-Furness, to 3·2 in Gateshead, 3·5 in Rochdale, 3·7 in Warrington, 3·8 in Rotherham, 4·2 in South Shields, and 4·6 in St. Helens. Neither the county nor the city of Leicester receives special mention, a circumstance from which we may infer that the action of the members of the Medical Union has been guided by considerations of a general character rather than by any special experience gained in the localities in which they live.

Of the 1781 deaths which in the third quarter of 1903 were registered without certification the returns furnish us with no particulars. We are not told in what proportion they were those of young children or of aged people, the two classes in which death is most likely to be brought about, directly or indirectly, by cupidity or by neglect. It is probable that some causes have been assigned for this mortality, but no one can tell in what proportion such causes may have been those actually in operation. During the same quarter the causes of death were certified in 8296 cases by coroners after inquisition, and it is manifest that an increase of this number by something more than one-fourth, while entailing but small expense, would materially have increased the public safety. We do not need SHAKESPEARE to tell us the frequent dependence of ill deeds upon opportunity; and a locality in which it becomes known that registration can be easily effected, and that the absence of a certificate will be excused or disregarded, quite naturally becomes a happy hunting ground for the agents of those perverted forms of the insurance office or of the burial club which have been responsible for so many instances of unexplained decease. A minor but still an important consideration arises from the extent to which the want of certification introduces an element of inaccuracy into the returns of the causes of death and diminishes their usefulness as the basis of conclusions upon questions of public health. At St. Helens, for example, where there is a population of rather more than 85,000 and an average mortality of 475 deaths per quarter, there would be an average of 78 uncertified deaths in the year; and it is easy to conjecture the extent of error which might thus be introduced into any calculations concerning, say, the mortality attendant upon some particular local epidemic or cause of disease. The existing state of the law, therefore, strikes at the root of the accuracy of registration as well as at that of its completeness, and in regard of both it falls much below the scientific requirements of the present day. In addition to all this, it casts a wholly unjustifiable burden upon medical practitioners who are required to furnish certificates of the cause of death in all cases which they have attended and in which there is no suspicion of foul play, without any provision for their remuneration, either by the relatives of the deceased or by the State.

The evils and abuses thus referred to have long been flagrant and have more than once been made the subject of official representation to the Privy Council by the General Medical Council, but so far wholly without effect. It may be added that the office of Registrar-General, which has for its main object to chronicle the causes of death and to derive from them whatever lessons they are calculated to teach, instead of being regarded as one which is in its very nature medical, has hitherto been conferred upon non-medical gentlemen. The Leicester Union does not touch this aspect of the case but is content to suggest that no burial shall take place without a medical certificate, that every birth shall be certified to the registrar either by a medical practitioner or by a registered midwife, and that no *stillborn* child shall be buried without a medical certificate, provisions being introduced to meet the accidental absence of a person entitled to certify. So far the "suggestions" ought to command universal assent; but there is also one which would require a practitioner who had been in attendance during an illness to see the body of his deceased patient before certifying, and within 24 hours of death, or to depute some other practitioner to do this on his behalf. We have heard objections to this proposal on the part of medical men who have alleged that the discharge of the duty might sometimes be troublesome or inconvenient, but we think, especially as the suggestions provide for payment, that any such trouble should be faced. It would hardly be consistent with professional dignity and rectitude to certify even the fact of death, when this is done as a public duty, merely on a basis of hearsay information, and there could be no overwhelming inconvenience in paying another visit where presumably several have been paid before. The medical profession, with everything to gain by the better enforcement of registration, should be the last to object to an enactment which would invest it with due and proper formality. As regards the important question of remuneration, the suggestions are only defective in so far as they neglect to say by whom it should be provided. They recommend a payment of 5*s.* for a medical certificate of the *cause* of death and a payment of 1*s.* for a certificate of the *fact* of birth, thus making a proper distinction between the value of professional and of what may be called common knowledge. The proposed service is for the good of the State and it is clearly by the State that the expense of providing it should be incurred. The proposed payments would yield something between £160,000 and £200,000 a year to the profession; and whenever there is any prospect of the question being submitted to Parliament the medical men in every constituency should impress upon their representatives the absolute dishonesty of the demand hitherto made upon their time and skill, and the strength of the arguments in favour of their being paid as public officials for the discharge of important public duties.

The Results of Operative Treatment of Perforating Gastric and Duodenal Ulcer.

FOR more than ten years it has been the routine treatment to deal with perforated ulcers of the stomach by laparotomy and sufficient time has now elapsed to enable us to form a clear idea of the operation and its results. It is true that the records of many cases have appeared in THE LANCET and other medical journals, both in this country and abroad, and these have been collected from time to time and analysed, but the statistics founded on the results of these published cases have but little value, for successful cases are far more likely to appear in a medical periodical or to form the basis of a paper read at a society than are those in which the issue has been unfortunate. There are several reasons for this. In the first place every surgeon feels a perfectly justifiable pride in the recovery of a case which he has submitted to operation and therefore he is more likely to put it on record; secondly, an unfavourable result may be, and often is, due to some peculiarity in the case itself or to the time at which it comes under treatment, and therefore it may in itself be less instructive; and in the third place, especially when an operation is new, the surgeon is liable to attribute a fatal result in some degree to a lack of acquaintance with the technique of the operation. As a result of these natural tendencies single cases, whether recorded in the journals or in the transactions of the societies, should be excluded from statistics which claim to be of real value, because it will be found that single cases are far more likely to be successful than unsuccessful. It is then on series of cases that we must rely if we wish to obtain a trustworthy statistical idea of the mortality following any operative procedure.

A complete list of the cases under any one surgeon will give a far better view of the risk of an operation, but of greater value still is a series of cases occurring in a hospital, for thus not only are we likely to obtain a greater number of cases but, inasmuch as it will include the practice of several surgeons, the personal factor will tend to be eliminated. In this issue of THE LANCET will be found a series of cases of operation for perforation of gastric and duodenal ulcers treated at St. George's Hospital. The cases number 50 and have been collected by Mr. T. CRISP ENGLISH who has also analysed the facts connected with them and thus has conferred a distinct service on surgery. Of course from this series have been excluded those cases in which moribund patients with perforated ulcers were admitted and in which no operation was performed. The first question which Mr. ENGLISH has attempted to solve by his series of cases is, What signs are there of impending perforation—and he has shown that in a certain proportion of the cases there were a progressive increase of pain and vomiting for a few hours or even for two or three days preceding perforation. This increase of severity of symptoms might prove of value in enabling surgical aid to be at hand should perforation result. In three cases perforation occurred in patients already in the hospital and curiously all three patients died; in one of the cases death was due to a duodenal ulcer opening up the gastro-duodenal artery. The signs of perforation are generally sufficiently clear; the sudden intense and abdominal pain is the most important of these while vomiting was present in over 75 per cent. of the cases. During the stage of reaction the patient may show few signs and in one case a man walked into the hospital merely complaining of "stomach-ache" although he had general peritonitis from a perforated duodenal ulcer. Mr. ENGLISH considers that not only morphine but also stimulants such as alcohol or strychnine may produce such temporary improvement as to mask the symptoms and to lead to the postponement of an urgent operation. We have on several occasions pointed out that the presence or absence of liver dulness is of no value in the diagnosis of perforation and Mr. ENGLISH's statistics support this view, for in 11 out of 43 cases the liver dulness was normal in spite of perforation having occurred.

The percentage of recoveries after laparotomy for perforation of gastric and duodenal ulcers is certainly encouraging. In the case of gastric ulcers the percentage of recoveries was 52 and in the case of duodenal ulcers it was 25. The proportion of recoveries is increasing, for of the first ten cases only three patients recovered, while of the seven patients admitted during 1903 six have recovered. We hope that when the number of cases at St. George's Hospital reaches 100 we may have the statistics brought up to date, for the larger the number of cases in a series the more trustworthy are the conclusions to be drawn therefrom.

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Herbert Spencer.

THE hand of death has removed from the ranks of the living another of the triumvirate who conceived the theory of evolution, laid the foundations, and completed the mighty edifice. We do not attempt to appraise the size or the value of the part which each artificer contributed to the completion of the whole. It must be remembered, however, that HERBERT SPENCER'S achievement was unique in the annals of literature; with a limited scientific equipment, with no classical training, and with, at first, no conspicuous literary gifts he imposed upon himself, the task of systematising all knowledge and of symbolising in concrete ideas the processes whereby organic and inorganic nature had arrived at the stages of development at which he found them. He assumed at the commencement of his task that there were certain immutable laws which were responsible for all conditions of change, and as a sequence he laid it down that in all the phenomena of the material world there was a gradual passage of matter "from an incoherent homogeneity to a definite coherent heterogeneity, during which the retained motion undergoes a parallel transformation." Applying and extending this general formula to the interpretation of particular phenomena he sketched in his "First Principles" the outline of a philosophy which covered the entire ground of biology, psychology, sociology, and ethics. At the time that he moulded the skeleton of the system which he ultimately clothed with adequate tissues his knowledge of biology, psychology, sociology, and ethics was admittedly small. He was, as he described himself, "merely a synthetic philosopher," a systematiser of the work of others. His knowledge of the completed anatomy of his skeleton, with its nerves, its muscles, and its integuments, was still to be acquired, and was acquired as he proceeded with his task and then published for the benefit of the world in the volumes which unfolded the details of his many-faceted philosophy. The real greatness of the man is not least revealed in the fact that never, or practically never, was he compelled by force of evidence to abandon any of the original propositions which he laid down in his "First Principles," or, with maturer experience and knowledge of the subject, to modify any of the important views which he therein enunciated. Guided entirely by first principles and laws which were universally applicable he seldom fell into gross error, and by reason of the exactness of his methods few could criticise or find fault with his less important observations. The principles which HERBERT SPENCER enunciated are to-day accepted all the world over as the basis of an exact philosophical reasoning and his conceptions have influenced the directions of progress of almost every science. Biology has by no means been the least to profit by his work. Medicine has as yet reaped benefits which were hardly comparable with those which he has conferred on kindred branches of science; indeed, the full significance of his definitions of life and death and disease are by no means to-day as fully valued by those who attempt to unravel the problems of pathology as they undoubtedly deserve to be. The conception of disease as a "disturbance of organic equilibrium," a perverted manifestation of energy, and an uneconomical redistributing force, is one which has only found expression in some few of our medical writers who have come under the influence of his genius. But pathological manifestations, like all other natural phenomena, are subject to immutable laws, and as medicine becomes more and more an exact science we may expect to see among its practitioners a wider appreciation of HERBERT SPENCER'S synthetic work.

HERBERT SPENCER was himself little interested in the problems of pathology, but such generalisations as he occasionally ventured to form had an illuminating influence on the conception of morbid processes. It has been a loss to medical progress that his philosophy extended so little in this direction. Up to the end of his illustrious career he fought with all the energy and the sincerity of which his profound mind was capable for the principle that acquired characteristics were, and must be, inherited. The truth or falseness of this postulate was, he contended, of the utmost importance to the progress of mankind, for according to the manner in which men regard this question so are determined their actions in politics, ethics, education, and sociology. In the appendix of the last edition of his "Principles of Biology," which was written only a few years before his death, and which therefore may be accepted as representing his final word on this subject, he expresses the depth of his feeling in the following words: "And now I must once more point out that a grave responsibility rests on biologists in respect of the general question (inheritance), since wrong answers lead, among other effects, to wrong beliefs about social affairs and to disastrous social actions. In me this conviction is increasingly strengthened. Though the 'Origin of Species' proved to me that the transmission of acquired characters cannot be the sole factor in organic evolution, yet I have never wavered in the belief that it is *a* factor and an all-important factor. And I have felt more and more that since all the higher sciences are dependent on the science of life and must have their conclusions vitiated if a fundamental datum given to them by the teachers of this science is erroneous, it behoves these teachers not to let an erroneous datum pass current; they are called on to settle this vexed question one way or other." The truth or the reverse of his views on the inheritable qualities of acquired characteristics is of universal importance, but more especially so in medical science; and although his proposition is by no means opposed to the accumulated evidence of clinical experience, nevertheless deductions from morphology, laboratory experiments, and microscopic investigation at least lay it open to serious doubts. As we have already said, HERBERT SPENCER'S views have seldom proved wrong. His purview of organic evolution was so far-reaching in extent that we must hesitate many times before we reject on grounds of detail a proposition in which he firmly believed and which was material to the stability of his great argument.

"Every change," wrote HERBERT SPENCER in his "Principles of Biology," "is towards equilibrium, and that change can never cease until equilibrium is reached." And again he postulated: "Evolution is an integration of matter and concomitant dissipation of motion." In his own powers of mental cerebration he provided one of those great climaxes of intellectual evolution which at times anticipate, perhaps by generations, the progress of knowledge. The integrated forces from which proceeded this intellectual outflow have now found their equilibrium and that life which was devoted to the fathoming of the knowable has passed to the regions of the unknowable. The influence of his intellect will persist, permeating men's minds and substantiating his conceptions in psychology.

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The University of London and Medical Education.

WE publish in another column a thoroughly well-justified appeal made by the University of London for funds to support an adequate system of medical education in the metropolis. The appeal takes the form of a letter signed by the Earl of ROSEBERY, the Chancellor of the University; Dr. P. H. PYE SMITH, the Vice-Chancellor; Sir ARTHUR RUCKER, the Principal; Mr. H. T. BUTLIN, the Dean; and Dr. J. KINGSTON FOWLER, a member of the Senate; and in this document all the arguments for the foundation of a central institute for the preliminary scientific education of the medical student are succinctly set forth. A Royal Commission has recommended that the teaching of such subjects as physics, chemistry, biology, anatomy, physiology, and pharmacology should be concentrated into one or two central institutions. The recommendation was adopted by the Statutory Commission responsible for the statutes of the reconstituted University and has since been endorsed by the faculty of medicine, which has urged upon the Senate the advisability of carrying out a project so importantly brought to its notice. Lord ROSEBERY and his co-signatories have, therefore, behind them an enormous weight of deliberate and authoritative opinion when they appeal to the public for funds to establish in connexion with the University of London a central school for the teaching of subjects ancillary to the acquisition of medical science or preliminary to the practice of medical doctrines. We trust that the appeal will be generously responded to.

The affairs of the University of London have lately been much in evidence. The address recently delivered by Sir ARTHUR RUCKER on the work and aims of the University of London marked a distinct forward step in the organisation of education in the metropolis. It is not a matter for surprise that some considerable time should have elapsed before the Senate of the reconstituted University was able to announce to what small portions of its mighty task united effort would first be directed. The irresponsible critic has frequently in the last three years grumbled at the apparent absence of immediate results from the work of the Statutory Commission, and even in the three important schemes which the Principal of the University commends to the attention of a generous public, it is not impossible to find features which fail to command universal approval. Fortunately, while recognising the impossibility of pleasing all parties the authorities move forward, doubtless carefully considering the criticisms, and taking every precaution to avoid the pitfalls pointed out to them. Mr. T. BAILEY SAUNDERS, whose work as secretary of the Statutory Commission gives his opinion on university matters weight, has lately indicated the difficulties that will have to be overcome, if the scheme, which is usually called Lord ROSEBERY'S Charlottenburg scheme, is to achieve the good results hoped for by its promoters. Sir ARTHUR RUCKER'S reply to these criticisms makes it clear that most of Mr. SAUNDERS'S objections have already been noted by the authorities. It remains to be seen with what success the powerful and representative committee now considering the details of Lord ROSEBERY'S proposal will be able to devise a scheme which, while filling vacant educational spaces, will not unduly interfere with existing institutions. Difficult as is the problem it certainly should not prove insoluble. Almost immediately after it had been officially announced that an additional amount of £100,000 would enable the incorporation of University College with the University of London to be carried into effect the satisfactory news came to hand that the College had received an anonymous donation of one-half the needed sum. We offer our hearty congratulations to the authorities of University College upon this latest indication of the public appreciation of the good work which they have done in the past under difficult conditions.

The last of the three aims of the University which the Principal linked together as requiring and deserving the immediate support of the public purse is that in which the medical profession is most interested—namely, the proposal to build and to endow an institute of medical sciences in the near neighbourhood of the University. The Principal stated that this scheme was well in hand and that the proposal was receiving the warm support of the Senate, and now the letter, which we publish to-day in our columns, shows that it is intended to make an immediate attempt towards its realisation. We understand that promises of pecuniary help towards this object are somewhat difficult to obtain. London has not been accustomed to find money to promote medical education, and it will require much eloquence on the part of those who recognise the value of concentration to persuade the wealthy public to subscribe the considerable sum required to build and to endow the institute. Nevertheless, we are confident that the example that has been set in provincial universities and colleges will shortly be followed by wealthy citizens of London. Sir TREVOR LAWRENCE, in defending the original determination of the governors of St. Bartholomew's Hospital to rebuild their charity on what is now allowed to be an inadequate site, alluded to the subject in a suggestive way. He pointed out that the taking over by the University of the teaching of certain subjects of medical education now taught at the hospitals will provide, in hospitals having medical schools attached, an automatic extension of their sites. This is no doubt true and is not the least of the many advantages of concentration. We, however, think that the space freed in hospitals by the relegation of some of the earlier courses of the students to a central institute would almost immediately be made use of for those improvements in the teaching of pathology, bacteriology, and other clinical subjects which the progress of medical education will inevitably demand. However this may be, it is of interest to note that the lay authorities of the hospitals in London are beginning to recognise that, by the help of the University of London in relieving them of some of the burden of medical education, the difficult problem may possibly be solved of providing for the ever-increasing demands of scientific medicine upon the defined but costly sites which most of the hospitals occupy.

Annotations.

"Ne quid nimis."

THE CASE OF DR. LACHLAN GRANT.

IN THE LANCET of Dec. 5th we drew attention to the then existing position of the dispute between the quarriers of Ballachulish and the directors of the quarry company. We said that if the men held out the shareholders would insist upon the matter being settled in the men's way. We now learn that on Dec. 9th two members of the quarriers' committee, together with Dr. Grant, went to Edinburgh at the request of their legal advisers. On arrival they were told that the company's secretary had approached the quarriers' lawyers with a view to a settlement. Eventually it was agreed between the directors on the one hand and the quarriers' representatives and Dr. Grant on the other that Dr. Grant's appeal to the House of Lords should be withdrawn, that the quarriers' appeal to the Inner Division of the Court of Session should be withdrawn, and that the company would suspend its interdict against Dr. Grant practising in Ballachulish. Dr. Grant and the directors have signed an agreement, the quarriers consider that the labour terms already agreed to are satisfactory, and now all that remains is that the quarriers themselves should agree to the terms accepted by their representatives. This we should think there is no doubt of their doing. So the dispute may be said to be at an end and Dr. Grant and the quarriers have won all along the line. From a strict legal point of view the directors had a right to terminate their agreement with Dr. Grant. But it was foolish of them to do so, and they found that they were unable to get another medical man to take over Dr. Grant's work permanently. The quarriers have acted towards Dr. Grant magnificently all through the trying times which have now passed. Their club is, indeed, one worth working for and Dr. Grant may well be proud of having gained the confidence and esteem of such a worthy body of men.

THE METROPOLITAN HOSPITAL SUNDAY FUND AND THE KING'S HOSPITAL FUND FOR LONDON.

WE publish this week an abstract of the report of the King's Hospital Fund for London for the past year which sufficiently shows the magnificent work that has been accomplished. A sum of £100,000 will be distributed among the hospitals, the awards having been made as usual with generosity as well as with scrupulous discretion. We publish also a report of the annual general meeting of the supporters of the Metropolitan Hospital Sunday Fund, which Fund has been instrumental in collecting and distributing a sum of £64,975. Magnificent as these sums are the wants of the hospitals are so urgent that they are absorbed without making any apparent difference to the prevalent financial depression of our noblest London charities. Ask, however, the treasurers of the different institutions what the receipt of an annual donation from these funds means and it will be found that the grants are welcomed with the greatest gratitude. They are doubly valuable as, first, the receipt of them is a testimonial to good management, and secondly, the augmentation of funds comes with approximate regularity and in some proportion to the urgency of the needs. If the public knew what a relief the certainty of being able to meet particular claims with particular receipts brings to those who are responsible for the pecuniary management of the London hospitals, surely they would help these two splendid funds to do a still greater work.

BUTTER STANDARDS.

IN the words of the fourth section of the Sale of Food and Drugs Act, 1898, "the Board of Agriculture may after such inquiry as they deem necessary make regulations for determining what deficiency in any of the normal constituents of genuine milk, cream, butter, or cheese, or what addition of extraneous matter or proportion of water in any sample of milk, cream, butter, or cheese, shall for the purposes of the Sale of Food and Drugs Act raise a presumption, until the contrary is proved, that the milk, cream, butter, or cheese is not genuine or is injurious to health and an analyst shall have regard to such regulations in certifying the result of an analysis under those Acts." For a long time there has been considerable difficulty amongst analysts in drawing a uniform inference from the results of their analyses in regard to butter. The difficulty has been increased by the fact that butter fat varies in composition in accordance with the different conditions (such as climate and feeding) under which it is produced in different places. The difficulty became acute when it was shown that certain imported butters gave abnormal results, though there was no doubt about their genuine character. Analysts have commonly based their inference as to the genuineness or not of a butter upon the amount of soluble or volatile acids that it contains and a fairly constant number was used as a semi-official limit. It was soon found, however, that though this limit could be fairly applied to home-produced butters it could not be so applied to certain butters imported from abroad. In other words, certain butters showed a deficiency in volatile acids although the samples were undoubtedly genuine. The subject therefore was one requiring serious attention and a departmental committee was appointed by the Board of Agriculture to deal with it, and the recommendations just published in its final report appear to us to be, on the whole, well founded. The committee was appointed in July, 1901, and in an interim report issued in January, 1902, it unanimously recommended the adoption of a limit of 16 per cent. for the proportion of water in butter. We believe that this limit has worked well in practice and has not imposed any hardship upon the trade, but, as we have pointed out before, it is a pity that the operation of this limit can be avoided provided that a sufficient disclosure of the fact be made to the purchaser. This system of disclosure seems to us to reduce the Sale of Food and Drugs Acts in many cases (notably in spirits and the milk sold in restaurants) to a dead letter. However, in its final report the committee deals with the question of what regulations, if any, should be framed for the purpose of directing an analyst appointed under the Sale of Food and Drugs Acts when to raise a presumption that a sample of butter has been mixed with foreign fat. Without going into such details of the report, as, for example, the chemical nature of butter, the composition of butter fat and of butter substitutes, and analytical methods, it may be stated that the committee has decided to recommend a limit based on a deficiency in the normal constituents of butter. The opinion of the committee is that if the amount of the volatile acids in any sample of butter as determined by the Reichert-Wollny method should fall below the number 24 a presumption should be raised that the butter is not genuine. In arriving at this decision the committee had before it the evidence of analytical experts and the tabulated results of some thousands of determinations more particularly of the volatile acids contained in butters of very variable origin. As a result it was shown that more than nine-tenths of the samples have a Reichert-Wollny number comprised between the limits of 24 and 33, and that by far the greater amount of these are comprised between the limits of 26 and 31. Many of the exceptional instances were the produce of single cows or of very small herds. The opinion is expressed that as the butter which comes within the purview of the Sale of Food and Drugs Acts is the product of large herds or the mixed products of different dairies, abnormalities due to idiosyncrasy or to exceptional causes tend to disappear. The committee assumes that the proposed limit will not act prejudicially upon any appreciable quantity of butter made in the United Kingdom or upon colonial, American, Argentine, Danish, Swedish, French, or Italian butter, but it may occasionally affect to a small extent, and then only for a short time during the year, the butter from Norway, Siberia, and Holland. An important step is suggested in regard to margarine, and that is that the use of 10 per cent. of sesame oil in the manufacture of margarine should be made compulsory. As it is remarked, fraud might be considerably checked if margarine were required to contain, as is the case in Germany, Austria, and Belgium, and as is contemplated in France, some "tell-tale" or indicative substance sufficiently sensitive to allow even small quantities of the margarine to be detected. The report is signed by ten of the members of the committee, three of whom, however, make certain reservations. Mr. C. J. Dunn and Mr. J. Gilchrist refer to the limit of 24 and suggest that the figure 23 would be safer, while Mr. P. G. Craigie is of opinion that it is premature yet to fix a limit in view of the cases of variations brought to the notice of the committee. Finally, Mr. Patrick Hickey found himself unable to sign the report because his views were at variance with the conclusions of the majority. He has, therefore, added a separate report in which he gives his conclusions for thinking that the evidence presented to the committee does not afford solid grounds for the fixing of any limit based upon the proportions of volatile acids.

THE VIVISECTION QUESTION IN THE PAST.

QUESTIONINGS as to the justifiability of vivisection and expositions of the results obtained by means of experiments upon live animals are by no means new. So long ago as 1709 Christian Sigismund Wolff published at Leipsic a disputation as to the morality of anatomy when occupied with living animals ("De moralitate anatomes circa animalia viva occupatæ") and in 1722 Apinus contributed to the literature of the law of nature a dissertation on the same theme. The book was published at Altorf and its quaint title runs, "An licet brutorum corpora mutilare et speciatim ob es recht sey, dass man den Hunden die Ohren abschneide, variis observationibus aucta et a nonnullorum objectionibus vindicata." After the time of Apinus' library catalogues omit any mention of this vivisection literature until in 1824 appears a judicious dissertation by Gerdy of the University of Paris in which the claims of vivisection are weighed *pro* and *con*. Gerdy's book is followed a year later by a Copenhagen *prize essay from the pen of Dr. P. W. Lund*. The book is a detailed exposition of the benefits and discoveries *due to vivisection*. *It* deals with discoveries concerning reproduction, digestion, and the functions of the *intestines generally*, all of which have been arrived at by means of the experiments of such men as Blundell, Haighton, Magendie, and Wilson Philip, to mention English-speaking physiologists alone. Such a book as Dr. Lund's, carefully compiled and issued by authority, is, despite its antiquity, a sufficient answer to the silly modern query: "What has vivisection discovered?" The older writers were never really doubtful of the use of vivisection both to science and to humanity. Mr. Pepys, for instance, after recording "a pretty experiment of the blood of one dog let out into the body of another," writes optimistically of the possibilities of the experimental method in the future. "Mr. Hooke …… tells me," says he, "the dog (into the body of which blood had been transfused) is very well and doubts not its being found of great use to men, and so do Dr. Whistler, who dined with us at the tavern."

ST. BARTHOLOMEW'S HOSPITAL.

WE have received the following communication from the governors of St. Bartholomew's Hospital:—

> [illegible] lieve that they have the unani- [illegible] the action they have decided to [illegible]

We have also received this letter from the medical council of the hospital:—

To the Editors of THE LANCET.

St. Bartholomew's Hospital, Dec. 10th, 1903.

SIRS,—We, the members of the medical and surgical staff of St. Bartholomew's Hospital, wish it to be known that we support most cordially the [illegible] essential is the [illegible]

We beg to [illegible] ew buildings, and acquisition of [illegible] on the extended the ultimate [illegible] area.

I[illegible] we are in hearty agreement with the [illegible] ire more land and to erect first and [illegible] ut-patient block, on account of the [illegible] which will be included in this building.

[illegible] rs will necessitate the [illegible] id other new buildings [illegible] of the most complete [illegible] rily depend the future [illegible]

[illegible]
J. A. ORMEROD.
W. P. HERRINGHAM.
H. H. TOOTH.
A. E. GARROD.
JAMES CALVERT.
F. H. CHAMPNEYS.
W. S. A. GRIFFITH.

JOHN LANGTON.
HARRISON CRIPPS.
W. BRUCE CLARKE.
ANTHONY BOWLBY.
C. B. LOCKWOOD.
D'ARCY POWER.
H. J. WARING.
W. MCADAM ECCLES.
R. O. BAILEY.
W. H. H. JESSOP.
T. HOLMES SPICER.
A. E. CUMBERBATCH.

We heartily congratulate the governors of St. Bartholomew's Hospital upon the decision to which they have come and all the more so because we applied the major portion of the stimulus which has brought about so prompt a response. We may remind the governors of the hospital that on July 2nd, 1900, Sir Sydney Waterlow remarked at a special court of governors: "Personally I do not think that the purchase of the whole site (of Christ's Hospital) would be a very speculative undertaking."[1] Only late, however, have the governors made up their minds and already we hear of formidable rivals who are anxious to obtain the remainder of the site of Christ's Hospital. The most dangerous rival in the field is the Post Office, an organisation which without doubt is cramped for room. But the claims of St. Bartholomew's Hospital are paramount and we can but hope that an institution with such a noble history, the Patron of which is the King, the President of which is the Prince of Wales, and which is the one hospital within the City of London, will not be allowed to be outbidden in its desire for more land by any other organisation. Some five weeks hence the citizens of London will have all the details laid before them at the Mansion House meeting. If the governors make a bold and large appeal we repeat our opinion that such an appeal will not fall on deaf ears.

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[1] THE LANCET, July 7th, 1900, p. 43.

SIR WALTER BESANT AS A LONDON CITIZEN.

AN interesting little ceremony was performed on Dec. 11th, when a memorial was placed in the crypt of St. Paul's Cathedral to Sir Walter Besant. Sir Walter Besant's literary work and position do not call for detailed comment in THE LANCET, but his deep interest in London had its distinct medical side. Lord Monkswell, the chairman of the London County Council, to whom the unveiling of the monument was entrusted, pointed out that the especial fitness of a memorial to Besant in St. Paul's Cathedral lay in the fact that his unrivalled knowledge of London went hand in hand with a deep and genuine sympathy for the poor of the great city. Such men as Besant, said Lord Monkswell truly, give enormous aid to municipal bodies in their attempts to brighten and to sweeten the lives of the needier classes under their jurisdiction. In all Besant's work dealing with the metropolis there is evident knowledge that the foul environment produces the defaulting citizen. What is this but to preach the doctrines of sanitation?

PARACENTESIS THORACIS IN TRAUMATIC PNEUMOTHORAX.

BY far the most frequent cause of pneumothorax is the bursting of a tuberculous vomica of the lung into the pleural cavity, but pneumothorax may be the result of injury and then the air may be admitted into the cavity of the pleura in one of three ways. In the first mode by a bullet or a cutting weapon an aperture is made through the chest wall and the parietal layer of the pleura and the external air enters directly; this is, perhaps, the most common variety. In the second form there is no external wound but the force applied breaks a rib and the sharp end of this tears both the parietal and the visceral layers of the pleura and the air from the torn lung escapes into the pleural cavity. The rarest of all the forms of traumatic pneumothorax results from a rupture of the lung substance without any wound of the parietes of the thorax or fracture of a rib. This occurs especially in children, in whom the pliancy of the ribs permits their bending so that the full force of the pressure comes on the lung. If, at the same time the glottis closes from the sudden shock, the lung is liable to be ruptured and pneumothorax to be produced. The form of violence that usually gives rise to this lesion is the passage of the wheel of a cart over the chest. In recent issues of THE LANCET we have recorded two instances in which a traumatic pneumothorax was produced and in each of them the injurious effect of the pressure exerted by the air in the pleural cavity was relieved by the withdrawal of some of the air. In one case, which was under the care of Mr. R. J. Godlee in University College Hospital, the air was removed by means of a trocar and cannula, a tube being attached to the end of the cannula and dipping into a bottle containing sterilised salt solution. The other case was in King's College Hospital, under the care of Mr. F. F. Burghard, and in this instance an aspirator was employed. In both cases much benefit resulted from the operation and the question arises should paracentesis be performed in any cases of pneumothorax? and the further question follows, should simple tapping be preferred or should aspiration be done? The value of paracentesis in the analogous condition of pleurisy with effusion has long been recognised, and therefore it is natural that the operation should have been performed in pneumothorax. From time to time there have been discussions as to the advisability of attempting to remove the air from the pleural cavity and many of the text-books deprecate any interference on the ground that there is a possible danger of renewing the fistulous opening. This objection, however, applies chiefly to pneumothorax which has resulted from the rupture of a tuberculous cavity; for in the traumatic variety it would not apply. If it be determined, then, to perform paracentesis thoracis, which method, tapping or aspiration, is to be preferred? The answer to the question will depend on the intrapleural pressure. Mere tapping will suffice to relieve the pressure should it be above that of the atmosphere. Although it has been denied that the intrapleural pressure can ever exceed that of the atmosphere, yet it is clear, from the observations of Dr. Samuel West, for instance, that in many cases of pneumothorax the pressure, especially during expiration, may exceed the pressure of the atmosphere by several inches of water. If, however, there be no excess of intrapleural pressure it is obvious that no air will escape through a simple cannula and in such cases, other conditions permitting, the aspirator may be usefully employed. The relief to the dyspnœa has been very great in many recorded cases and in some the operation has appeared to rescue the patient from imminent death.

ANTIDIPSO.

THERE have been many cruel and wicked frauds committed by the sellers of quack medicines but of all that have come to our notice we do not know one of a baser character than that which is perpetrated by the proprietor of antidipso. This remedy is "run" by a person named A. L. Pointing who is referred to in our contemporary *Truth* in its issue of Dec. 10th. Mr. Pointing, who resides at Century House, Regent-street, appears to be responsible for the Century Thermal Bath Cabinet, Limited, the Grecian School of Physical Culture, the Espanola Medicine Company for increasing the size of the female bust, and the Ward Chemical Company which is responsible for antidipso. Antidipso is said to be a drug which in cases of drunkenness "can be given in tea, coffee, or food, thus absolutely and secretly curing the patient in a short time without his knowledge." So we learn from an advertisement which occupies a whole page in the December number of the *Strand Magazine* in company with such advertisements as Dr. Rice's Rupture Cure, the Espanola Medicine Company, and that of the well-known quack Dr. James W. Kidd. About ten days ago we sent a representative to Century House who purchased antidipso powders for which he paid 10*s.* He was also given two samples of the same and we will do the Ward Chemical Company the justice to say that the powders in the box and the sample were similar in composition. Ten powders weighed 2·733 grammes, being an average of 4½ grains for each powder. Their composition was as follows: bromide of potassium, 21·78 per cent.; milk sugar, 78·22 per cent. There is therefore in every powder an average of rather less than one grain of bromide of potassium. The printed matter accompanying the powders stated that up to six powders may be given per day and that antidipso is both alterative and curative. It may be alterative, whatever that means, but to say that it is curative *is a lie.* The 10*s.* box contained 48 powders which at a moderate estimate would cost the vendors ½*d.* for bromide of potassium and nearly 1*d.* for the milk sugar. We do not, however, so much object to the price—if people are so silly as to buy quack remedies they must expect to pay for them—but the heartless swindle is scandalous. To raise false hopes in those whose lot it is to be tied to a drunkard is disgraceful and no punishment can be too bad for the person who profits by such deceit. There is not the excuse that even if the drug is useless *per se* it may act by suggestion, for great stress is laid on the fact that it can be administered to a patient without his knowledge. Six grains or less of bromide of potassium per diem would have no effect whatever in restraining the craving for alcohol or in relieving the physical evils arising from the ingestion of alcohol. The proprietors of our lay contemporaries in these circumstances might surely consider the advisability of refusing to insert the advertisements.

VACCINATION FEES IN RURAL DISTRICTS.

WE publish in another column a communication from a correspondent dealing with the very pressing question of the charges for vaccination in rural districts and without at this stage entering into all the controversial matters which centre around the subject we may say that in our opinion the communication referred to sets forth the case from the point of view of the public vaccinator clearly, forcibly, and reasonably. All who are familiar with the difficulties in carrying out the provisions of the present Vaccination Act and Regulations in rural districts will, we think, recognise that the illustrations furnished by our correspondent are fair average examples of what actually occurs in practice. The present outcry against the cost of vaccination is no doubt largely the result of what some would call a fortuitous concourse of circumstances. On the one hand, it is due to the neglect of vaccination and revaccination in the past and, on the other, to the actual or threatened presence of small-pox. We are dealing, therefore, not only with a charge in respect to arrears but also with a charge relative to insurance in which all the premiums are being paid at one time in consequence of the fear of disease or death. Similarly those who have any knowledge of the routine work of the public vaccinator in rural districts will agree with our correspondent in recognising that under the present system there is an enormous amount of unremunerative work performed, and if the guardians call in question this fact let them inspect some of the H Forms which their public vaccinators have, in accordance with instructions, returned to the vaccination officers. The guardians will find that in some instances not 50 per cent. of the cases on the list have been vaccinated by the public vaccinator and that in the column for "remarks" there abound entries such as "refused," "will be done by own medical man," "left," "postponed," "cannot find," and the like. An examination of these H Forms will satisfy the guardians or the departmental committee which is at present sitting that our correspondent is not exaggerating when he states that in a certain instance "the public vaccinator had travelled 1172 miles to vaccinate 745 cases for a remuneration of £45, being a fraction over 9*d.* a mile," and hence it is that in some cases the remuneration works out at 2*s.* or 1*s.* 10½*d.* per visit. The clerical work under the present Act is certainly very considerable, more especially if the instructions are rigidly adhered to, and the guardians, as well as the medical inspectors of the Local Government Board, are becoming very strict in regard to these matters. We think that all reasonably minded persons will agree with our correspondent that any reduction of fees for primary vaccination in rural districts would be eminently unfair. With regard to revaccination it cannot be contended that the fees are too high, but possibly a little saving might be effected where several persons are revaccinated in the same house. Here the maximum fee might be allowed for the first case only. Similarly, the guardians might, during the actual or threatened presence of small-pox, more frequently provide stations for revaccination. The Local Government Board would not, we imagine, in these circumstances withhold its consent. That these stations have not been provided in the past in greater degree is due largely to the indifference of the guardians themselves who take no interest whatever in performing the administrative duties in this respect which have devolved upon them but who content themselves with protesting when a somewhat startling table of fees is presented to them. Of course, stations of this nature are less used in rural than in urban districts owing to the long distances which have to be travelled, but in towns during an outbreak of small-pox stations opened in the evening hours would effect a very material saving in the total charge for revaccination and it appears to us that if any retrenchment is considered desirable it is in this direction that it might be effected. But, as we have already said, the magnitude of the whole question has become distorted by the vast accumulation of arrears and the presence of small-pox.

THE INVESTIGATION OF MALIGNANT DISEASE.

A JOINT paper by Professor J. B Farmer, Mr. J. E. S. Moore, and Mr. C. Walker was read at a meeting of the Royal Society on Dec. 10th. The paper contained the substance of some extensive investigations which have been undertaken by them into the structure of carcinomata and sarcomata. They found that the cells at the growing edge of a malignant growth exhibited peculiarities in their nuclear changes on division. When an ordinary healthy cell divides the nucleus undergoes the changes which are so well known, and the chromosomes which are formed are constant in number in each group of organisms. In the division, however, of reproductive cells the chromosomes are few in number, and this smaller number is never exceeded so long as the cell remains a reproductive cell. The authors of the paper have observed that the growing cells of malignant tumours exhibit on division the phenomena of reproductive cells, possessing only the smaller number of chromosomes. From this fact they deduce that the cause of multiplication must be physiological stimulus and cannot be parasitic in origin. The observations are of great interest.

IRISH FOLK-LORE.

Professor J. W. Byers recently delivered before the Belfast Natural History and Philosophical Society a lecture on the Stories, Proverbs, and Sayings of Ulster. Apart from their intrinsic interest, such *résumés* of popular humour render service to students of folk-lore, for with the spread of education many of the old-world beliefs in elves, and forms of "good people," and many charming local superstitions will naturally die out. The greater part of Professor Byers's lecture was occupied with what may be called the supernatural side of his subject, but he also dealt with many curious words and phrases used by Ulstermen. "The Real M'Kay," "Morgan Rattler," and "Tibb's Eve" came in for explanation, and we think that most English audiences would here require an interpreter. No one knows the derivation of the phrase "Tibb's Eve"; it implies the day that never comes and is a sort of Irish synonym for "the Greek Kalends." "The Real M'Kay" is used as an expression of commendation which may be compared to the street boy's phrase, "a bit of all-right." The phrase had its origin in the Spanish title of "Réal" or Royal granted to a scion of a famous Irish house. The name of Morgan Rattler, a well-known smuggler, is used as a type of cleverness not necessarily coupled with honesty. Of many examples of Ulster humour we quote the following. "Coming into hospital one day," says Professor Byers, "I overheard a patient say to another, 'Is your chicken soup thin?' The reply came at once, 'Ay, the bird only walked through it,' to which the first answered, 'Maybe it was on stilts.'" The people, especially the bucolic people of Ulster, do not differ from the inhabitants of other parts of the world in their belief in charms as a preventive of, or cure for, disease. We are told that in some places in the north of Ireland the moment a medical attendant pronounces the disease to be erysipelas a "charmer" is brought to the child. A patient suffering from mumps has to put on a donkey's bridle with the bit in his mouth and being led blindfolded to a stream or well is made to drink water three times in the name of the Trinity, the charmer meantime repeating an incantation. The ritual seems to be complicated but the value of suggestion is doubtless enhanced by making the patient submit to a good deal of trouble. Dread of the power of the evil eye still exists in Ulster as does also faith in omens. Professor Byers is to be congratulated upon having put on record some of the poetic superstitions of a charming people. That jettatura still has force in northern Ireland, as in Italy or the Levant, will be something of a revelation, we fancy, to most of our readers.

BURROUGHS, WELLCOME, AND CO. *v.* THOMPSON AND CAPPER.

Mr. Justice Byrne delivered judgment on Dec. 14th in an action of some interest to medical men brought by Mr. H. S. Wellcome, trading as Burroughs, Wellcome, and Co., against the firm of Thompson and Capper, druggists. The object of the action was to restrain the defendants from passing off goods as of the manufacture of Burroughs, Wellcome, and Co. which had not been manufactured by them and particularly from selling, or offering for sale, any such goods under the name "tabloid" or "tabloids" and from infringing these the registered trade-marks of the plaintiffs. Evidence was given in the course of the trial of the selling of goods not of the manufacture of Burroughs, Wellcome, and Co. to persons asking for tabloids and bearing prescriptions in which further specification of the manufacture demanded was afforded by the use of the initials B. W. & Co. by the prescriber. As to this being wholly unjustifiable no question could arise but the real claim of the plaintiffs was for the declaration of their exclusive right to the use of the words "tabloid" and "tabloids," without any addition, as indicating goods of their manufacture. The establishment of such a right by them was denied by the defendants, and behind this lay the question whether the words "tabloid" and "tabloids," registered by the plaintiffs as their trade-marks, were to remain upon the Trade-marks Register or were to be struck off in accordance with the defendants' cross-action to that effect. The judgment of Mr. Justice Byrne was in favour of the plaintiffs upon all points. He granted them an injunction against the defendants independently of the question of registered trade-mark. With regard to the trade-marks he refused to order their removal from the register and he granted the plaintiff firm a certificate to that effect. The case has some important professional bearings. One of the main grounds of attack on the trade-mark "tabloid" was the allegation that a proportion of the public did not know that the word was the property of a firm. It was shown in evidence by the defendants that Burroughs, Wellcome, and Co. advertised only to the medical profession and pharmaceutical trade, no facilities therefore being given to the public for gaining knowledge of the trade name in its proprietary connexion. It was also shown that some dispensers when supplying "tabloids" have removed the makers' label and affixed their own—a still more obvious reason for the ignorance of the public as to the property of Burroughs, Wellcome, and Co. in the word "tabloid." There are a few circumstances in which the dispenser is entitled to exercise his judgment concerning a prescription but the substitution of one drug for another, or of imitations for proprietary articles of accepted reputation, is not one of those circumstances. The medical man is accustomed to depend upon the pharmacist for a faithful discharge of the obligations of the written prescription, a consideration which no doubt determined the attitude of certain leading members of the pharmaceutical profession, and the President, Vice President, and several members of the Council of the Pharmaceutical Society appeared to give evidence in favour of Burroughs, Wellcome, and Co. For the reasons implied above we congratulate Burroughs, Wellcome, and Co. upon the result of the action. Their intent to approach the public through the medium of the medical profession only was used against them in a manner which could but enlist for them the sympathies of all practitioners.

ARGON IN ATMOSPHERIC AIR.

AN interesting communication was made recently to the Paris Academy of Science on the above subject. M. Moissan reported that he had followed up the researches of M. Schloesing who had already determined the proportion of argon existing in certain specimens of air. By utilising the property which calcium possesses of absorbing at one and the same time the oxygen, the nitrogen, and all the impurities which are found in atmospheric air, and by the use of a special apparatus of which he had already given a description to the Academy, M. Moissan had been able to estimate the amount of argon found in the air of Paris, of London, of Berlin, of Vienna, of St. Petersburg, and of Athens. In all these towns the amount was identical. The same proportion of argon was also found in samples of air taken in the Channel, in the Ionian Sea, in the Gulf of Naples, in the valley of Chamounix, at the Grands Mulets, and at the top of Mont Blanc. Air collected in the middle of the Atlantic appeared to be slightly richer in argon than that from other places. Calcium will combine with the hydrogen which is produced during reactions, forming a hydride which is not decomposed at a temperature of 600° C. All this illustrates the remarkable uniformity of the composition of the air. M. Moissan does not appear to refer to the question of small quantities of helion which may possibly occur in the air or as to what its behaviour would be when exposed to hot calcium. The results as regards argon are of interest and the observation that the air collected in the middle of the Atlantic appeared to contain a slightly greater proportion of argon than that from other places is probably in some way connected with its solubility in water and the great and frequent variations of atmospheric pressure to which the Atlantic ocean is liable.

THE MILK-SUPPLY OF FINSBURY.

A SPECIAL report has been printed in accordance with the instructions of the public health committee of the metropolitan borough of Finsbury in which the medical officer of health, Dr. George Newman, gives a very complete account of the position of the milk-supply of that place. Dr. Newman points out how difficult it is to trace the exact source of the milk sold wholesale or retail in the shops, so complex is the system by which the milk reaches the consumer from the point of production. And yet the importance of being able to do so is obvious when the question of milk and its relation to disease is considered. It is not easy to trace milk to its origin or to discover where or how contamination or adulteration originated. It appears that 90 per cent. of the cow's milk consumed in Finsbury is obtained from country farms and that 95 per cent. of the contributory farms are situated at a greater distance than 100 miles from London which, of course, means that the milk must be 12 hours *old* before it reaches the shops Dr. Newman states that as a general rule the country cowsheds from which this milk is derived are ill-lighted, overcrowded, badly ventilated, and badly drained. There is also little or no guarantee that the milk is derived from healthy cows free from tuberculosis. Again, the milk shop is sometimes found to be in anything but a sanitary environment. In Finsbury it is further stated that the adulteration of milk in 1901 was 22 per cent., that is to say, 7 per cent. higher than the average for all London. Dr. Newman therefore very properly calls attention to these facts and adds that in the face of them much remains to be done by the borough council in the direction of the control of the milk supply in Finsbury.

THE ROYAL INSTITUTION OF GREAT BRITAIN.

THE Christmas course of lectures at the Royal Institution will be delivered by Professor Ray Lankester, director of the natural history department of the British Museum. These lectures, which will be illustrated by lantern slides and adapted to a juvenile auditory, will deal with the subject of Extinct Animals and will be delivered on Dec. 29th and 31st, 1903, and Jan. 2nd, 5th, 7th, and 9th, 1904, at 3 P.M. on each day. Various extinct mammals will be described in the first four lectures, birds and flying reptiles in the fifth lecture, and newts, salamanders, and fishes in the sixth lecture. The Tuesday afternoon discourses will commence on Jan. 12th, when Professor L. C. Miall of the Yorkshire College, Leeds, will deliver the first of a series of six lectures on the Development and Tranformations of Animals. The Friday evening discourses will commence on Jan. 15th with an address by Lord Rayleigh on the subject of Shadows. The programme of the lecture arrangements up to March 26th, when the Easter recess will commence, includes a great variety of topics

TEETH IN THE TEMPORAL BONE OF HORSES.

THE occurrence of teeth in the temporal bone of horses formed the subject of an interesting communication by Mr. J. Bland-Sutton in the recent issue of the *Transactions of the Odontological Society of Great Britain*. This anomaly, which has been especially studied by French writers, has attracted but little attention in this country. The clinical features of these cases are briefly as follows. A swelling occupies the region of the temporal fossa and communicates with the surface by a sinus situated near the base of the ear. A probe passed along the sinus comes in contact with a hard body which invariably proves to be a tooth. The position of the sinus is of interest and it is not clear whether the sinus is congenital or arises as a consequence of suppuration as the tooth develops; indeed, Hensinger[1] regards the condition as due to persistent branchial fistula The teeth, varying in number from one to four, are misshapen and of a molar type and in some cases are so ill-formed as to come under the category of odontomes The condition in all recorded cases is unilateral and Mr. Bland-Sutton thinks that the malformation may be teratoid and allied to a somewhat similar anomaly in sheep. With regard to the origin of these teeth Mettams[2] suggests that the tooth-bearing cysts and the associated sinus are due to a developmental error in connexion with the first branchial cleft. A small portion has been separated off and along with it there is included parts of the tooth-bearing segment of the palato-pterygoid division of the arch From the point of view of pathogenesis, Mr. Bland-Sutton suggests that the abnormality should be studied in connexion with cervical teeth of sheep. These animals are liable to an anomaly in the neighbourhood of the ear which consists of a fistula opening near its base with the orifice invariably surmounted by an incisor tooth. In one specimen examined the tooth was lodged in a bony pedicle surrounded by mucous membrane of the same features as the gums, and the cutaneous recess in which it was accommodated presented in the aspect in contact with the tooth a number of processes resembling the papillæ in the sheep's lips The arrangement of the wool on the outer surface of this accessory lip was identical with that covering the normal lip of the animal. In another specimen examined by Gurt[3] two deciduous incisors were lodged in a miniature but unmistakeable mandible and associated with a tongue of corresponding size, while the fistulous tract communicated with the pharynx. These facts suggest that the teeth and associated structures are the remnants of an attached or parasitic fœtus and the cutaneous opening represents its mouth. A more careful examination is required of the anomaly of teeth in the temporal bone of the horse before any decisive statement can be made but the anomaly in the sheep seems to throw light on the pathogenesis.

THE COMPARATIVE GERMICIDAL EFFICIENCY OF DISINFECTANTS.

IT is time that some system of control should be organised with regard to disinfectant preparations by which some assurance could be given of their actual germicidal efficiency. There is no doubt that many proprietary disinfectant preparations on the market have exaggerated claims made for them in this respect and there are not a few which are practically worthless as germ destroyers. From time to time private investigations have been made on correct lines, in which the relative germicidal efficiency of a number of disinfectant preparations has been stated and the results have been of value. But it seems to us that what is wanted is a well-organised system by means of which the absolute efficiency of a disinfectant preparation can be guaranteed. The need of such an organisation is felt in America as well as in other countries and recently a practical paper upon the subject was read by Mr. B. R. Rickards at a meeting of the Massachusetts Association of Boards of Health, Boston, the details of which are of interest. The author's results may thus be summarised. Formaldehyde solution or formalin, although commonly supposed to be superior to carbolic acid as a liquid disinfectant, is really much inferior in equivalent per centum solutions. This fact is all the more striking when the high efficiency of formaldehyde as a gaseous disinfectant is considered. Formaldehyde is also a most efficient deodoriser The coal-tar proprietary compounds are, as a rule, very good disinfectants. They are not any better, however, than carbolic acid. Moreover, the composition of the proprietary articles may be varied and the purchaser be none the wiser. Carbolic acid is preferable in all cases when its odour and properties are not objectionable. The various colourless solutions put upon the market under fanciful names are, as a rule, of little value as disinfectants, their cost usually increasing in inverse ratio to their efficiency.

THE secretary of King's College Hospital has received a letter from the clerk to the Worshipful Company of Drapers stating that the company views with approval the proposal to move the hospital. The company has therefore voted the sum of £5000 from its corporate funds to the removal fund, conditionally upon the balance of the sum of £300,000 required being raised by voluntary contributions within the next 12 months. We can only hope that this generous offer will not be lost by any failure to raise the balance. A statement has just been authoritatively issued that the donor of the site for the new buildings of the hospital is the Hon. W. F. D. Smith, M.P., who is the chairman of the removal committee and treasurer of King's College. Mr. Smith wishes his donation to be associated with the memory of his father the late Mr. W. H. Smith who was for many years treasurer of the hospital, and the committee have accordingly decided to associate that gentleman's name with the central administrative block of the new hospital.

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[1] Deutsche Zeitschrift fur Thiermedicin, Band ii, 1876

[2] Veterinarian, vol. lxxii, p 3[illegible]9

[3] Thierische Missgeburten, Berlin, 1877, Tafel xv.

Dr. A. Marmorek, whose paper on Antituberculous Serum and "Vaccine" we published last week (p. 1642), has intrusted some of his serum to Dr. Arthur Latham for the purpose of an experimental trial of its properties in England. At present Dr. Latham has under observation in this connexion three cases at St. George's Hospital and two at the Brompton Hospital and next week he will have more cases. Dr. Latham thinks that in the course of a few months he and his colleagues will have collected sufficient evidence from the English cases in order to enable them to form a trustworthy opinion as to the advantages of the treatment. Dr. Latham will have the benefit of the personal advice of Dr. Marmorek who intends to come to London once a month; he was in London last week and gave the first injections himself before a number of Dr. Latham's colleagues.

THE British Dental Association has appointed a committee (in connexion with the inquiry at present taking place as to the alleged physical degeneration of the British race) to investigate the question of the alleged increase of dental caries. With this object the committee is anxious to examine British skulls and teeth of the last few centuries if possible. Early British skulls are to be found in museums and elsewhere in considerable abundance, but with the exception of Professor Thane's collection of skulls from Whitechapel (? plague pit) none of more recent date have been examined. The honorary secretary of the British Dental Association, 32, Leicester-square, London, W.C., would be grateful for any information concerning any such collection, if existent.

THE medical officer of health of the Cape Colony states that for the week ending Nov. 21st only 1 case of plague was discovered in the Colony—namely, that of a native male found dead on Nov. 15th in King William's Town. Plague-infected rats were found at East London, Knysna, Lady Grey Bridge, and on board a ship in Cape Town Harbour. As regards the Mauritius, a telegram from the Acting Governor received at the Colonial Office on Dec. 11th states that for the week ending Dec. 10th there were 76 cases of plague and 46 deaths from the disease.

THE King has approved of the appointment of Dr. John Mitford Atkinson (principal civil medical officer) to be an official member of the Executive Council of the colony of Hong-Kong.

Mr. Edward D. Madge, M.R.C.S. Eng., L.R.C.P. Lond., has been made an officer of the Order of the Crown of Roumania by H.M. the King of Roumania.

DONATIONS AND BEQUESTS.—The executors of the will of the late Mr. Robert Munn have paid to the Victoria Hospital for Burnley and District £8006, being the residuary estate of the testator bequeathed by him to the hospital.

THE FINAL REPORT OF THE ROYAL COMMISSION ON ARSENICAL POISONING.[1]

II.

IN our first article on this subject in THE LANCET of Dec. 12th, p. 1674, we dealt with Parts 1 to 3 of this report and gave an account of the Commission's conclusions regarding the toxicity of small quantities of arsenic taken for considerable periods together with beer and other articles of food and drink and its recommendations as to the tests which should be employed for the detection and estimation of arsenic in various substances. Part 4 of the report deals with the ways in which foods are liable to become contaminated by arsenic. When a question of risk of arsenical contamination arises the food manufacturer often argues that as the amount which could reach his products is in any case small there is no need for him to take special precautions in obtaining his glucose, colouring matters, or other ingredients which happen to be in question, and if small amounts of arsenic are found in his goods he urges that almost any substance will be found to contain arsenic, if enough of it is examined by modern methods.

The Commissioners have evidently been fully alive to objections of this kind in preparing Part 4 of their report, and they deal with the question in a thoroughly practical manner. Taking first ingredients of food, or substances used in food preparation, which are liable to contain arsenic, and next "finished foods," they show in each instance what is the extent of the liability to be arsenical, assuming carelessness or ignorance on the part of the manufacturer; what quantities of arsenic have been found in particular specimens; and what degree of purity is habitually obtained commercially or is readily attainable if reasonable precautions are adopted.

The Commission has obtained its information on the subject by hearing evidence of manufacturers, by correspondence with public analysts, and by instituting a series of inquiries at places of food manufacture, on which a report has been made by Mr. H. Hammond Smith. A number of foods obtained by the Commission have been examined for arsenic in the laboratory of Dr. G. McGowan and a large number of analyses made in the Government laboratory in connexion with brewing materials have also been reported to the Commission. The following substances are among those dealt with in the final report.

Mineral Acids.

Directly or indirectly sulphuric acid is used, sometimes in relatively large amount, in the preparation of a variety of foods.

The greater part of the sulphuric acid used for manufacturing and general purposes in this country is obtained [illegible] imported mainly from Spain and Portugal. [illegible] from certain mines, contain large proportion [illegible] manufactured, unless subjected to a de-arsenication process, is invariably arsenical. At works where a de-arsenication process is carried out the system of manufacture usually followed necessitates the production, in addition to the de-arsenicated acid, of an acid derived from the Glover tower which habitually contains a high proportion of arsenic. This, however, is not the case where the acid is prepared by synthetic processes which have been introduced in recent years. The sulphuric acid ("B.O.V.") supplied in 1900 by Messrs. Nicholson and Sons to Messrs. Bostock and Co. was contaminated by arsenic to an exceptional and enormous degree. As much arsenic as 1·45 and 1·9 of arsenious oxide per cent. has been estimated in certain samples of this acid. Chemical and other technical witnesses are agreed that de-arsenicating processes when thoroughly and uniformly applied at works where acid is obtained from pyrites produce an acid [illegible] de-arsenicated acid of the [illegible] when tested [illegible] only minute amounts of arsenic. Proportions of arsenic as high as from 2 to 3 parts per 1,000,000 (approximately 1-70th to 1-50th grain per pound of acid) can only occur if the de-arsenication is not properly carried out.

Commercial hydrochloric acid, as is well known, frequently contains arsenic. A recent specimen showed as much as 1·12 grammes of arsenious oxide per litre. The liability of this acid to be arsenical, however, is relatively small when it is prepared by "cylinder" and other processes in which special care is taken to employ pure sulphuric acid.

Glucose and "Invert" Sugar.

The glucose used by brewers is usually "solid." It is manufactured on a large scale at factories in Great Britain and a considerable quantity is also imported from America and Germany. The glucose used for confectionery, syrups, and other food purposes is generally "liquid" and is almost always imported. Solid and liquid glucose alike are liable to contain arsenic derived from sulphuric or hydrochloric acid, which are used in varying proportions (e.g., from 2 to 6 per cent.) in the "conversion" process by which the glucose is manufactured from starch. In view of the circumstances of the epidemic of 1900 it is unnecessary to insist upon the high degree of arsenical contamination of glucose which may be brought about by neglect of precautions regarding the quality of the acid used. Solid glucose manufactured by Messrs. Bostock and Co. in 1900 in several instances was ascertained to contain as much arsenic as three grains per pound, and even larger proportions of arsenic were estimated in a few specimens.

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[1] Cd. 1848. Eyre and Spottiswoode, price 5½d.

With due attention to the purity of the chemical sub- [illegible]

But such instances have been few. Brewers' glucose is now generally free from arsenic, and the arsenic detected in some specimens has seldom exceeded 0·004 grain per pound. Similar conditions obtain in the case of the "invert" sugar which is used by brewers and sometimes also by manufacturers of cider and fermented "temperance drinks." About 3 per cent. of sulphuric acid is used in the preparation of this form of sugar.

Glycerine.

The observations of the report on glycerine are of interest. It is not generally known that as much as 3 per cent. of glycerine is sometimes added to cakes to keep them moist, or that this substance is used in certain meat extracts and confectionery. Large quantities of arsenic (one grain or even three or four grains per pound) were discovered a few years ago in several samples of glycerine. The attention then given to the subject has no doubt secured considerable improvement, but it is instructive that public analysts and others shortly after the 1900 epidemic reported objectionable quantities of arsenic in several samples of British and foreign glycerine sold for pharmaceutical purposes. A special test for arsenic ("Gutzeit" method) was introduced into the British Pharmacopœia in 1898.

The report notes, however, that—

> Doubts have been expressed as to the sufficiency of this pharmacopœial test. It has been stated that this test may fail to detect [illegible] vely small are neverthe- [illegible]

Colouring Matters: Caramel.

Oxide of iron, sold under various names, is the chief mineral colouring matter used in food. It is frequently obtained from the residue in the manufacture of Nordhausen sulphuric acid, and this is no doubt the reason for the considerable quantities of arsenic which have been found in some specimens. Coal-tar or "aniline" colours are in many cases prepared by the use of large quantities of crude sulphuric acid. Aniline colours used by sweet manufacturers have been found in some cases to contain as much as, or more than, half a grain of arsenic in the pound. Caramel has usually been found free from arsenic, but owing to the use of impure alkali in its preparation it is liable to be arsenical and as much as a quarter of a grain per pound has been reported in certain instances.

The report gives a useful warning (though on a matter somewhat outside the Commission's reference) as to the use of emerald green.

> Coloured salts o [illegible]
> are so notoriousl [illegible]
> never used in foo [illegible]
> articles which ma [illegible]
> use of emerald g [illegible]
> objectionable anc [illegible]
> year that he had [illegible]
> in green tapers thus coloured.

Other Chemical Substances used in Food.

Arsenic is well known as an impurity of commercial phosphates, which are largely used in baking powders, and of phosphoric acid, which is used in sugar refining and mineral waters. These substances have lately been purer as regards arsenic than was formerly the case. In some samples of commercial borax over one-third of a grain of arsenic in the pound has been reported. Considerable quantities of arsenic have been determined in certain samples of beer "regenerators," consisting mainly of alkaline carbonates used to treat beer which is going sour, and in other chemical substances used by brewers. In all these cases the Commission points out that satisfactory degrees of purity can be obtained commercially.

Malt.

> The liability of malt to be contaminated by arsenic was first recognised after the cause of the 1900 epidemic had been ascertained. Considerable amounts of arsenic have been reported by different witnesses to have been found in malt; as much as 1-20th grain and [illegible] seems certain that no arsenic was introduced otherwise than by way of the malt used.
>
> The question of arsenic in malt has lately received close attention from brewers and maltsters, and malts as a whole have in consequence improved in this respect. All our evidence goes to show that it is now commercially practicable to produce malt which either may be considered free from arsenic, or in which the amount of arsenic present is certainly less than 1 250th grain per pound (0 57 part per 1,000 000), and that most of the malt prepared during the past two years has been of this character.

Owing to the practical difficulties which have arisen the report gives a considerable space to the various ways in which it has been found possible to avoid the risk of malt becoming arsenical. Brewers and maltsters appear to hold that the products of combustion, whether of anthracite, gas coke, or oven coke, are essential to give a flavour to malt which is necessary for beer. Kilns constructed so that the malt-drying is wholly effected by means of heated air have lately been introduced but they have not got beyond the experimental stage. The Commission is not satisfied with the evidence that the products of combustion are necessary and recommends that the new systems should receive careful attention from brewers and maltsters who are about to erect new kilns. The use of gas coke for malt drying has been shown to be dangerous and has now been largely discontinued; oven coke, which is less objectionable, has also been discontinued to a considerable extent It cannot be said that the use of anthracite, as such, affords complete security. Much depends upon the selection of this fuel and on the extent to which pieces of pyrites, shale, and other "impurities" which contain arsenic are picked out of the anthracite at the colliery or by the maltster. The Commission had instituted an important inquiry into the presence of arsenic in malting anthracites and in "impurities" of anthracite seams with the aid of Mr. A. Strahan, F.R.S, of the Geological Survey, and others, and they indicate the principles which should guide maltsters in the proper selection of their fuel. The objections to relying solely on chemical analysis in the case of fuel, owing to the question of sampling and other practical difficulties, was emphasised by one of the Commissioners, Dr. Whitelegge, in the interim report of 1901 and the final report points to the more practicable method of picking out obvious impurities, such as pyrites, from anthracite as the first and most important step in the selection of satisfactory fuel.

The problem may also be attacked in other ways by "treating" the fuel with lime which prevents the arsenic from becoming volatilised, by placing lumps of limestone at the outlet of the kiln furnace, and by modifying the construction of the kiln so that the major portion of the hot air has not come into contact with the fire. In any case it is evident that frequent and thorough cleansing of the interior walls of the kiln is essential as the sweepings from these walls have been found to contain a surprising amount of arsenic which is liable to be volatilised again and carried to the malt on the drying floor above. The report notes that the drying of chicory roots in Belgium and France is in many respects comparable to malt drying and that the small amounts of arsenic (up to 1·100th of a grain per pound) reported in some samples of chicory are to be accounted for in this way.

Among "finished foods" which are liable to arsenical contamination the following are mentioned:—

Beer.

> The liability of beer to be contaminated by arsenic arises mainly through the use in brewing of arsenical glucose, invert sugar, and malt, or by the addition of arsenical invert sugar or glucose as "priming" after the wort has been fermented. The degree of contamination which

may arise in these ways is abundantly illustrated in our evidence. Since the 1900 epidemic and the appointment of this Commission close attention has been given by brewers to the exclusion of arsenic from these and other substances used in brewing and various precautions have been extensively adopted with the object of eliminating all risk of arsenical contamination of beer. We have referred in the first part of this report to evidence that, notwithstanding the general adoption of these precautions, beer has been occasionally met with in which notable amounts of arsenic (for example, 1-20th or 1-30th of a grain per gallon) have been found. But such instances at the present time may be considered quite unusual. We are satisfied from the evidence received during the later part of our inquiry that much of the beer sent out at the present time from breweries in this country may be regarded as free from arsenic and that arsenic, where detected, is usually in minute amount. All the chemical witnesses from whom we have recently had evidence (including responsible chemical advisers of breweries) have been agreed that it is commercially practicable to produce beer which uniformly shows less arsenic than 1-100th of a grain per gallon and in which as a rule any arsenic present is in much smaller proportion than this.

Golden Syrups; Treacle; Foods containing Glucose.

Golden syrup and treacle are usually prepared from cane or beet sugar by the addition of about 2 per cent. of sulphuric acid. Glucose is an ingredient of a large variety of foods. Certain syrups sold as "table syrup," "amber syrup," and the like, consist largely of liquid glucose. Jams and marmalade frequently contain from 5 to 10 per cent. of glucose and sometimes larger amounts. Glucose may be *mixed with honey or used as a basis for the manufacture* of "artificial honey." Certain kinds of sweets and confectionery, again, consist largely of glucose.

It is satisfactory to read that British manufacturers of golden syrup and treacle have been in the habit of taking strict precautions to obtain pure sulphuric acid and that many manufacturers have lately made a practice of testing the glucose which they use. But the report notes that—

> Certain manufacturers whose products contain large proportions of glucose appear to have considered it unnecessary to take any steps to assure themselves by analysis that their glucose was satisfactory in respect of arsenic, notwithstanding the circumstances of the epidemic of 1900.

Vinegar is specially noted, as at some factories the material from which the vinegar is made is raw grain (rice or maize) which has undergone a "conversion" process in which sulphuric acid is used in much the same way as in the manufacture of glucose.

Demerara sugar has been found to contain small quantities of arsenic, exceptionally 1-50th of a grain per pound, derived from chloride of tin used to colour West India sugar or from impure phosphoric acid.

In general, the Commission appears to have found little evidence of the presence of arsenic in *malted foods*. It draws attention, however, to a preparation termed "Carnos" made from yeast and malt culms obtained from a Yorkshire brewery. In four different samples of this food Dr. McGowan found from 1 25th to 1 6th of a grain of arsenic per pound.

Foods containing glycerine and colouring matters are also dealt with.

> Bole Armenia and other mineral colouring matters consisting mainly of oxide of iron are frequently added in considerable proportion in the preparation of a variety of foods—for example, sausages, anchovy preparations, cocoa, and certain kinds of sweets. Material quantities of arsenic may be contributed to these substances in this way. Thus Mr. Hehner in June of this year informed us that he had estimated approximately 1-20th or 1-25th grain of arsenic per pound in a "chocolate powder" largely sold in London at a cheap price, which had been contaminated by arsenic through the use of oxide of iron. He also estimated the arsenic in certain sweets, similarly coloured, at 1-30th grain per pound.

The Commission has found no evidence that the use of arsenical superphosphates as manure will cause contamination of ripe grain or roots. Other inquiries have been attended with reassuring results, especially an examination of enamelled cooking utensils from a large number of factories which indicates that the use of arsenic as an ingredient of the enamel has now been generally discontinued.

The report makes a series of recommendations in Part 5 as to the precautions which should be taken by manufacturers to exclude arsenic from foods. These comprise practical suggestions as to the substances to which attention should be given, as to the extent to which it is necessary that their purity should be controlled by analysis, and as to the significance which should be attached to any guarantees asked for or given in the case of ingredients such as sulphuric acid, glucose, malt, or colouring matters.

The Commission objects strongly to the giving of guarantees of "freedom from arsenic" based on crude tests or insufficient frequency of testing. The application of the Marsh-Berzelius test is now well understood and the Commission is of opinion that in all cases where arsenic is detected its amount should be estimated. For practical purposes it recommends certain limits, on the understanding that these do not represent standards of purity but merely of what should not be tolerated :—

> We think that no substance should be used as an ingredient of food which contains a larger proportion of arsenic than 1-100th grain per pound, or in the case of solutions 1-100th grain per gallon. In many cases (particularly glucose and malt) more stringent limits are now attainable commercially and should be insisted upon.

Incidentally the report draws attention to, and strongly condemns, the objectionable practice of selling chemical substances to food manufacturers under misleading or ambiguous trade names, giving as an example the sale to bakers of solutions of phosphoric acid, a cheap substitute for tartaric acid, under the name of "liquid tartaric acid." The use of oxide of iron and chloride of tin in food is regarded as objectionable and unnecessary. In one instance lanoline was employed as a substitute for cocoa-butter and owing to the use of arsenical sheep dip this substance is regarded as unsuitable for food purposes.

Review of the Present Means of Official Control over the Purity of Food and Recommendations for Improvements.

We are unable in this article to do more than call attention to Parts 6 and 7 of this report They comprise a very valuable summary of the present administrative machinery in relation to purity and adulteration of food and an exposition of its many defects. The recommendations which are made for improved administration by the Local Government Board and as to the establishment of food "standards" are eminently practical and moderate and deserve the careful consideration not only of the department concerned but also of all health officers and public analysts, who are frequently baffled by the present unsatisfactory state of the law. Practical proposals are also made for amending the law of "warranty" and for improving the "seizure" clauses of the Public Health Acts.

Pending an authority officially to prescribe standards the Commission advises that amounts of arsenic in food which exceed 1-100th of a grain of arsenic per gallon in the case of any liquid food, or 1-100th of a grain per pound in the case of any solid food, should insure penalty when prosecutions are instituted under the Sale of Food and Drugs Acts.

Doubt was originally expressed in some quarters as to the necessity of calling together a strong Royal Commission for the investigation of the subject of arsenical poisoning by way of beer and other food. But no one who reads this final report will now question that the Government were well advised. Lord Kelvin and his colleagues have fully justified the Commission's appointment by having undertaken a most thorough and valuable inquiry which could not have been carried out by other means, and the Commission by its report and recommendations has rendered an important service to the public.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

A meeting of the Council of this Fund was held at Marlborough House on Dec. 14th, under the presidency of the Prince of Wales.

Lord Rothschild, the treasurer, in presenting the balance-sheet, said that the financial year had not ended, so that the accounts presented were incomplete. The amount received to Dec 10th was £71,033 8*s*. 3*d*. It spoke very highly for the honorary officials that the collection and distribution of the Fund were made at a cost of under £2000 a year.

Sir Henry Burdett said that he was glad to inform the meeting that the League of Mercy would be able to send a contribution of £10,000 to the Fund, which was £2000 more than last year and ten times as much as the amount given in the first year of the establishment of the league.

The report of the executive committee recommended this year the distribution of £99,000 to the London hospitals, making with the £1000 entrusted to the Fund by the London Parochial Charities for the convalescent homes, a total distribution of £100,000.

In presenting the report of the hospitals distribution committee Sir William S. Church referred to the great loss which the Fund had sustained by the retirement of Lord Lister as chairman of the distribution committee.

Sir William Church was elected to fill the post vacated by Lord Lister.

Sir SAVILE CROSSLEY then read the list of awards, which we hope to publish in full in an early issue.

We notice that the Bolingbroke Hospital at Wandsworth has been granted a donation of £1000. This hospital, which is in the centre of a congested population, has recently extended its accommodation and its expenses are necessarily great. Charing Cross Hospital has been given £2000 towards the rebuilding fund and the East London Hospital for Children £1600 to provide isolation and whooping-cough wards. Guy's Hospital, which receives an annual donation of £5000, has been granted £1000, and King's College Hospital, which also receives an annual grant of £1000, has been given the sum of £6500, £5000 of which are to be spent in the removal of the hospital to South London, which the committee views with great satisfaction. The London Hospital, with its annual grant of £5000, will receive a donation of £2000 and the Royal London Ophthalmic Hospital a donation of £2500. A sum of £2000 has been given to St. George's Hospital and one of £2000 to University College Hospital. A donation of £1000 has been granted to the West London Hospital, Hammersmith-road, W.

HIS ROYAL HIGHNESS, in moving the adoption of the report of the executive committee, said: My Lords and Gentlemen,—I beg to move the adoption of the report and in doing so to express my hearty concurrence with the recommendations of my committees and approval of the various grants and of the conditions upon which in some instances these have been made. You will, I know, join with my feelings of deep regret at our loss through the deaths of Cardinal Vaughan and Lord Rowton. We have also sustained a further serious loss in the retirement of Lord Lister who since the inception of the Fund has been chairman of the distribution committee. I trust that with improvement in his health we may again have the benefit of his valuable services. In reviewing the results of this year's work I have to admit that the hopes which I expressed 12 months ago that another £10,000 a year would be forthcoming, have not been fulfilled. But the year 1902 was an exceptional one, as a large sum was contributed specially as a coronation gift. We have, however, in addition to the sums set aside to be invested and those given in the form of investments, a considerable balance which can be utilised at the discretion of the general council. Upon this balance we have decided to draw for this year only in order that the amount for distribution among the hospitals may not be less than that of last year. We have not come to this decision without duly considering those two opposing principles one of which deprecates any encroachment upon our reserves, while the other advocates the expenditure of subscriptions with a view of relieving present necessity rather than of placing them to capital account. We are anxious not to go back in the work initiated by the King, and in the fulfilment of which I consider a sacred trust was confided to me. Our aim must be steady progress and to secure public confidence. I venture to draw attention to the enormous sums for which appeals are now contemplated by the London hospitals. According to my information, if we take only 12 hospitals out of more than 100, thus omitting many which are contemplating appeals, these sums amount to £700,000. This is exclusive of a probable appeal on behalf of St. Bartholomew's Hospital for a sum varying between £300,000 and £600,000. Hence the public must be prepared for appeals to provide over £1,000,000. And in addition to this there are other hospitals not included in this list, many of which have equally pressing needs. It is indeed a serious question whether some limit should not be put upon hospital extension works, and I trust that new schemes will not be undertaken by any hospitals without grave consideration of these heavy demands now being made on the charitable public. It is also a matter of regret to find that in the hospitals where the charges for maintenance were held to be too high no adequate reduction has yet been made. No doubt this matter will next year receive the close attention of the distribution committee. With regard to King's College Hospital I note with the utmost satisfaction its removal to South London. The importance of establishing in that vast population a large hospital with a medical school is known to all and I am glad that the decision seems to have met with general approbation. The amount allocated to the amalgamation of orthopædic hospitals is large but I fully concur with the distribution committee in its view of the great importance of establishing in London one first-rate orthopædic hospital. You will, I am sure, join with me in congratulating the League of Mercy on the steady progress made and the increased aid given by it to the Fund. It is a matter of satisfaction to find that the trustees of the London Parochial Charities continue to entrust us with the administration of the £1000 which they allot to convalescent homes. We are satisfied that in allocating these grants chiefly to convalescent homes connected with London hospitals we are acting in conformity with the views both of the supporters of the Fund and of the trust. The continued success of the Sunday and Saturday Funds proves that, as promised by the King, we have not trespassed upon their field of operations. The meeting of the Sunday Fund takes place to-morrow. We trust that the results may be in every way satisfactory and we look for continued coöperation with the other hospital funds. I have much pleasure in offering my congratulations to one of our honorary secretaries (Mr. J. G. Craggs) upon the honour conferred upon him by His Majesty, the patron of the Fund, in recognition of his valued services since the inauguration of the undertaking. I am directed by the King to express his high appreciation of the efficient manner in which the work of administration of the Fund has been conducted during the past year. His Majesty was especially pleased with the evident care and thought which had been bestowed upon the list of grants to hospitals and with the judicious decisions come to by the distribution committee. I have now great pleasure in moving the adoption of the report.

The LORD MAYOR of LONDON, supported by the Duke of FIFE, seconded the adoption of the report, which was carried unanimously.

A vote of thanks to the Prince of Wales, proposed by the Rev. J. GUINNESS ROGERS, was carried, to which HIS ROYAL HIGHNESS replied, and the proceedings terminated.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE annual general meeting of the Metropolitan Hospital Sunday Fund was held at the Mansion House on Dec. 15th, when the Right Hon. Sir JAMES T. RITCHIE, Lord Mayor, president and treasurer of the Fund, presided.

The report of the council for the year 1903 stated that—

> The thirty-first year of collecting this Fund has resulted, under the presidency of the Right Honourable Sir Marcus Samuel, Bart., Lord Mayor, treasurer, in a total of £64 975 12*s* 3*d*, the largest amount ever collected on Hospital Sunday since it was founded in 1872. The collections made in places of worship have again resulted in a record amount of £49,238 15*s* 9*d*, being an increase of £2907 13*s*. 4*d*. over those of last year. Their Majesties the King and Queen, with other
> Paul's Cathedral on
> ay, June 7th,
> were for the
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In proposing the adoption of the report, Alderman Sir JOSEPH SAVORY, Bart., M.P., said that the Fund owed a special debt of gratitude to the Rev. Prebendary Ridgeway of Christ Church, Lancaster Gate, to the Rev. Canon Fleming of St. Michael's, Chester-square, and to the Rev. Canon Pennefather of the Parish of St. Mary Abbots, Kensington, for the splendid contributions which they had made towards the total sum collected.

The CHIEF RABBI, in supporting the motion for the adoption of the report, referred to the loss which the Council had sustained by the death of Mr. A. L. Cohen.

Before putting the motion to the meeting the LORD MAYOR read an amendment which had been handed to him by the Hon. Stephen Coleridge with reference to the alleged use of the grants made by the Metropolitan Hospital Sunday Fund for the purpose of hospital school or college teaching.

Mr. RICHARD B. MARTIN, M.P., and the LORD MAYOR said that the awards of the Fund were made for the relief of the sick poor in the hospitals and not for the purposes of medical education.

Canon BASIL WILBERFORCE, who was to have seconded the amendment of the Hon. Stephen Coleridge, said that if this were so the amendment must fall to the ground.

A speaker in the body of the hall asked, if it were found that a hospital had made a grant to its medical school out of the sum awarded by the Metropolitan Hospital Sunday Fund, whether the amount so misused would be deducted by the Fund when it made its next distribution.

The LORD MAYOR replied in the affirmative.

The report was then adopted.

On the motion of the Rev. R. L. ALLWORK, seconded by Mr. R. W. DIBDIN, the council was re-elected with the addition of the following gentlemen to fill vacancies—Sir Marcus Samuel, Bart., the Rev. Frank Freestone, the Rev. J. Scott-Lidgett, and Mr Arthur T. West.

Sir SAVILE CROSSLEY, P C., M P., proposed, and Lord MEATH seconded, a vote of thanks to Mr. George Herring for his generosity which had assisted the Fund to secure the record amount of £64 975 This was carried with acclamation.

The ARCHDEACON of LONDON proposed :—

> That June 12th be fixed for Hospital Sunday of 1904 and that the cordial coöperation of all ministers of religion within the metropolitan area be again invited in the usual way.

In doing so he referred to the Royal visit to St. Paul's Cathedral this year which, he said, was due to the initiative of Sir Edmund Hay Currie, the secretary of the Fund. The Rev. W. H. HARWOOD seconded the proposition, which was adopted.

On the motion of Sir HENRY BURDETT, seconded by Sir WILLIAM CHURCH, an addition was made to Law IX. of the Constitution, which now reads :—

> In the event of a congregational collection made on Hospital Sunday being given to a particular hospital, dispensary, or institution, instead of being sent to the General Fund, the amount so sent shall be deducted from the grant made to that hospital, &c., and can in no case be included as forming part of the Fund. And in the further event of a partic[illegible] or institution fixing any day or days in the we[illegible] Hospital Sunday in any year for the purpo[illegible] of such institution upon the public it shall be an instruction to the committee of distribution, when determining the award to such institution, to take into consideration the amount received from such an appeal and the loss, if any, resulting therefrom to the Fund.

This was carried and the meeting terminated with a vote of thanks to the Lord Mayor who, in his reply, said he hoped that during his year of office the sum collected by the Fund would exceed any previous amount.

THE REPORT OF THE COMMISSION ON THE NATURE, PATHOLOGY, CAUSATION, AND PREVENTION OF DYSENTERY AND ITS RELATION TO TYPHOID FEVER.

WE have received a communication from Dr. George Turner, medical officer of health of the Transvaal, commenting upon the statements contained in the above-mentioned report. Our own summary of the report was published in THE LANCET of August 29th, p. 626. The main portion of Dr. Turner's letter is taken up with a judicially written estimate of the marked differences shown in the report between the opinions of Dr. W. J. R. Simpson and of Colonel J. Lane Notter, R A.M.C. Dr. Turner was sent in October, 1900, by Lord Roberts on a tour of inspection to all the camps situated between Pretoria and Komati Poort and Barberton and he was accompanied by Dr. Simpson and Colonel Notter. All that either of these authorities saw on the tour Dr. Turner saw and that at the same time, so that, to use his own words, "I can form a fair opinion as to which of them most accurately represents the facts." Speaking generally Dr. Turner agrees with Dr. Simpson. With regard to the objection taken by both Dr. Simpson and Colonel Notter to the prevailing system of removal of excreta by bucket Dr. Turner points out that no doubt water carriage is the best method of removal. But water carriage implies a supply of water "and that is precisely what is generally wanting in South Africa." As regards Lord Wolseley's "Soldier's Pocket Book," 1886, Dr. Simpson states that "it was the knell to the development of sanitary science and sanitary administration in the army as a prevention against disease." With this statement Dr. Turner thoroughly agrees. Dr. Turner next proceeds to take Colonel Notter's objections to Dr. Simpson's statements *seriatim* and here we give his own words.

Sanitary Condition of the Camps.

"Colonel Notter (p. 5) says : 'I consider the description of the camps to be greatly exaggerated. In my opinion, except in a few cases of camps occupied by colonial and irregular forces, the general sanitary state of the camps was good. ...... This has been intensified by the free employment of civil surgeons with the army in the field who have had no training whatever in sanitary science or preventive medicine.' This is in reply to a remark of Dr. Simpson (p. 56) as follows : 'The most crude notions and practices prevail which are contrary to the simplest elements of sanitary science. It requires very little descriptive powers to portray the results : polluted water-supplies, filthy latrines, covered with swarms of flies and uncovered with earth, excrement, polluted soil, manure heaps, and dead horses have been the usual accompaniments of camps where large numbers of troops have been located.'

In my opinion Dr. Simpson's general description is not exaggerated. Camps varied considerably as regards cleanliness and selection of position and those occupied by the colonial and irregular forces were not by any means always the worst. The civil surgeon did not always see that his tents were pitched with mathematical regularity and the whitening of the stones to mark out the paths left something to be desired, but as regards essentials it was different. The civil surgeon is just as likely to have received instruction in sanitary matters and is more likely to have had practical experience than is his military *confrère*.

I do not wish to infer that in bad camps all the errors enumerated in Dr. Simpson's general description were to be found but generally one or more of these avoidable errors were committed. The latrine pits were usually defective and no care was taken to prevent the dispersal of paper. At one camp I saw the dam side covered with pieces of paper which had been blown from a pit. On another occasion a regiment, to save the trouble of digging a pit, had actually used the furrow which carried the drinking water into a town. I did not actually see this but I had the evidence of two men who did see it and who told me of it independently and I have no reason to doubt the truth of their statements.

The selection of camps when on the march was often bad. A relative, a civil surgeon, spoke to his commanding officer about the imprudence of camping on the ground occupied by the Boers 24 hours previously as he knew that they had left several cases of enteric fever behind them. The reply was, 'What business is it of yours?' This was on the march and there may have been high strategic reasons for camping on a fæces-sodden soil. But in camps it must be different. I saw men camped out and and actually eating their food on the refuse heaps and within a few feet of a foul latrine. It would have been perfectly possible to have gone elsewhere and not far away. I saw the men camped out on ground on which the slop water of a hospital discharged and actually washing in the foul water. There was no earthly reason for this, there was more than ample room, yet this place of all others was selected. I accidentally ascertained that a rest camp had been formed near the railway. I suspected, from the elevation, that the town water could not reach it and made an examination. My surmise was correct. But water from a filthy sluit was laid on in readiness for the troops. A regiment which had been religiously filtering and boiling water might have camped there for the night and have suffered soon after from typhoid fever, and then the uselessness of filtration, the effects of soil and the agency of flies would have been called into requisition.

The disposal of carcasses was particularly bad. Colonel Notter (p. 4) tried to throw the onus of this on the Civil administration of Pretoria. But the jurisdiction of the municipality of Pretoria does not extend over the whole of the Transvaal and the nuisance was not by any means confined to Pretoria. I have frequently seen carcasses in water furrows and spruits which must have been there for days. As regards Pretoria, the civil administration was carried out under martial law and the duty of burying carcasses was imposed on the civil administration. Sometimes the number reached 200 in one day. The civilian population of Pretoria could not possibly furnish anything like 200 animals; 90 per cent. of those buried belonged to the military. And when it is remembered that nearly all the draught animals had been commandeered it is marvellous that so much was done; the work was not rendered any easier by the fact that sick animals were driven into the municipal area to die in order that the civil administration might bury them. The difficulty of burning carcasses has, in my opinion, been exaggerated. The process requires little fuel, provided that the carcass is previously opened and the bowels are exposed to the air for 24 hours, then very little brushwood and a small quantity of paraffin will cause it to burn easily. In fact, I burned many carcasses in this manner.

The Water-supply.

This, in my opinion, is the most important of all questions as regards typhoid fever. Colonel Notter writes (p. 139): 'Very stringent orders were issued to all units that the water used for drinking purposes should be boiled before distribution and for this purpose Sawyer's boilers were provided and an extra fuel allowance issued.' And again (p. 4*a*): 'The statement that it was the general exception for water to be filtered or boiled by regiments I consider to be far from the real facts Commanding officers were most keen on this point and in my experience it was rather the *exception to find water not boiled or filtered*' This to me is the most surprising assertion in view of the knowledge I possess of what Colonel Notter actually saw while he and Dr. Simpson accompanied me to Komati Poort and Barberton. Dr. Simpson's statement, so far from being exaggerated, is under-stated. I did not see any Sawyer's boilers; they may have been provided at a later period or in other districts but the troops were all supplied with filters.

If asked whether the water was filtered we were generally assured that it was and I have no doubt that the assurance was given in good faith. But we always inspected the filters. On one occasion a screwdriver had to be fetched to open the box, the bougies were all wrapped in the paper in which they left the shop, and the original packing was in the box. This box had been transported God knows how many miles and had never been used. More than once the filter was broken and I remember one was popular on that account because it filtered easily. In some regiments the filters were put up and anyone who liked to have filtered water could filter for himself. In very few regiments was the filtration properly supervised. In one case we were informed that the commanding officer had 'a fad about water,' that 'he had water on the brain.' Anyway he had come up from Natal and was then at Waterval Boven and he had not had any cases of typhoid fever. But even when water was filtered no attempt was made to insure that the men did not drink foul water. I am speaking now of camps not on the march.

At Skinner's Court was a well of fine water which could be raised by means of a pump. Dr. Simpson and I watched the men fetching water in their bottles. I did not see a man fill his bottle at the clean well, but several did so from a polluted spring which was about 50 yards nearer the camp and this went on *right in front* of the commanding officer who was sitting outside the tent. At Daspoort camp, where pure water was provided, at great expense in pipes from the Pretoria source, Dr. Simpson and I saw the men, about a dozen, fill their bottles from a leak in an irrigation furrow which contained the foulest water possible. I drew the attention of an officer to the fact and he remarked 'Yes, they will do it.' I went to see this camp because so many cases came into hospital from it Two of the cases described by Lieutenant-Colonel D. Bruce (p. 29) came from this place.

Dr. Simpson (p. 70) describes the discovery of the supply of foul water to the Pretoria railway-station as the result of an accident. It was hardly that. I had arranged that weekly samples of water should be taken from the reserve and at some ten or 20 points in the town should be analysed. This I did in order to be able to note and to inquire into any slight variations which might appear in the analyses. For three consecutive weeks I noticed that the sample taken at the station differed slightly from the others and that the difference increased. As the station tap was so situated that it was subjected to a negative pressure during the daytime I made arrangements with the town engineer to examine the pipes so as to be certain that there was no leakage. We then found that the tap in question was supplied, not from the covered reservoir which contained the same water as the town supply, but from an open sluit which was polluted. A clean supply by means of tanks was provided but the tap, to the best of my knowledge and belief, was never removed although I wished it done. Colonel Notter (p. 4) apparently objects to the remarks of Dr. Simpson as to the water-supply of West Fort as he has no knowledge of it, but the objection is rather far fetched, because at that time Colonel Notter was in hospital and Colonel Bruce was occupied in the laboratory, so that unless the work of the commission was to stop only Dr. Simpson remained to carry it on.

Even when pure water was laid on it was frequently so managed as to become polluted. For instance, water had to be pumped both to the Yeomanry Hospital and to another large hospital, because they were situated at too great a height for the town water to reach them Therefore wells were formed on the mains in such situations that at night, when the pressure was at its best, they were filled and water was pumped from these wells to cisterns in the hospital. I noticed that in the weekly analyses the number of micro-organisms per cubic centimetre instead of being below 100 amounted to thousands and, therefore, I inspected these supplies. In one instance the well was uncovered on the level of a very dusty road over which much traffic passed. In the other instance the well was in a shed; it was imperfectly covered, and on the cover were remnants of bread and meat. I concluded that a pet dog had been fed there. I may be wrong but the pieces of meat and bread were there and had no business there.

Colonel Notter (pp. 4-6) says, 'Too much is made of failure to put a guard on a particular disused water-supply. It must be remembered that the men were getting one night in bed per week owing to the onerous duties then prevailing.' He evidently misunderstands Dr. Simpson. If the paragraph mentioned in the note is referred to it will be seen that though the remarks are applied to the Daspoort incident it was in the second paragraph made generally applicable. I can substantiate Dr. Simpson's remark. I cannot remember any attempt being made to prevent men from drinking bad water. It may have been done, but although I was constantly making inquiries I never came across a case. As regards the Daspoort incident an officer and many engineers were working day and night within a few feet of the place at which the men took the foul water. The plea cannot hold water.

A civil surgeon, a relative, informed me that he had seen a guard placed at a drift from which an engine was pumping water. No one was allowed on the banks. Well and good, but he added that the men bathed and washed their *clothes above the place.*

But there was even a grosser case of neglect. During my investigations as to the origin of certain cases of enteric fever I became convinced that they were caused by drinking soda-water from a particular factory. I had a sample analysed and the analyses showed not only that the soda water was not prepared from the town water-supply but that the water was polluted. I immediately wrote to the principal medical officer of the forces and was informed that he had been aware of the fact for ten days. I am speaking from memory —it may have been a week; but in any case the time was quite long enough to have informed me of the fact so that I might have closed the factory. Dr. Simpson subsequently was good enough to make a bacteriological examination of the well water; the result is given in Appendix V., p. iii. The typhoid organism was separated. The sample said to have been analysed by the military had been taken from the Yeomanry Hospital. This I could not understand, because I had gone through the merchant's books and there was no entry of any sale to the Yeomanry and, when questioned, he denied any sale to them. Besides, there had not been any marked number of cases of enteric fever in the hospital which could have arisen during the patients' stay there. If the soda water at the Yeomanry Hospital came from the factory in question (the Trevenna) then the cases I supposed to be due to the consumption of that water were attributable to some other cause. The bacteriological examination had not then been completed. I went to the hospital and was assured that the water came from Travenna, but when I saw the invoices it was evident that all had come from a factory which used Pretoria town water and which I had recently closed because the premises were dirty and not well kept. The Travenna books show that considerable sales had been made to the military and I endeavoured to trace these and to have them destroyed, but found that the whole supply had been sent down the Durban line Therefore, not only had the military omitted to report the matter to me or to close the factory, but they had omitted to take such an obvious precaution as to stop the issue of the soda-water which they had in store. It was impossible from the army statistics to find if the soda-water in question had caused any appreciable amount of disease, because they are useless for that purpose, but judging from the effect it had produced in Pretoria it cannot have been harmless. The factory was closed until Pretoria water was laid on and the proprietor, who acted very innocently as regards the unfortunate occurrence, made a donation of £20 to the hospital, I am entirely of Dr. Simpson's opinion as to the value of the army hospital statistics. They may serve the purpose for which they were designed but they are useless for sanitary purposes. We spent hours trying to obtain any useful information from them and failed. It is important for preventive purposes that there should be speedy and accurate knowledge of the places in which disease originates.

Without offering any opinion as to the method he proposes to provide a sanitary service for the army, such a service is essential. Of course there are brilliant exceptions, but, broadly speaking, the officers of the Royal Army Medical Corps know less of sanitary matters than the general practitioner. How can it be otherwise? Moreover, any officer who has any sanitary *fads*, to quote Lord Wolseley, is very apt to have them soon knocked out of him. I could give a very glaring instance of this but it would serve no good purpose and might embarrass deserving men. I have not the least wish to depreciate the value of the Royal Army Medical Corps as a body and I feel certain that Dr. Simpson has no wish to do so. We quarrel with the system, or want of system, and not with the officers. The same remark applies to the Royal Engineers. No man possessed of ordinary common sense could travel over the railway line at the time that I did, when it was frequently destroyed, and see the stupendous work carried out by the Engineers and the rapidity with which it was accomplished without being struck with admiration. At the same time I do not think they are usually first-class sanitary engineers. It is not their vocation."

Dr. Turner concludes his letter by saying that he has "a few exceptions to take to Dr. Simpson's views as to the way in which typhoid fever was spread." As regards the frequency with which it is conveyed from person to person directly or at least not through the agency of water, upon which both Dr. Simpson and Colonel Notter lay stress, Dr. Turner agrees that this method of infection, though not common, probably accounted for many cases at Bloemfontein. The agency of flies he considers as unimportant; for instance, the highest proportion of admissions for enteric fever occurred in June, 1900, when the admissions were 1·16 per cent. of strength. But June is midwinter and the flies then are not troublesome.

Looking Back.

FROM

THE LANCET, *SATURDAY*, DEC. 17, 1825.

OBSERVATIONS [1]

Upon "IGNOTUS *on the Medical Profession*," *and* "NEOTEMERE *in reply*." By a SURGEON, APOTHECARY, and MAN-MIDWIFE.

To the Editor of THE LANCET.

SIR,—In turning over some old numbers of the Repository the other day, (a somewhat morbid taste, you will say,) or what a pastoral friend calls "chewing the cud," I chanced to stumble upon two papers in Nos. 87 and 89, written by a wag, yclept or ycleping himself "*Ignotus*," and a third in No. 93, professing to be a reply to the above-mentioned two by, evidently, a *no wag*, under the *nom de guerre*, "*Neotemere*," a name under which it behoves his god-fathers and god-mothers, for the edification of all good Christians, to explain and etymologize.

He (Ignotus) tells us, that "*professional men carry their stock in trade within their crania, or skulls*."—God help them!—'tis a small store-house, and often too but slenderly stocked; besides, does he mean to assert that a lawyer, carries all his briefs, a divine, his texts, and a physician, his prescriptions under his hat? Pshaw! the thing is impossible.

"*A surgeon*," *he goes on to state*, in "common with, &c. &c. may claim his station amongst those who exchange intellectual exertion for money, but whence the apothecary derives his claim," &c. &c —whence? why, from the same source. Is not his intellectual exertion?—what can be more so than pill making, plaster spreading, gallipot scraping, and draught shaking, accompanied, as it may be, by humming an Irish melody, spouting Shakspeare, quoting Horace, or mouthing Byron? Would that he had been accustomed to such intellectual pursuits, he could not then, after his affectation of euphony, too, have been guilty of another mis quotation; "the rose will smell as sweet," &c.—bah!—"the flower we call a rose, by any other name would smell as sweet;" let him look at Romeo and Juliet, in Stevens's edition.

"*The art of the apothecary*," we hear, is "that of sending in medicine," and "the most wonderful mystery—what becomes of it all?" but this is far from his only art. There is the art of supplanting a pre occupant, or rival—the art of worming into a family—the art of coaxing nurses—the art of frightening your patient, but, at the same time, keeping out his physician—the art, too, of calling him in *in time*; there is also the art of emulsionizing a cough, and of cordializing a pious spinster, who would not drink a tea-spoonful of "Booth's best" to save her soul, but will swallow alcohol by the ounce from the doctor, to the decided detriment of her body; in short, there is the whole art of acting, looking, walking, talking, and riding, the apothecary—the mystery is soon solved; woe to the clergy were theirs as soluble; that is, palatable medicines are swallowed, nauseous ones smelt, and those of ambiguous character returned with the empty bottles.

"*Walking the Hospitals*," it is true, generally amounts to an amble, and now and then to a run; but the book of disease, like that of nature, is, we all know, written in large and legible characters, and "he who runs may read."

"*A sentence in the pharmacopœia*," is no such trifle; the very first one in the preface would puzzle many an Eton boy, although, I contend, that it is quite as classical and humane to bring a *book to an anvil* as a *nose to a grindstone*: and where, let me ask, is the physician, who can *always* translate his own prescriptions?

P.S. These lucubrations, although anonymous, will of course be admitted into THE LANCET. Should any doubt exist as to the authenticity, respectability, or responsibility of the writer, the Court of Examiners at the Hall will perhaps be able to set these matters at rest, if it is just mentioned, that he is the identical X T.N. who, not many years since, was a little puzzled with their *drawings* of medicinal plants, and who then and there took the liberty of suggesting, that as medical botanists made use of their *noses* as well as their *eyes*, it might be as well to have the said drawings *scented* according to the individual odour of the plants they represented.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8207 births and 5553 deaths were registered during the week ending Dec. 12th. The annual rate of mortality in these towns, which had been 17·4, 17·6, and 18 6 per 1000 in the three preceding weeks, further rose last week to 19·2 per 1000. In London the death-rate was 18·9 per 1000, while it averaged 19·4 in the 75 other large towns. The lowest death-rates in these towns were 6·3 in Grimsby, 8·8 in Leyton, 10·6 in Hornsey, 10·8 in Walthamstow, 13·1 in King's Norton, 13·3 in Barrow-in-Furness, 13·4 in South Shields, 13·8 in Tottenham, and 14·0 in Stockton on-Tees; the highest rates were 25·2 in Oldham, 25·4 in York, 25 7 in Reading, 26·2 in Burnley, 26·5 in Plymouth, 29 6 in Middlesbrough, 30 2 in Wigan, and 32 0 in Merthyr Tydvil The 5553 deaths from all causes in these towns last week included 422 which were referred to the principal infectious diseases, against 436 430, and 402 in the three preceding weeks, of these 422 deaths, 121 resulted from measles, 97 from whooping cough, 67 from diphtheria, 67 from diarrhœa, 30 from scarlet fever, 37 from "fever" (principally enteric), and three from small pox. No death from any of these diseases occurred last week in Hornsey, Tottenham, Bournemouth, Southampton, Burton on-Trent, Grimsby, St Helen's, South Shields, or Newcastle on Tyne, while the highest death rates from the principal infectious diseases were recorded in Willesden, Great Yarmouth, Warrington, Bury, Burnley, Preston, Rotherham, and York The greatest proportional mortality from measles occurred in Willesden, Great Yarmouth, Warrington, Bury, Preston, Rotherham, and York, from diphtheria in Coventry and Merthyr Tydfil, from whooping cough in Brighton, Wolverhampton, Aston Manor, Bootle, Rochdale, Burnley, Leeds, Newport (Mon), and Swansea; and from diarrhœa in Burnley The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns Two fatal cases of small pox were registered in Gateshead and one in Birmingham, but not one in any other of the 76 large towns The Metropolitan Asylums hospitals contained 32 small pox patients on Saturday last, Dec 12th, against 51, 47, and 40 on the three preceding Saturdays, two new cases were admitted during the week, against five, five, and three in the three preceding weeks The number of scarlet fever cases remaining under treatment in these hospitals and in the London Fever Hospital, which had been 1824, 1832, and 1770 at the end of the three preceding weeks, had further declined to 1717 at the end of last week, 173 new cases were admitted during the week, against 191, 157, and 161 in the three preceding weeks The deaths in London referred to pneumonia and diseases of the respiratory organs, which had been 325, 399, and 358 in the three preceding weeks, rose again last week to 417 and were 47 above the number in the corresponding period of last year The causes of 67, or 1 2 per cent, of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in West Ham, Leicester, Nottingham, Salford, Leeds, and in 39 other smaller towns, the largest proportions of uncertified deaths were registered in Hastings, Reading, Birmingham, King's Norton, Coventry, Liverpool, St Helen's, South Shields, and Gateshead

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[1] Excerpts only are transcribed.

HEALTH OF SCOTCH TOWNS

The annual rate of mortality in eight of the principal Scotch towns, which had been 17 4, 18 7, and 20 0 per 1000 in the three preceding weeks, further rose to 22 4 per 1000 during the week ending Dec 12th and was 3 2 per 1000 in excess of the mean rate during the same period in the 76 large English towns The rates in the eight Scotch towns ranged from 16 4 in Edinburgh and 17 0 in Paisley to 25 8 in Glasgow and 29 3 in Greenock The 735 deaths in these towns included 34 which were referred to measles, 15 to diarrhœa 13 to whooping cough, six to scarlet fever, two to diphtheria, two to "fever," and one to small pox In all, 73 deaths resulted from these principal infectious diseases last week, against 61, 62 and 53 in the three preceding weeks These 73 deaths were equal to an annual rate of 2 2 per 1000, which was 0 7 per 1000 above the mean rate last week from the same diseases in the 76 large English towns The fatal cases of measles, which had been 13, 17, and 22 in the three preceding weeks, further rose to 34 last week, and were all registered in Glasgow The deaths from diarrhœa, which had been 20, 22 and 12 in the three preceding weeks, rose again last week to 15, of which nine occurred in Glasgow, two in Edinburgh, and two in Dundee The fatal cases of whooping cough, which had been seven nine, and seven in the three preceding weeks, increased again to 13 last week and included five in Glasgow, three in Aberdeen, two in Edinburgh, and two in Paisley The deaths from scarlet fever, which had been four, two, and one in the three preceding weeks, rose again last week to six, of which five were registered in Glasgow The fatal cases of diphtheria which had been seven, five, and four in the three preceding weeks, further declined last week to two, both of which occurred in Glasgow. The two fatal cases of fever were recorded in Greenock and the death from small pox was registered in Glasgow The deaths referred to diseases of the respiratory organs in these towns, which had been 136, 148 and 138 in the three preceding weeks, rose again last week to 192, and were 51 in excess of the number in the corresponding period of last year The causes of 31, or more than 4 per cent, of the deaths in these eight towns last week were not certified

HEALTH OF DUBLIN

The death-rate in Dublin, which had been 24 5, 24 8, and 27 5 per 1000 in the three preceding weeks, declined again to 24 6 per 1000 during the week ending Dec 12th During the past four weeks the death rate has averaged 25 4 per 1000 the rates during the same period being 17 7 in London and 17 2 in Edinburgh The 179 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 21 from the number in the preceding week and included 11 which were referred to the principal infectious diseases, against nine, 11, and 13 in the three preceding weeks; of these, seven resulted from whooping cough, two from diarrhœa, one from measles, and one from "fever," but not any from small pox, scarlet fever, or diphtheria These 11 deaths were equal to an annual rate of 1 5 per 1000, the death rates last week from the principal infectious diseases being 1 2 in London and 0 8 in Edinburgh. The fatal cases of whooping cough, which had been two, three, and five in the three preceding weeks, further rose last week to seven The 179 deaths in Dublin last week included 33 of children under one year of age and 57 of persons aged upwards of 60 years; the deaths of infants showed a marked decline from the number in the preceding week, while those of elderly persons were slightly in excess Eight inquest cases and seven deaths from violence were registered, and 56, or nearly one third, of the deaths occurred in public institutions The causes of eight, or nearly 5 per cent., of the deaths registered in Dublin last week were not certified

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE

IN accordance with the provisions of His Majesty's Order in Council of Oct. 9th, 1903, the seniority of the undermentioned Fleet Surgeons has been antedated to the dates shown against their names viz —William Rogerson White, dated Oct. 2nd, 1888, Steward Frazer Hamilton, dated July 29th, 1889, Henry Anthony Wills Richardson, dated Sept 21st 1890, Edward Wentworth Luther, dated Sept 30th 1890, Everard Home Saunders dated Oct. 1st, 1890, William Henry Patterson dated Dec 7th, 1890, William Edward Bennett, dated Dec 9th, 1890, Archibald McKinlay, dated March 2nd, 1891, Alfred Patterson, dated Oct 26th, 1891, John Dudley, dated Jan 29th, 1892, Henry Lawrence Crocker, dated Sept 5th, 1892, George Sprey Smith, dated April 27th, 1893, Leonard Henry Kellett dated April 27th, 1893, John Davey Henwood, dated May 7th, 1893, James Crawford Dow, dated June 4th, 1893, Charles Edward Geoghegan, dated Sept 23rd, 1893; George Despard Twigg, dated Sept 27th, 1893, Thomas Edward Henry Williams, dated Nov 19th, 1893, Standish Thomas O Grady, dated Dec 6th, 1893, Howard Todd, dated Jan. 6th, 1894, Alexander Livingston Christie, dated Feb 20th, 1894, Charles James, dated March 12th, 1894, Francis Austen Jeans, dated May 21st, 1894, Charles William Buchanan Hamilton, dated July 15th 1894, John Speare Lambert, dated July 25th, 1894, Horace Ximenes Browne, dated August 11th, 1894, Arthur William May, dated August 21st 1894, Alexander John James Johnston, dated Nov 16th, 1894, James O Brien Williams, dated Nov 16th, 1894, Samuel William Vasey, dated Dec 19th, 1894; Richard Edmund Biddulph, dated Oct. 1st, 1895, William Tait, dated Oct 1st, 1895; Joseph Crowley, dated Oct 1st, 1895, William Manley Lory, dated March 31st, 1896, William Spencer Lightfoot, dated March 31st, 1896, John Jeffreys Dennis, dated Oct. 2nd, 1896, Frederick John Lilly, dated Oct 21st, 1896, John Lloyd Thomas dated Nov 9th, 1896; Horatio Septimus Richard Sparrow dated Feb 26th, 1897, Anthony Kidd dated Feb, 26th, 1897, James Henry Beattie, dated Feb 26th, 1897; Edward James Biden, dated

August 25th, 1897; William Eames, dated August 25th, 1897; Charles William Sharples, dated August 25th, 1897; William George Kynaston Barnes, dated Feb. 27th, 1898; William Henry Norman, dated August 28th, 1898; James McCardie Martin, D.S O., dated August 28th, 1898; William Maxwell Craig, dated August 28th, 1898; Timothy Joseph Crowley, dated Feb. 26th, 1899; Donald Templeton Hoskyn, dated Feb. 26th, 1899; Robert Howard Nicholson, dated Feb. 26th, 1899; John Leslie Barrington, dated Feb. 26th, 1899; Percy William Bassett-Smith, dated March 26th, 1899; George Welch, dated March 26th, 1899; Edward Bridges Townsend, dated May 30th, 1899; Patrick Brodie Handyside, dated May 30th, 1899; Edward John Morley, dated August 21st, 1899; Hugh Winckworth Macnamara, dated August 21st, 1899; Joseph Henry Whelan, dated August 21st, 1899; Edgar Ralph Dimsey, dated August 21st, 1899; Joseph Reville McDonnell, dated August 21st, 1899; and Hamilton Meikle, dated August 21st, 1899.

Consequent on the above the undermentioned Staff Surgeons have been promoted to the rank of Fleet Surgeon in His Majesty's Fleet, with the seniority shown against their names, viz.:—Henry Harries, dated Feb. 11th, 1900; Edmund Corcoran, dated Feb. 11th, 1900; James Lawrence Smith, M.V.O., dated Feb. 11th, 1900; John Henry Thomas, dated Feb. 11th, 1900; John Dowson, dated Feb. 11th, 1900; Henry Frederick Iliewicz, dated Feb. 11th, 1900; Jeremiah Sugrue, dated Feb. 26th, 1900; Alexander Gascoigne Wilde, dated August 21st, 1900; Harold Rochester Osborne, dated August 21st, 1900; James Macdonald Rogers, dated August 21st, 1900; Chatworth Louis Nolan, dated August 21st, 1900; Harold Frederic Dale Stephens, dated August 21st, 1900; Edward Copley Ward, dated August 21st, 1900; William Robert Minchin Young, dated August 21st, 1900; Herbert William Gibbs Doyne, dated August 21st, 1900; George Albert Dreaper, dated August 21st, 1900; Alexander Fleming Harper, dated August 21st, 1900; Hubert William Austin Burke, dated August 21st, 1900; Edward Robert Drummond Fasken dated August 21st, 1900; James Charles Francis Whicher, dated August 21st, 1900; Alexander Gordon Andrews, dated August 21st, 1900; Arthur Stanley Nance, dated August 21st, 1900; Evan St. Maur Nepean, dated August 21st, 1900; Henry Erskine South, dated Feb. 16th, 1901; Alfred Matthew Page, dated Feb. 16th, 1901; Alfred Cropley, dated Feb. 16th, 1901; John Jenkins, dated Feb. 16th, 1901; Horace Elliott, dated Feb. 16th, 1901; Robert Forbes Bowie, dated Feb. 16th, 1901; William Edward Home, dated August 20th, 1901; Richard Aubrey Fitch, dated August 20th, 1901; Henry Bullen Beatty, dated August 20th, 1901; William Spry, dated August 20th, 1901; Percy Edmund Maitland, dated August 20th, 1901; James Joseph Walsh, dated August 20th, 1901; John Moore, dated August 20th, 1901; Cyril James Mansfield, dated August 20th, 1901; Robert Hickson, dated August 20th, 1901; John Lowney, dated August 20th, 1901; Frederick Walter Stericker, dated Feb. 18th, 1902; William Wenmoth Pryn, dated Feb. 18th, 1902; Graham Egerton Kennedy, dated Feb. 18th, 1902; Jerome Barry, dated Feb. 18th, 1902; Alfred John Pickthorn, dated Feb. 18th, 1902; John Andrews, dated Feb. 18th, 1902; Henry John Hadden, dated Feb. 18th, 1902; Vidal Gunson Thorpe, dated Feb. 18th, 1902; Edward Henry Meaden, dated Feb. 18th, 1902; Alfred Ernest Weightman, dated August 20th, 1902; James Walter Octavius Underhill, dated August 20th, 1902; Frederick James Burns, dated August 20th, 1902; Daniel Joseph Patrick McNabb, dated August 20th, 1902; Charles Strickland, dated August 20th, 1902; James Mead France, dated August 20th, 1902; John Menary, dated August 20th, 1902; Walter Godfrey Axford, dated August 20th, 1902; George Thomas Broatch, dated August 20th, 1902; William Bett, dated August 20th, 1902; Frederick Augustus Brice, dated August 20th, 1902; John Walter Slaughter, dated August 20th, 1902; George Henry Foott, dated August 20th, 1902; John Douglas Hughes, dated Feb. 28th, 1903; William John Colborne, dated Feb. 28th, 1903; John Hutton Stenhouse, dated Feb. 28th, 1903; Joseph Agnew Moon, dated Feb. 28th, 1903; Robert Hardie, dated Feb. 28th, 1903; Cornelius Bradley, dated Feb. 28th, 1903; George Trevor Collingwood, dated Feb. 28th, 1903; Richard Miller, dated Feb. 28th, 1903; John Edwin Coad, dated Feb. 28th, 1903; Hubert Holyoake, dated Feb. 28th, 1903; George Wilson, dated Feb. 28th, 1903; Walter Bowden, D.S.O., dated Feb. 28th, 1903; Octavius William Andrews, dated June 2nd, 1903; James Bradley, dated August 27th, 1903; George Hewlett, dated August 17th, 1903; George Alexander Walters, dated August 17th, 1903; William Gordon Stott, dated August 17th, 1903; Charles Sharman Woodwright, dated August 17th, 1903; Jonathan Shand, dated August 17th, 1903; and William Arthur Whitelegge, dated August 17th, 1903. Also the seniority of the undermentioned Staff Surgeons has been antedated to the dates shown against each, viz:—Johnston Hamilton Acheson, dated Feb. 22nd, 1896; John McElwee, dated Feb. 22nd, 1896; D'Arcy Harvey, dated Feb. 22nd, 1896; Reginald Thomas Alexander Levinge, dated Feb. 22nd, 1896; John Christopher Ferguson, dated Feb. 22nd, 1896; Edward Pain Mourilyan, dated Feb. 22nd, 1896; Charles Marsh Beadnell, dated May 2nd, 1896; Ernest Courtney Lomas, D.S.O., dated Oct. 21st, 1896; Robley Henry John Browne, dated Nov. 9th, 1896; Edward Butler Pickthorn, dated Nov. 9th, 1896; John Falconer Hall, dated Nov. 9th, 1896; Lawrence Bidwell, dated Feb. 21st, 1897; Edward Henry Hodnet de Courtmacsherry, dated Feb. 21st, 1897; Walter James Bearblock, dated Feb. 21st, 1897; William Hackett, dated Feb. 21st, 1897; Charles Geekie Matthew, dated Feb. 21st, 1897; Thomas Austen, dated Feb. 21st, 1897; Joseph Chambers, dated Feb. 21st, 1897; Percy Vaughan Jackson, dated August 22nd, 1897; Alfred Harold Lissant Cox, dated August 22nd, 1897; Alexander Maclean, dated August 22nd, 1897; Robert Hill, dated Nov. 6th, 1897; Frederick William Parker, dated Feb. 21st, 1898; George Goss Borrett, dated Feb. 21st, 1898; Walter Henry Skinner Stalkartt, dated Feb. 21st, 1898; George Alexander Stuart Bell, dated Feb. 21st, 1898; John Ambrose Keogh, dated Feb. 21st, 1898; Henry William Finlayson, dated July 28th, 1898; Frederick Fedarb, dated July 28th, 1898; Richard Cleveland Munday, dated July 28th, 1898; Edward Carter Cridland, dated July 28th, 1898; Frank Bradshaw, dated July 28th, 1898; Matthew Joseph O'Regan, dated July 28th, 1898; Richard Francis Bate, dated July 28th, 1898; Arthur Gaskell, dated Oct. 31st, 1898; Thomas Christopher Meikle, dated Feb. 11th, 1899; Thomas Cudlip Wood, dated Feb. 11th, 1899; Horace Bruce Marriott, dated Feb. 11th, 1899; Norman Lloyd Richards, dated Feb. 11th, 1899; Ernest Alfred Penfold, dated Feb. 11th, 1899; Ernest James Finch, dated Feb. 11th, 1899; John Kirkup Robinson, dated Feb. 11th, 1899; Hugh Clift, dated Feb. 11th, 1899; Ernest Albert Shaw, dated March 26th, 1899; Francis Herbert Aylen Clayton, dated March 26th, 1899; Frederic James Abercrombie Dalton, dated March 26th, 1899; Edward Sutton, dated March 26th, 1899; and Arthur Reginald Bankart, M.V.O., dated May 5th, 1899.

The following Surgeons have been promoted to the rank of Staff Surgeon in His Majesty's fleet, with the seniorities shown against their names—viz.: Edward Cooper, dated Nov. 11th, 1899; Charles Samuel Facey, dated Nov. 11th, 1899; William Ernest Marshall, dated Nov. 11th, 1899; Montague Louis Bouchier Rodd, dated Nov. 11th, 1899; Herbert Lloyd Penny, dated Nov. 11th, 1899; Arthur Edward Kelsey, dated Nov. 11th, 1899; Henry Baker Hall, dated May 11th, 1900; Henry William Gordon Green, dated May 11th, 1900; Thomas Edward Honey, dated May 11th, 1900; George Thompson Bishop, dated May 11th, 1900; Edgar Fairbank Mortimer, dated May 11th, 1900; Beauchamp Frederick Parish, dated May 11th, 1900; Frederick Albert Capps, dated May 11th, 1900; Percival Marshall May, dated Nov. 15th, 1900; Christopher Louis White Bunton, dated Nov. 15th, 1900; Frederick Davidson Lumley, dated Nov. 15th, 1900; Edward Thomas Meagher, dated Nov. 15th, 1900; Henry Edward Tomlinson, dated Nov. 15th, 1900; Arthur Sydney Gordon Bell, dated Nov. 15th, 1900; James William Wilcocks Stanton, dated Nov. 14th, 1901; Henry Newport Stephens, dated Nov. 14th, 1901; Morris Charles Langford, dated Nov. 14th, 1901; Thomas Williams Philip, dated May 16th, 1902; Lancelot Kilroy, dated May 16th, 1902; Arthur Harry Hingston Vizard, dated Nov. 14th, 1902; Paul Hohling Mills Star, dated May 15th, 1903; Edwin Swainson Miller, dated May 15th, 1903; and Oswald Rees, dated May 15th, 1903.

In accordance with the provisions of His Majesty's Order in Council dated May 13th, 1901, commissions of the rank and date shown have been restored to the following gentlemen, formerly in His Majesty's navy, who have been placed on the list of volunteers for service in the event of war or emergency: James Henry Dawe, Surgeon, dated Feb. 18th, 1886; Philip Nicholas Randall, Surgeon, dated Feb. 21st, 1890; George McGregor, Surgeon, dated Feb. 11th, 1891; Frank Ernest Rook, Surgeon, dated

May 16th, 1894; and Eric Danvers Macnamara, Surgeon, dated Nov. 29th, 1897.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel J. Riordan retires on retired pay (dated Dec. 12th, 1903).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain E. Gray, 2nd Cheshire Royal Engineers, Railway Volunteers, to be Surgeon-Captain (dated Dec. 12th, 1903).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Cinque Ports: Surgeon-Captain J. B. Berry to be Surgeon-Major (dated Dec. 12th, 1903). 4th Lancashire: The undermentioned officers resign their commissions:—Surgeon-Captain W. McClelland (dated Dec. 12th, 1903). 6th Lancashire: Francis William Bailey to be Surgeon-Lieutenant (dated Dec. 12th, 1903).

Rifle: Galloway: Surgeon-Captain J. Cowan resigns his commission (dated Dec. 12th, 1903). 1st Volunteer Battalion th [illegible] Charles Percival Allen to be [illegible] Dec. 12th, 1903). 3rd Voluntee [illegible] Regiment: Charles Richardson White to be Surgeon-Lieutenant (dated Dec. 12th, 1903). 3rd (Dundee Highland) Volunteer Battalion the Black Watch (Royal Highlanders): Surgeon-Major W. Kinnear is borne as Supernumerary whilst commanding the Black Watch Volunteer Infantry Brigade Bearer Company (dated Dec. 12th, 1903). 3rd (Renfrewshire) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highl [illegible] W. A. Pride to be Surgeon-Ca [illegible] h Middlesex (London Sc [illegible] be Surgeon-Lieutenant- [illegible]

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The London Companies: Major H. W. Dodd resigns his commission, with permission to retain his rank and to wear the prescribed uniform on retirement (dated Dec. 12th, 1903); Lieutenant H. Fulham-Turner to be Captain (dated Dec. 12th, 1903).

SOUTH WALES BORDER VOLUNTEER INFANTRY BRIGADE.

Field-Marshal Sir Evelyn Wood, commanding 2nd Army Corps, sanctions an extension of service until Jan. 31st, 1906, in the case of Brigade-Surgeon-Lieutenant-Colonel P. E. Hill, V.D., South Wales Border Volunteer Infantry Brigade.

DEATHS IN THE SERVICES.

Major Langton Philip Mumby, R.A.M.C., on Dec. 1st at Spring Garden Lodge, Gosport, in his forty-third year. The deceased, who was the youngest son of the late Colonel Charles Mumby, received his medical education at Westminster Hospital Medical School, where he took a high place in the various class examinations. He graduated M.B. of London University in 1884, having obtained the M.R.C.S. and L.S.A. qualifications during the previous year. In 1892 he took the D.P.H. of Cambridge. After holding resident appointments at Westminster Hospital Dr. Mumby entered the Medical Department of the Army in 1886 and served with distinction in the North-West Frontier campaign of 1897 (mentioned in despatches).

Correspondence.

"Audi alteram partem."

AN APPEAL BY THE UNIVERSITY OF LONDON IN SUPPORT OF MEDICAL EDUCATION.

To the Editors of THE LANCET.

SIRS,—We venture to ask your aid in giving publicity to an appeal which is now being issued by the Senate of the University of London for funds to build and to endow an Institute of Medical Sciences under the control of the University. Owing to the great changes which have taken place in medical education of late years, due to the increasing attention given to the teaching of the scientific subjects, it has become impossible for each medical school out of the income derived from the fees of students to build, to equip, and to maintain the laboratories, fitted with costly apparatus, which are necessary for modern scientific teaching. It has long been felt that a great improvement would be effected if instruction in certain subjects could be given, not separately in a number of medical schools, but in one or more central institutions controlled by one authority.

The Royal Commission appointed to consider the charter for the proposed teaching university in London reported as follows:—

> The teaching of physics, chemistry, biology, anatomy, physiology, ... pharmacology ...... should be concentrated into one or two *institutions*.
>
> It can hardly be doubted that considerable improvement in medical education would result from this [illegible] time and expense and concentratio [illegible] be set free from what must now be [illegible] enabled to devote all their energ [illegible] subjects of medicine and surgery, which in all their various branches have largely developed of late years.

The Statutory Commission appointed to frame the statutes of the reconstituted University adopted the recommendation of the former commission and embodied it in the following statute:—

> [illegible]

The faculty of medicine, a body consisting of 350 recognised teachers of the University, having ascertained the views of the teachers of the medical schools, recommended the Senate to establish an Institute of Medical Sciences for the teaching of physics, chemistry, biology, anatomy, and physiology.

It is because the Senate believes that at the present moment there is a most favourable opportunity of obtaining that centralisation *in the teaching of these subjects which has been* so much desired that it appeals for funds to help the University to carry out this project. If London is to maintain the position which it has hitherto held as a centre of [illegible] that money for these objects [illegible] recognised [illegible] to meet a [illegible] the United Kingdom in which there are such opportunities for the study of medicine and surgery as in London. The importance of its hospitals, the immense number of patients suffering from every kind of disease who come from all parts for treatment, and the presence of distinguished physicians and surgeons as teachers, have combined to render London one of the most celebrated schools of [illegible]

The public is indeb [illegible] ly for a supply of men comp [illegible] and the private needs of the community, but also for many of those discoveries which have of late done so much for the advancement of medicine and surgery. The nation has therefore a very direct interest in the efficiency of medical education; and now that the needs of London in this respect have been made known it is hoped that the University will obtain from the citizens of the metropolis the support which it requires [illegible] providing the space required for the teaching of the prelimary scientific subjects, would henceforth be able to devote all their resources to the care of the sick and to research into the causes of disease, to an improved knowledge of which future advances in medical and surgical treatment must be due.

We confidently commend the present appeal of the University to those who are in a position to help it forward by donations or bequests. Donations and applications for copies of the appeal and for further information should be sent to the honorary treasurers at 35, Clarges-street, W. For the convenience of donors the payment of a donation may be extended over a period of three years.

We are, Sirs, yours faithfully,
ROSEBERY,
Chancellor.
P. H. PYE SMITH,
Vice Chancellor.
ARTHUR W. RUCKER,
Principal.
J. K. FOWLER,
Member of the Senate.
H. T. BUTLIN,
Dean of the Faculty of Medicine.
Honorary Treasurers of the Appeal Fund.

THE LUNG REFLEX OF ABRAMS.

To the Editors of THE LANCET.

SIRS,—You will pardon my revival of this subject, but the recent polemic in THE LANCET in which Dr. A. G. Auld and Dr. Harry Campbell participated respecting this reflex may be regarded as an adequate excuse for my intrusion. I do not concur with Dr. Campbell who combats the theory of Dr. Auld—viz , that the lung reflex is an independent reflex and not dependent on the action of the inspiratory muscles. I presume that I am correct in assuming that Dr. Campbell does not deny the existence of the lung reflex but merely questions its mode of genesis. We do not deny the phenomenon known as the knee-jerk although we may remain undecided whether it is a true spinal reflex or accept the interpretation of Gowers that it is due to the direct effect of the concussion or the sudden stretching upon the muscle itself which is in a condition of slight tonus. Dr. Campbell presents the unconditional inspiratory dyspnœic theory in explanation of the lung reflex, ignoring, as Dr. Auld puts it, "that the lung has an *inherent* power of dilating apart from the breathing forces or atmospheric pressure." The theory of Dr. Campbell is certainly ingenious and is fully elaborated in his excellent work on "Respiratory Exercises," to which I owe many valuable suggestions, notably those relating to the splanchnic vaso-motor mechanism which have enabled me to develop an important clinical sign which I have called the "cardio-splanchnic phenomenon." The Campbell theory of the genesis of the lung reflex of dilatation may be contravened, as I view it, by succinct reference to the counter reflex of *lung contraction.*[1] The latter reflex is evoked by forcible percussion in the nature of a concussion blow and manifests itself in brief by the translation of a resonant into a dull percussion sound. This method of concussional percussion when executed during the time the Roentgen rays are traversing the chest demonstrates the gradual darkening of a definite area of lung contiguous to the region percussed and impresses one as though the lung were trying to squeeze the air out of the air vesicles. After the lapse of several seconds the specified lung area resumes its normal brightness. If the Campbell theory is correct—viz., that lung dilatation ensues as a result of cutaneous irritation which reflexly excites the inspiratory muscles to action, why is it that in a manœuvre necessary to elicit the lung reflex of contraction when cutaneous irritation is more pronounced lung contraction and not dilatation ensues? Surely dyspnœa as a resultant of lung collapse (the lung reflex of contraction) would be a more reasonable assumption than air-hunger as a concomitant of lung dilatation. Why is it that the reflex of lung contraction does not occur if the nasal mucosa has been cocainised? I may add that recently I have succeeded in bringing both lungs into a condition of contraction by medicamentous applications to the nasal mucosa and that after such applications none of the conventional manœuvres necessary to induce the lung reflex of dilatation proved operative. I have reserved for future consideration, for a work on asthma now in course of preparation, further reference to this important subject.

That the lung reflexes are quite independent of any dyspnœic activity of the thoracic musculature is made evident by my contribution on the physiological action of amyl nitrite.[2] I demonstrated that in a certain percentage of persons the inhalation of this drug will cause a diminution of the transverse diameter of the heart, a fact made evident by the x rays. Insomuch as amyl nitrite is regarded almost as a specific in inhibiting the distress of angina pectoris the theory of Heberden that angina is a cramp of the myocardium must be wrong and the theory of extreme tension of the ventricular walls in consequence of acute dilatation seems to be corroborated by the action of the drug upon the heart What appears to be more apposite in this connexion is the fact that after inhalation of amyl nitrite a limited patch of lung dulness over the manubrium sterni may be evoked. This patch of dulness obtained by percussion may involve the entire manubrium and extend to the right as well as to the left side. The dulness in question is almost never reproduced after an immediate second inhalation of the drug. The lung dulness is dependent on circumscribed collapse of lung, a veritable lung reflex of contraction, and may be dissipated at once by tapping the epigastrium which provokes the counter reflex of dilatation. In some persons inhalation of the drug evokes dull areas in other thoracic regions but the dulness over the manubrium is almost constant. I recall an individual with progressive muscular atrophy in whom both lung reflexes could be elicited notwithstanding loss of electric irritability of the muscular structures of the chest. The elicitation of the lung reflexes through the nose and elsewhere and their inhibition by definite manœuvres prompted me to conclude several years ago in a publication that they were dependent on reflex irritation of broncho-constrictor and broncho-dilator nerves which I hypothesised to exist in the vagus. The recent experimental observations of Dixon and Brodie[3] appear to confirm my original conclusion based on purely clinical investigations.

The number of cutaneous visceral reflexes has by no means been exhausted. More recently I have demonstrated the existence of liver, stomach, and intestinal reflexes. I believe that the epoch-making investigations of Head will prove an incentive to the discovery of other reflexes which will not only subserve a useful purpose in diagnosis but will also suggest many valuable therapeutic measures and elucidate many therapeutic methods which have had heretofore no substantial reason for their existence other than empiricism.

I am, Sirs, yours faithfully,

ALBERT ABRAMS

San Francisco, Cal.

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[1] American Medicine, Jan. 3rd, 1903.

[2] Ibid.

[3] Journal of Physiology, March, 1903.

THE NEED FOR FURTHER REFORMS IN THE DEPARTMENT OF ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—The many points of interest and importance not only to teachers of anæsthetic administration but also to the governing bodies, medical staffs, and patients of the great hospitals of the United Kingdom which are clearly set forward in Dr. Frederic Hewitt's letter on this subject to THE LANCET of Dec. 12th (p. 1683) form my apology for adding a few remarks and suggestions to those which have already appeared.

A practical knowledge of the administration of anæsthetics has never been, and is not at the present time, demanded by the various universities in their examinations for medical degrees, and, as far as the public are concerned, the possession of a university degree by a medical man is no certificate to them that he has ever read a book on the subject, attended a lecture on anæsthetics, or administered to a single case in his whole previous life. One of the first steps in procuring the advance which is now being claimed for the position of the anæsthetist is to insure a proper training in anæsthetics for every medical student before he receives legal registration and is qualified to practise. More than a year and a half ago the Royal Colleges of Physicians and Surgeons in London inserted a course of practical and theoretical instruction in anæsthetics into their curriculum; their action is bearing good fruit in insuring proper training to those who obtain the Conjoint diplomas, and it lies with the graduates of the various universities to bring pressure to bear upon them to follow his example.

A medical practitioner who has not held a resident post including the work of anæsthetic administration at a hospital is unlikely, to say the least, to have had sufficient practical experience in this branch of the medical art to undertake it in his practice with safety to the public. Many believe that because their obstetric patients take chloroform quite easily in small doses its administration for surgical operations is quite a simple and safe affair. There never was a greater mistake. The physiological state during the period of childbirth is for many reasons peculiarly favourable to the exhibition of chloroform and the anæsthesia required is very light, whilst for surgical cases great experience is necessary to meet the requirements of the various types of patient, both healthy and in every pathological state, in addition to the modern conception of complete anæsthesia entertained by the operator. Most operating surgeons are so thoroughly cognisant of these facts that they dread the performance of any operation without the aid of a specially trained and experienced anæsthetist and, in view of the gradual disappearance of the "major shadow" of high mortality from the surgical procedure itself, as pointed out by

Dr Hewitt, and the emergence of the "minor shadow" of mortality from anæsthesia from its former obscurity, this is a very right and reasonable fear Unsuitable environment and the frequent lack of needful accessories in private practice will always render it inferior in the treatment of disease to the hospital, and as the hospital sets the highest ideal of treatment and advice in other special departments so the hospital must be the means of educating the public to the proper estimation of the services of the skilled anæsthetist

The ideal most surgeons desire and the governing bodies of the hospitals should be urged to adopt is this that no anæsthetic should be administered within their walls excepting by, or under the personal supervision of, a specially chosen anæsthetist To provide the requisite officers and experience the appointment of resident house anæsthetists at all the teaching hospitals should be made, preferably from the ranks of former house physicians and surgeons The lectures demonstrations and supervision of the whole department should be in the hands of one or two competent medical officers with staff rank according to the size of, and particular work required by, the institution

I am, Sirs, yours faithfully,
H Bellamy Gardner

Mansfield street, W , Dec. 12th 1903

THE ADMINISTRATION OF CHLOROFORM TO MAN AND TO THE HIGHER ANIMALS.

To the Editors of The Lancet

Sirs —Dr A D Waller's lecture on the Administration of Chloroform to Man and to the Higher Animals, published in The Lancet of Nov 28th, p 1482 surely contains a warning which the medical profession should be slow to neglect Remembering the immense advances made during recent years in almost every department of medicine and surgery towards exact knowledge it is surprising that the administration of anæsthetics is still an empirical operation Who, amongst even the more skilled anæsthetists, is prepared to say what is the exact composition of the vaporous mixture which he is administering to his patient? The present loose and inaccurate method of producing anæsthesia is unnecessarily dangerous in the hands of a careful but less skilled anæsthetist If a surgeon were given the choice of being assisted at an operation by a skilled surgical assistant or a skilled anæsthetist would he not almost invariably choose the latter

Dr Waller's remarks upon the "open" method of giving chloroform—much vaunted by Edinburgh men as the safest—show with equal clearness the great danger and the great extravagance of this method It is disconcerting but wholesome to realise so plainly that the patient may at one inspiration receive an overwhelming at others a minimum dose of chloroform the amount inspired depending largely on that uncontrollable factor—the character of the respiration The majority, perhaps, of anæsthetics are given by those who, from whatever reason, do not hold themselves to be amongst the more skilful anæsthetists It appears to me high time that some form of apparatus should be obtainable which will accurately determine the quantity of anæsthetic vapour actually being inspired, will permit such quantity to be regulated with precision, and will also supply continuously air which has not been previously respired by the patient

Junker's inhaler is no doubt an attempt in this direction Although analyses of the composition of the mixture it supplies have been published, the mixture yielded must necessarily vary greatly in composition and other dangers of the apparatus are well known Probably some form of apparatus, such as that of Dubois could be made in a portable form suitable for what may be called clinical work Some such apparatus seems to have been suggested by Vernon Harcourt and tried by some anæsthetists A description of the apparatus—which does not seem to be supplied by surgical instrument makers—and accounts of experience with it are not easy to find It may be concluded that the time has arrived when the administration of anæsthetics should cease to be an art and become a branch of exact science

I am, Sirs, yours faithfully,
W J Lindsay, M A., M D , D P H. Cantab

Bromley, Kent, Dec 10th, 1903

RECURRENT OVARIAN CYSTOMA AND ABERRANT ACCESSORY OVARIAN STRUCTURES

To the Editors of The Lancet

Sirs —I am glad that I have succeeded in drawing Mr J D Malcolm's special attention to the unique table published by Spencer Wells showing the causes of death of those who recovered from completed ovariotomy for cystoma and I hope that the profession also will take note of it, for I am convinced that the matter is of more than ordinary importance In none of these cases could any sign of malignant disease be detected before, during, or after the operation, although it is certain that every case was carefully scrutinised *ad hoc* by the keen eyes of Spencer Wells, who would naturally not care to spoil his operation results by including malignant cases in his list Indeed, at this period, if, after opening the abdomen the disease was found to be malignant the operation was usually abandoned It is necessary to recollect, for the proper appreciation of this matter, that the great majority of Spencer Wells' patients were still alive when his table was published very many of them having been comparatively recently operated on, for in the earlier years of his career far fewer operations were done than subsequently It is no use speculating as to what maladies these persons might have died from, for we have no information whatever on the subject Therefore for the purpose of ascertaining the causes of death of those who died after completed ovariotomy these surviving cases must be completely ignored Statistical conclusions on this subject resting on any other basis can only be *pour rire* Spencer Wells' 1000 completed ovariotomies were done between the years 1858 and 1880 The final inquiries as to after results were made in 1881, when the state of affairs was as follows —449 reported themselves well in 1881, 11 were well in 1880 but did not respond to subsequent inquiry, 85 were well in 1872 but did not respond to subsequent inquiry, 55 were well when last heard of ten years previously but did not respond to subsequent inquiries, 51 were not heard of after the operation 651 were therefore alive or were not known to be dead in 1881, 127 of the remainder died after operation of the first 500 cases, 105 others died after operation of the second 500 cases, and 117 died after recovery from the completed operation—total, 1000

Of the 117 patients who were known to have subsequently succumbed 29 died from unknown causes, 43 died from various cerebral cardiac, or pulmonary affections unconnected with the operation, seven died from abdominal or pelvic disease not further specified, six died from recurrent ovarian cystoma, 32 died from malignant disease of various parts In 19 of these 32 cases the seat of the disease is not stated in the other cases the parts affected were the peritoneum in three the uterus in three the ovarian pedicle in two, the rectum in two cases and the lung the liver, and the kidney each in one case It is distinctly stated, with regard to six of these 32 cases, that the operation was bilateral and it probably was so in several of the others Now from the analysis it will be seen that the causes of death of those who recovered after completed ovariotomy were known only in 88 cases, and of these 32 were ascribed to malignant disease or 36 per cent, which is an extraordinarily high percentage

Wishing to avoid any appearance of exaggeration, I purposely omitted from my estimate the four cases in which malignant disease supervened at very brief intervals after the operation, but these may very well have been instances of acute traumatic malignancy caused by the operation, such as we occasionally see in other parts of the body after operative procedures for the removal of non malignant tumours Although the evidence furnished by Spencer Wells' ovariotomy cases as to the great frequency of subsequent malignant disease seems to me to be of the most complete and convincing description, I have not relied on it solely, or even chiefly, for proving my thesis The cumulative evidence of modern experience, to which I alluded in my last letter in your journal, is of an equally convincing and undeniable kind and permits of not the slightest doubt being entertained as to the exceptional frequency of malignant disease after operations of this kind

In conclusion, it appears to me that Mr Malcolm has been rather unfortunate in the somewhat antiquated statistical data, as to the comparative frequency of malignant disease of the ovaries, which he has cited from Greig Smith's work. Leopold and Schroeder's series of cases are absolutely worthless for this purpose, since they comprise a large number of specially selected malignant cases sent to the clinic for this very reason. It is quite inadmissible to compare cases of this kind with Spencer Wells' ovariotomies from which all malignant cases had been rigorously excluded. I selected the Kelly series of 138 ovarian tumours because this is the only considerable series of such tumours known to me in which the diagnosis had been verified by microscopical examination. With a larger total the percentage of malignant disease would no doubt have accorded closely with my own results, derived from the analysis of 804 primary ovarian tumours under treatment at four of the largest London hospitals, of which only 6·3 per cent. were malignant. Olshausen's and Pfannenstiel's data support me in this contention, for of 293 ovarian tumours from the former's clinic 21 were malignant, or 7·1 per cent.; and of the latter's 400 cases 22 were malignant, or 5·5 per cent.

I am, Sirs, yours faithfully,

Clifton, Bristol, Dec. 4th, 1903. W. ROGER WILLIAMS.

THE ASSURANCE OF UNDER-AVERAGE LIVES.

To the Editors of THE LANCET.

SIRS,—The interesting and suggestive letter of "Actuary" in THE LANCET of Dec. 5th, p. 1617, has, I regret to see, produced no comment from those members of the profession who are best qualified to speak on this somewhat special branch of medicine.

There is no doubt that it is wrong to accept a sub-standard life at ordinary rates on the "limited payment" scale. The tendency, however, has been to accept such lives with a smaller addition than would be required were the policy a "whole life" one. This is done on the ground that the flaw in the applicant—be it gouty tendency, cancerous family history, &c.—will not probably affect him until all the payments have been made, and examiners are apt to fall into the error of supposing that the office is then safe. But as "Actuary" points out, this is far from being the case and is another proof, if such were required, that these sub standard lives should not be accepted at ordinary rates for the "limited payment" scale. What I would venture to ask "Actuary" is how he arrives at the conclusion that the addition on the "limited payment" scale should be greater than that on the "whole life" basis. The point appears to me to be a new one and of such importance as to require further elucidation.

I am, Sirs, yours faithfully,

Temple, Dec. 14th, 1903. R. L. GUTHRIE.

A CASE OF TRAUMATIC ANEURYSM OF THE GLUTEAL ARTERY TREATED BY INCISION OF THE SAC AND LIGATURE OF THE ARTERY DURING INTRA-PERITONEAL COMPRESSION OF THE INTERNAL ILIAC.

To the Editors of THE LANCET.

SIRS,—At p. 601 of THE LANCET of August 29th Dr. Alan H. Muir has an article on this subject, in the remarks on which Mr. W. F. Brook says: "The credit of having been the first to devise and to perform this operation belongs to my friend Mr. W. H. Battle who in 1898 published a case which he successfully treated in this way at the Royal Free Hospital. So far as I know this is the only case on record." The incision of the gluteal aneurysm and the ligature of the artery during direct compression of the internal iliac artery was first performed by me in 1895. The case is referred to in my work, "Etudes de Clinique Chirurgicale," p. 62 (O. Bertier, Paris, 1901). As regards the operation I said:—

> L'extirpation décidée, il fallait trouver un moyen préservant le malade de l'hémorragie qui suivrait fatalement l'ouverture du sac, surtout dans l'hypothèse de ligature profonde, celle-ci ne pouvant se faire peut-être, qu'en arrière de l'échancrure sciatique.
>
> Après quelques reflexions sur l'éventualité touchant la conduite à adopter pour éviter l'hémorragie, nous nous décidons pour la compression préliminaire directe de l'artère iliaque primitive. Nous pratiquons l'incision latérale en vue de la ligature de l'iliaque primitive, sous le chloroforme. Une fois l'artère découverte, nous la saisissons avec une longue pince hémostatique, dont nous avions eu soin de doubler les mors avec du caoutchouc. Cette pince est formée légèrement pour ne pas léser l'artère. Nous inclinons ensuite le malade vers le coté droit et nous commençons l'extirpation de l'anévrysme. Arrivé au terme de la dissection, et la ligature des vaisseaux ouverts achevée, nous retirons la pince de l'artère iliaque interne, puis nous nous assurons que l'hémostase est complète.
>
> Nous sommes arrivé sans encombre au terme de l'opération et sans que le malade ait eu à souffrir de pertes de sang considérables.

I am, Sirs, yours faithfully,
Dr. ANTONIO PACHECO MENDES

Bahia, Brazil. Professeur de la Faculté de Médecine de Bahia.

PARISH COUNCIL OF DURNESS, SUTHERLANDSHIRE.

To the Editors of THE LANCET.

SIRS,—This parish council in 1898 dismissed its then medical officer *without cause being given;* it has now continued its unjust treatment of its medical officers by dismissing its present medical officer. Might I warn the profession, as it is not likely that the next medical officer will get any better treatment? I shall be pleased to furnish any applicant with further information.

I am, Sirs, yours faithfully,
W. L MUIR,
Secretary, Scottish Poor-law Medical Officers' Association.

1, Seton-terrace, Dennistoun, Glasgow, Dec 9th, 1903.

A SUSPICIOUS STOP-GAP.

To the Editors of THE LANCET.

SIRS,—In experimenting on samples of coffee which I have found it desirable to cork down for variable periods, it has frequently occurred that a bad cork has started deterioration of specimens of my concentrated infusions and that while the "brew" of the same period, corked with a good cork, has remained sound a coincident specimen has "gone bad" apparently (and only) from a bad cork. It occurs to me that in a multitude of trades where corks are used there must be some effect produced on articles of merchandise and manufacture, not perhaps sufficient so to taint the particular article as to make it "bad" to the taste and yet quite enough to cause it to be deleterious. I merely throw the idea out as a bald suggestion: it may or may not be new; it may or may not be relevant. But it seems to me that where various articles of diet are accused of causing cancer (beer has been so "named") it would be just as well if we all contributed our suspicions, even though such suspicions may turn out to be ill-founded. Of course a really bad cork "corks" wine and a wise man rejects it, but in the specimens of coffee which have been spoilt in my investigations there has been no taste of cork. It is the tasteless deterioration which seems to call for some investigation.—I am, Sirs, yours faithfully,

GEORGE H. R. DABBS, M.D. Aberd.

Austin Friars, E.C., Dec. 5th, 1903.

THE LATE MR. W. J. WALSHAM: AN EXHIBITION OF SELF-CONTROL.

To the Editors of THE LANCET.

SIRS,—Sometime in the early eighties the late Mr. W. J. Walsham permitted me, a student at the time, to be present when he tied the right internal iliac artery in a patient at the Metropolitan Free Hospital. The hospital was at this period in a state of repair or removal and the operation was performed in what appeared to me to be the upper floor of a large warehouse used as a ward. Screens were placed round the scene of operation and the carbolic spray, then so fashionable, was mounted on a couple of boxes. The artery had just been exposed when one of the screens was overturned; it fell against the spray and in an instant there was a big blaze. The other patients began screaming and many of them started for the door. Mr. Walsham left his patient and assisted to put out the flames and quiet the inmates, and then he returned to his operation and separated and tied the artery without betraying the least disturbance.

I am, Sirs, yours faithfully,
A. C. F.

THE FEES AND EXPENSES OF PUBLIC VACCINATION IN RURAL DISTRICTS.

(FROM A CORRESPONDENT.)

THE attitude of the Government in regard to the Vaccination Act of 1898 is not reassuring; the failure to re-enact or to confirm for a term of years a measure which was avowedly tentative has been followed by a departmental inquiry by a committee appointed by the Local Government Board on the subject of the fees and expenses necessitated by the existing Act.

This inquiry has been forced upon the Local Government Board by the representations of certain boards of guardians. The guardians in various parts of the country have been alarmed by the sudden increase in vaccination expenses necessitated in some measure by the Act of 1898, but increased to a somewhat abnormal degree by accidental and unfortunate circumstances. I say "accidental circumstances" but the term is scarcely correct; the large outbreak of small pox in 1901–02 felt over a great area of the country and notably in London was the direct outcome of an increasing failure of compulsory vaccination, increasing since 1880 and finding its maximum in the four years preceding 1898. The amount of revaccination which has obtained in the last three years throughout the kingdom has been very great and a large proportion of this work has been thrown into the hands of the public vaccinators which ten years ago would never have found its way into those hands. It is this sudden increase of expense which has alarmed the boards of guardians and their attitude is easy to understand. It is not only the guardians (who are the administrators of the Vaccination Acts) but also their constituents, the ratepayers, who demand inquiry into the financial aspect of the existing method.

In the interests of the profession at large I have prepared the following summary of the work performed by the public vaccinators and the remuneration they receive and it must not be forgotten that they form a numerous and industrious section of the medical profession. Under the old Act (1876) the public vaccinator had to vaccinate or to revaccinate at his own house or at outlying "stations" at fees varying roughly from 1*s.* 6*d.* to 3*s.* per head; for this he had to collect his own lymph or to arrange for a good service of arm-to-arm vaccination. The work was never considered well paid; in fact, it never was well paid, and no Poor-law medical officer would in those days have accepted the post of public vaccinator if he had not practically been obliged to do so. Under the old Acts the public vaccinator in rural districts waited at home on certain days in each quarter, usually one day each three weeks at the beginning of each quarter, or journeyed to "stations" at a given hour in a corresponding manner and earned a fee for every child efficiently vaccinated; the vaccination of each child occupied at most five minutes; the inspection and the vaccination of each new batch took place at the same appointed interviews and the clerical work was confined to a short entry on each occasion in the vaccination register. There were no expenses for postage, dressings, or other material.

With this let the work now done under the provisions of the existing Act be compared. The mere clerical work takes longer than the whole operation of vaccination and inspection used to do. It is as follows. A list (Form H) is received weekly from the vaccination officer giving the names and addresses of children who have reached the age of four months but have not been vaccinated. A counterfoiled form has to be sent (with postage paid) to the parent stating that on such a day (within the hours of nine and four in the daytime) the public vaccinator will call to offer to vaccinate the child. On the appointed day the public vaccinator has to call and to offer to vaccinate The parents may refuse his services, the mother may be absent from home, or the case may have to be postponed. In these cases the public vaccinator receives no remuneration whatever for his journey, a journey which may involve a drive of over 20 miles made by appointment I know from a competent authority that in only about 2 per cent. of instances do parents ever take the trouble to write and so to save the public vaccinator this unpaid labour. From returns collected from public vaccinators it appears that an average of over 30 5 per cent. of the journeys undertaken are productive of no fee whatever owing to refusals and postponements. The operation of vaccination as performed under the orders of the Local Government Board is a very different matter from the routine of five years ago. The arm must be washed and rendered aseptic. All instruments must be sterilised before use, the lymph must be allowed to dry, and thereafter the arm must be dressed aseptically. The whole operation cannot now be performed under 20 minutes, whereas in former days 15 or 20 cases could easily be vaccinated in one hour. At the proper period the arm must be inspected and dressed at the child's home, and a supply of aseptic dressings provided for use until cicatrisation is complete. If the arm should require any subsequent attention this has to be rendered but no further fee is payable.

The distances travelled by public vaccinators in rural districts are very great. Many districts extend ten or 12 miles and cases have frequently to be seen eight or ten miles from the vaccinator's home. One public vaccinator who has investigated the point informs me that the proportion of long journeys to short ones is very high. In his case there have been 82 journeys of over four miles from home out of a total of 179 journeys of all distances in a period of three years. The relation is not accidental, it is found to occur in a large proportion of public vaccinators' experiences. This singular fact that the further from home he goes the more vaccinations the rural public vaccinator has to perform is usually to be accounted for by the competition of some neighbouring "one-spot" vaccinator, a private practitioner, the only serious competition which the public vaccinator meets among the really poor. On the other hand, the further from home the public vaccinator travels the less chance there is of making his visit useful for seeing other patients. The public vaccination visits therefore become visits *ad hoc*. The fees for this exacting work are determined between the boards of guardians and the public vaccinators. The latter sign a contract to perform the work at the specified fees, but this contract may be terminated by the board of guardians entirely at their own will and at 28 days' notice. The Orders of the Local Government Board (1898) have fixed a minimum fee thus: for every child born within the district who attains the age of four months without being vaccinated the public vaccinator receives 1*s.*; for each child successfully vaccinated 5*s*; and for each revaccination at the public vaccinator's own house or at an appointed station 2*s.* 6*d.* Boards of guardians are empowered to treat their public vaccinators fairly and to grant fees which cover the unremunerated work and the great distances which may have to be travelled In some cases 2*s.* or even 2*s.* 6*d.* is granted instead of 1*s.* for the registration fee.

When it is considered that every case which finds its way on to Form H involves a far larger amount of clerical work and a special visit in addition, the fee even of 2*s* 6*d.* compares very unfavourably with that paid under the Infectious Diseases Notification Act and equally unfairly when the fees are compared with those of the certifying surgeons appointed by the Home Office Many boards have refused to grant any advance on the minimum fee of 5*s.* irrespectively of the distances. In the union of Gillingham, Kent, the work performed, allowing for unpaid journeys, produces a remuneration of a little under 2*s.* per visit. In Ashby de-la-Zouch the estimate is at the rate of 1*s.* 10½*d* per visit. In the Devizes union the rate of payment is under 2*s.* per visit. In the union of Westbury on-Severn an attempt was made by the guardians to reduce the fees to the minimum of 5*s.* for all distances, the fees as contracted originally being 2*s.* 6*d.* and 7*s.* 6*d* for long distances. At the higher rate of payment the public vaccinator had travelled 1172 miles to vaccinate 745 cases for a remuneration of £45, being a fraction over 9*d.* per mile.

The amount of purely unremunerative work is in some instances enormous. The public vaccinator of Mere (Dorset) reports that in one year he travelled 40 miles to visit 17 houses without vaccinating a single case. From Ogley Hay (Lichfield) we obtain the report: "In 12 months I have made 1115 visits, 90 per cent. of which were over two miles from my house, and more than 50 per cent. of them from three to five miles. I estimate the remuneration at 2*s.* 9½*d.* per visit." It is a grave hardship that public vaccinators may only postpone cases for two months; many cases which have to be postponed cannot possibly be ready for vaccination in two months and the public vaccinator knows this, but the cases must be hunted up and revisited every two months by him or by the vaccination officer. Instances are reported from all sides in which postponement has been made five or six times with no payment for the labour.

When comparison is challenged, as it has been challenged, between the fees earned by public vaccinators and those charged for vaccination by private practitioners, sufficient regard has not been paid to the conditions and character of the work done or to the fact that the apparent fee per case earned by the public official has to recoup him (as far as it does recoup him) for an immense amount of work which earns no fee. The clerical and operative work involved in each case demands at least 35 minutes of time exclusive of travelling time and expenses, while dressings and a proportion of the postage have to be provided. In view of the distances traversed and the unpaid work performed no one could claim that 5*s.* for each completed vaccination is in any district a fair remuneration and any reduction of the existing fees will involve very grave hardship. Few, if any, boards give registration fees over 2*s.* 6*d.* and few give over 2*s.*, while the highest fees for the longest distances are about 12*s.* 6*d.* Even at these apparently high fees the average sum earned by each visit (when the unpaid visits are reckoned) is very small. In the union of Tiverton the fees are 5*s.* per case under one mile, 7*s.* 6*d.* under four miles, and 10*s.* 6*d.* over four miles, but the average per visit is, we are informed, only 2*s.* 2*d.* and the minimum fee is paid for registration (1*s.*).

Where minimum fees are paid the return for each visit is miserable; in one of the districts of Lutterworth the fee earned per visit is 1*s.* 9½*d.*, in Mansfield, 9½*d.*, in Gillingham, 2*s.*; in Devizes, under 2*s.*; in Gainsborough, though a fee of 10*s.* is given for long distances over six miles, the average earning per visit is said to be only 1*s.* These sums are ludicrously small when the distances and the time of actual work are properly estimated. I believe that in many instances in which the minimum fees have not been enforced the boards of guardians and the public vaccinators made an honest attempt to arrive at a fair remunerative wage, having consideration for the poor prevailing scale of fees for ordinary rural practice. But if this be so it is obvious that both contracting parties were quite ignorant of the mass of unpaid work which compliance with the requirements of the Act would involve. I am convinced that when the large mass of evidence which I understand has already been laid before the committee of the department is fully sifted and considered a sympathetic estimate of the value of the work performed will be taken.

Though there is no doubt that the public vaccinators are even now underpaid, there is equally no doubt that the Act of 1898 committed the public to an expenditure with which, in the absence of satisfactory explanation, it is not unnaturally dissatisfied. If the normal proportion of vaccination effected at the public expense had merely been maintained the increase in cost would have been viewed with concern by the ratepayers; but this proportion has been unexpectedly increased by two factors. An enormous increase in revaccination occurred all over the country during the years 1901–02; the accounts of public vaccinators which under the old Act stood at a usual average of about £10 per annum, and under the new Act would (for the birth-rate of the district) have stood at £25, suddenly shot up to £150 or £200, the figures in some areas reaching £2000 or £3000. In districts where no revaccinations at the public cost, except those of occasional telegraph messengers, had been effected for years, there were many hundreds performed in those two years. Further, many boards of guardians neglected entirely to establish public stations for revaccination, with the result that the vaccinators were sent for to vaccinate at the patients' own homes, by which the higher scale of fee was incurred by the authorities. It is within my knowledge that in certainly one rural district the public vaccinator, with the assistance of the local clergy, arranged stations within his area at which he vaccinated many hundreds of persons at the minimum fee of 2*s.* 6*d.* per head, whereas he might have received 6*s.* or 8*s.* per head if he had vaccinated them at their own homes. The people had the legal right to require his attendance at their homes, but fortunately for the local rates he improvised a more economical machinery of stational vaccination. The second factor which tended to increase the amount of public vaccination is the growing appreciation by the public of the methods of public vaccination and the recognised high quality of the lymph supplied by the Government establishment.

In the normal average working of primary vaccination the substitution of the domiciliary visit for stational attendance has induced a large proportion of mothers of the superior artisan and lower trading classes, who would have considered it derogatory to attend in company with a herd of poorer mothers at a public vaccination station, to avail themselves of public vaccination. This influence has been felt even more in the matter of revaccination. In the last two years large numbers of householders of superior position, even of considerable wealth, who would not have done so ten years ago, have availed themselves of the provisions of the Act to secure the services of the public vaccinator for themselves, their domestic servants, or their business employés.

The present Act provides an expensive and comfortable means of securing vaccination to everyone. The expense is undoubtedly considerable, but if it is deemed desirable on the part of the departmental committee now sitting to recommend means of retrenchment it is to be hoped that such retrenchment will not be at the expense of the public vaccinators in rural districts, who are already underpaid. Not only would a reduction in fees for the work performed be a hardship which the profession might resent, but it must be remembered that skilled public vaccinators—men of good professional status and trustworthy character—are invaluable apostles of vaccination for whose work it is worth the while of the State to pay adequately. A good public vaccinator, zealous to render his district a well vaccinated one, is an apostle of the value of vaccination whose service is worth to the State more than the bare statutory fees which he earns, and this fact has been in principle recognised by the Government in the long-established system of "grants" for vaccination, which are allotted to a great extent according to the excellence of vaccination in individual districts.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Housing Question.

BESIDES the Rowton House (now under construction) another experiment in the way of solving the housing problem by private enterprise and as a commercial matter is being made by a company under the title of "Homes (Limited)." The idea is to provide clean, sanitary, and cheap dwellings for the poor and the prospectus of the company pledges it to build flats suitable for those earning small wages and to take steps to insure their being occupied by tenants of that class. Two blocks of flats, four storeys high, have now been erected in the very poor district of Deritend. These buildings are divided into 60 tenements, 28 of which consist of one room each, to let at 3*s.* per week; 16 of two rooms each, at 4*s.* 3*d.*; and 16 of three rooms each, at 5*s.* The materials of which the flats are built have been very carefully chosen so as to make the walls and floors fire-proof, and as far as possible sound-proof and incapable of harbouring vermin. Each tenement has a private lavatory attached to it and there is a washhouse containing two boilers on each floor. Each tenement contains a ventilated food-cupboard and a sink with water laid on. The ends of all corridors are open for the purpose of insuring free ventilation and by means of a pulley placed in each it will be possible to haul up coal or heavy articles of furniture to any level. Gas-light is provided in the corridors and on the staircases, but each tenant will be able to use gas or oil in his tenement as he may choose. These buildings have been recently opened at a ceremony at which Mr. Councillor G. H. Kenrick, chairman of the company, presided and the Lord Mayor was present. The latter in the course of his speech said that he was grateful to the company for giving the city council a practical example as to whether it were possible for private enterprise to grapple successfully with one portion of the housing problem. The erection was in the nature of an experiment and he would much rather that such an experiment were made by private enterprise than by the municipality. Meantime it must be added that the council's policy with regard to the housing of the poor does not seem to meet with much support in a pamphlet issued by the Rev. Mr. Bass, a well-known worker amongst the very poor, whose parish, that of St. Laurence, comprises one of the poorest and most wretched parts of the city. With respect to the council project of opening up the courts he says: "The landlords are called upon to pay the cost of repairing properties; the front houses, taken down to make air spaces, are paid for by the corporation. The housing committee's estimate when applying to the corporation for their last grant was that the pulling down of such front houses would cost £100 per court. The experiment made in the condemned area is to be applied to the whole city. Now let us see what the cost will be. There are 6000 courts in Birmingham and, to state the case moderately, if only 1 in 4 is opened up it will cost the city £150,000. Not one single foot of land on which the houses stood will then be the property of the corporation, nor will they be the possessors of a single brick, whereas, on the other hand, £150,000 of municipal money spent in building houses at rentals of 3*s* 6*d.* to 5*s.* a week would go a long way towards solving the slum difficulty and leave a handsome estate in the hands of the corporation, which would be a positive source of revenue."

St. John Ambulance Association.

The annual meeting of this body has recently been held and the report then read stated that the year's working had resulted in a profit of over £18, leaving a surplus of about £85 after voting a sum of nearly £30 to the funds of the Birmingham corps of the St. John Ambulance Brigade. 19 classes were held during the period under review, of which 15 were male first-aid, three female first-aid, and one male nursing; five classes were held in connexion with manufactories. The committee was pleased to announce that the number of classes inaugurated by employers of labour continued to increase. In view of the success of the Birmingham corps it was desirable that a nursing division should be formed from among the ladies possessing first-aid and nursing certificates and the matter was now under consideration. It was stated that 29 medical men had given their services as lecturers gratuitously during the past year. The Lord Mayor, in his speech, alluded to the valuable services of the corps on various public occasions during the year and notably on the occasion of the great meeting at Bingley Hall addressed by Mr. Chamberlain.

Old Age Pensions.

A very remarkable light is thrown upon the proposals in this direction by certain statistics collected by the clerk to the West Bromwich Union in reply to a request from the Local Government Board which some time ago wrote asking for the information of the Select Committee, which had under [illegible] s' Bill of 1903, the number [illegible] 65 years of age who would [illegible] ouse with relatives having suitable accommodation for them if each had a pension of from 5*s.* to 7*s.* per week and also how many of them would wish to do so. The clerk pointed out that the persons included in this inquiry would not contain amongst their numbers those inmates who could not take care of themselves owing to some bodily or mental infirmity. From information which he had obtained he found that the number of persons over 65 years of age in the workhouse on August 5th was 325. The number who, in the opinion of the medical officer, could not satisfactorily take care of themselves owing to physical or mental infirmity was 203. That left 122 persons who might be described as candidates for the pensions. Of this number 22 had out-relief before they came into the workhouse, whilst in 98 cases no out-relief was given prior to their admission to the building. Further, out of the total cases 52 were admitted to the workhouse because they had been living under neglected conditions and 73 because of intemperance, whilst 82 were men and 40 were women. As the result of careful inquiries made it was ascertained that there was not a single person in the workhouse who was eligible for a pension under the conditions laid down. It was a matter for regret that during the inquiries that had been made only one case was found in which a man had been for any considerable time a subscriber to the funds of a friendly society, and that person had to seek the shelter of the workhouse because he had no relatives or friends with whom he could reside.

Vaccination in the District.

A good deal of discussion has taken place at recent meetings of the Dudley board of guardians with respect to the cost of vaccination and at the last meeting but one a report of the views of the Association of Poor-law Unions that the fee should be reduced from 5*s.* to 2*s.* 6*d.* and paid by the Treasury and not by the local authority was received with much approval. At the last meeting a statement of the cost of vaccination during the past years was made by the clerk. He stated that for the four years ending 1899 there were 7314 cases of vaccination and revaccination and the total cost was £1440, which averaged practically 4*s.* per case. For the last four years following the adoption of the order there were 9504 cases of vaccination and revaccination and the total cost was £4378, which gave an average cost of 9*s.* 3*d.* Of the 4*s.* the public vaccinators received 1*s.* 7¾*d.* and of the 9*s.* 3*d.* they got 8*s.* At a recent meeting of the Hanley town council statistics were given of the results of the North Staffordshire joint small-pox hospital. The chairman stated that the total number of patients admitted up to that date from the opening of the hospital was 259, of whom 125 were from Hanley. The total number of deaths in the hospital was 13. Of these deaths five patients were alcoholic subjects and death in their case was due to delirium tremens the result of excessive drinking. One patient died from heart disease and one from acute delirious mania. Seven deaths out of ten which occurred amongst the vaccinated patients were thus accounted for by causes other than small-pox. Of the total admissions into the hospital 31 were unvaccinated patients, with three deaths, being 9·7 per cent. Imperfectly vaccinated patients numbered 128. Of these ten died, seven of which deaths had been accounted for otherwise than by small-pox, leaving three who died from that disease, or 2·3 per cent. Well-marked vaccination was shown in 100 patients, amongst whom there were no deaths. There was no case of any patient being admitted to the hospital who had been revaccinated within the last seven years. Several patients had been revaccinated after being in contact with infected persons, but each case was of a mild character and there were no deaths.

Dec. 15th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Edinburgh Medical Missionary Society.

IMPORTANT additions and alterations have just been made in connexion with the premises in the Cowgate of the Edinburgh Medical Missionary Society. The dispensary and students' residence at 39, Cowgate, known as the Livingstone Memorial Medical Mission, was erected by the society in 1877. At this institution young men and women are trained for medical mission work in foreign lands by similar training in the slums of Edinburgh. Since 1877 the work done at the Livingstone memorial has steadily increased. Last year no fewer than 9601 new patients were treated, including 3228 seen at the dispensary, 2413 visited at their own homes, and 2855 who required some slight surgical treatment. The work of the society abroad includes an institution at Agra for the training of native young men, a hospital at Damascus, and a mission station and dispensary at Nazareth. Since the society was instituted over 100 fully qualified medical missionaries have been trained and sent out. The extended premises in the Cowgate, which were formally opened on Dec. 4th by Lord Aberdeen, consist of a three-storey building with a frontage of about 160 feet ending on the west at the junction of the Cowgate with Candlemaker-row. The block to the east is the part formerly in use. It includes the Magdalene Chapel, an edifice which dates from the beginning of the sixteenth century and is traditionally associated with the first meetings of the general assembly of the Church of Scotland. The chapel entrance is on the left of the main corridor; to the right are two surgical rooms, while between those two rooms a corridor leads to a waiting room, two consulting rooms, and the dispensary. To the rear is a hall which has been enlarged by including in it what were formerly the consulting and waiting rooms and the dispensary. The hall is now large enough to accommodate between 200 and 300 persons. It contains a bust and crayon portrait of Dr. Livingstone and a stained-glass window, the funds towards providing the latter having been contributed by patients. On the first floor is the students' residence, including a bedroom for each student, a study between every two students, a dining hall, a library, and a missionary museum. All the rooms are to be heated by means of pipes. Formerly only six students could be accommodated, now there will be room for 12 men. During the first three years of their training the students live in Miller House, George-square, but during the fourth year they live in the Cowgate. Women students have a similar training but do not live at the dispensary. At present 18 men and four women are being trained under the auspices of the society. An important adjunct to the work of the society in the Cowgate is a temperance restaurant which occupies the western block of the building In connexion with this are a reading room, a billiard room, and a gymnasium, the object being to form a poor man's temperance club where he can be provided with good food and rational amusement at the lowest possible rates. The cost of the extension is estimated at over £5000.

Dec. 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Belfast Workhouse.

Dr. E. C. Bigger, medical inspector to the Irish Local Government Board, has just made a special report on the state of the Belfast workhouse which is one of the largest in Ireland. It stands upon 29½ acres of ground, employs 235 officials, and has during the winter an average of about 3400 inmates, made up of sick, aged and infirm, lunatics, children, and a few healthy adults. Taking the workhouse altogether there are 120 persons to the acre, but on the 11 acres on which the workhouse stands there are 200 persons to the acre, which is more than would be allowed in barracks, asylums, and similar modern institutions. Dr. Bigger asks whether the time has not arrived for the guardians to consider whether they should cease to erect any more buildings upon their present grounds. He suggests a kitchen for each ward or for each pair of wards. He praises the new nurses' home which has accommodation for 130 nurses and reports in eulogistic terms of the services of the visiting and resident medical officers and nursing staff.

Drumconrath Dispensary.

This dispensary, in Co. Louth, has been vacant over six months. The guardians have been unable to obtain a medical man, as the Irish Medical Association insisted on a minimum salary of £200 per annum. In the circumstances the Local Government Board proposed to amalgamate Drumconrath dispensary with two other districts and to make two medical officers do all the duty and to divide between them the salary formerly paid to the Drumconrath medical man. The guardians would not agree to this at first but on Dec. 8th they decided to leave the matter in the hands of the Local Government Board.

The late Dr. G. Gray, J.P., Newcastle, Co. Down.

Under the auspices of the Castlewellan Literary Society, of which Dr G. Gray, who practised for many years in that town, was first president, there was held in the court-house, Castlewellan, on Dec. 11th, a large public meeting, when the Countess of Annesley unveiled a portrait of the deceased practitioner. Lady Annesley, in referring to the high qualities of the late Dr. Gray, spoke in sympathetic terms of the self-denying sacrifices of the medical profession. Dr. Gray enjoyed the good-will, respect, and confidence of a large *clientele*, and it is pleasant to see—in a country like Ireland—people of all sects and every social position paying such a tribute to the memory of a deceased member of our profession.

Small-pox in Belfast.

On Dec. 14th four fresh cases of small-pox were notified to the authorities and the cases were promptly removed to Purdysburn isolation hospital. Each of the cases, as "contacts" with a case from Newcastle-on-Tyne, isolated some time since, had been under observation. The cases are a mother and two of her children and a young woman. Two "contacts" have been placed in the intercepting hospital.

The Poor-law (Irish) Commission.

This commission opened its sittings in the court house, Belfast, on Dec. 16th. The commissioners are Mr. W. L. Micks (chairman), Dr. E. C. Bigger, Mr. G. Murnaghan, M.P., and Mr. Mahon, LL.B., registrar. The inquiry is in reference to dissolution of unions, provision of auxiliary lunatic asylums, the better classification of the infirm, destitute, and sick, the boarding out of children, and the best method of dealing with casuals.

The Youghal Auxiliary Lunatic Asylum.

The board of governors of the Cork District Lunatic Asylum has built an auxiliary asylum at Youghal to which it proposes to remove harmless lunatics with a view to relieve the congestion of the parent institution At some recent meetings there was considerable discussion as to whether a visiting physician or a resident physician should be appointed at Youghal. At a meeting of the members of the Cork medical profession specially convened to consider the matter a motion was passed and duly forwarded to the governors urging them to appoint a resident physician, and mentioning amongst other reasons the fact that lunatics, owing to bolting their food, are liable to get choked, when medical assistance is required to be immediately at hand. At the following meeting of the board of governors this resolution was under consideration, when by a comparatively small majority it was decided to appoint a visiting physician. Amongst those voting with the majority was the Very Rev. Dr. Kelly, Bishop of Ross. Later, in reply to a communication addressed to him on a different subject, the bishop wrote to the gentleman acting as honorary secretary to the meeting of the medical profession and expressed the opinion that the action of the profession with regard to the asylum appointment was an unwarrantable interference and due to interested motives. At the meeting of the medical profession the reading of the bishop's letter naturally caused considerable indignation and a proposal was made that the resolution previously forwarded to the asylum board and the letter of the bishop should be jointly sent to the local press. However, it was pointed out that the adoption of that course would result in unpleasant discussions which could effect no good and it was finally decided that the members would best consult their own dignity by entering his lordship's letter on the minutes and marking it "read." A motion to that effect was accordingly unanimously adopted.

Dec. 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Possible Dangers of Saline Inj[illegible]

AT a meeting of the Hospitals Medical [illegible]der constr[illegible]ch was held on Dec. 4th three speakers drew [illegible]ing the [illegible]o some unfortunate results which had followed [illegible]ommercia[illegible]eous injections of saline solution. M. A. Bergé g[illegible]itle of [illegible]account of the first case It was that of an old man[illegible], sani[illegible]arterial and renal sclerosis as well as [illegible] two injections of saline sol[illegible] per 1000. After this he de[illegible] intense dyspnœa, a sense of [illegible] cyanosis, and on auscultati[illegible] Hallion and Carrion as well as Achard and [illegible] Laper had previously shown that intravenous injection of sa[illegible]line solution in an animal would bring about pulmonary œdem[illegible] M. Bergé's case is a clinical verification in man of th[illegible]is experiment. M. Achard and M. Paisseau in another paper [illegible] reported that they had made a post mortem examination on [illegible] the body of a woman who for secondary hæmorrhage after [illegible] hysterectomy had received subcutaneously within 24 hours [illegible] ten litres of artificial serum containing five parts of sod[illegible]ium chloride and ten parts of sodium sulphate per 1000. [illegible] Death was due to pulmonary œdema which was dem[illegible]onstrated at the necropsy and there were besides renal [illegible] lesions. It was not proved that these lesions were due s[illegible]olely to the sodium chloride being in excess, for the solut[illegible]ion of this salt was so weak as to have less than the norm[illegible]al osmotic power (*était hypotonique*). It was on account of this hypotonia that the muscles of the patient showed a smaller proportion of sodium chloride than did the muscles of a subject who had died from rapid suffocation, which were tested as a comparison. Nor can the sodium sulphate be held responsible for the death and M. Achard and M. Paisseau think that it was due to the quantity of water. Experiments on rabbits show that the animals die when either weak or strong solutions of sodium sulphate are injected. A rabbit injected with over a litre of the same solution as was employ[illegible] d[illegible]d within a few hours. Death was due [illegible] and the renal epithelium was affected [illegible]

"Dechloridation" and the "Dechloridated" Diet for Morbus Cordis.

At the meeting of the Hospitals Medical Society held on Nov. 13th M. Widal, together with M. Froin, M. Digne,

M. Vaquez, and M. Laubry, communicated the results of an inquiry which they had made into the above subject. The patients under observation were nine in number and all of them exhibited actual œdema or else signs of its recent occurrence. The first point to be noted was that a patient suffering from morbus cordis, even when just recovered from an attack of cardiac insufficiency (*asystolie*) with œdema, was not affected by the ingestion of chloride of sodium. Despite a progressive increase in the amount of chlorides given in the diet both the œdema and the weight diminished in three patients. Three others, however, showed an increase in weight under an additional dose of 10 grammes of chloride of sodium. A "dechloridated" diet—namely, bread, meat, potatoes, and butter all free from salt—given to four patients with morbus cordis either made no difference as regards weight or else diminished it very slightly, even after a test meal of salted diet. In fine, the action of a salt-free diet on cardiac œdema is rather to hold it in check than to cure it and does not cause the effused serum to disappear as it does in certain cases of Bright's disease.[1] M. Vaquez and M. Laubry gave it as their opinion that a diet rich in salts is generally dangerous for a patient with morbus cordis, whatever be the stage at which his complaint has arrived. As to a salt-free diet the indications for its use seem to be less marked than in cases of Bright's disease. During a period of acute but transient cardiac insufficiency a salt-free diet may with advantage be substituted for a milk diet. Continued for some little time after the attack has passed off it will prevent a relapse. In favourable cases a salt-free diet acts not so much as a cure but as a sustaining diet (*ration d'entretien*). It also has its uses in cases of chronic cardiac insufficiency with permanent œdema, for it is a pleasant change for the patient from a milk diet and it prevents a too rapid wasting.

Artistic Anatomy.

The anatomy classes at the Fine Arts School have a new professor who is at once a medical man and an artist. Professor Richer, the well-known sculptor, has for the past 20 years devoted himself to the search for truth in art, and the results of his first researches were published in a volume [illegible] "Artistic Anatomy" in 1890. At a later date he [illegible] the "Artistic Physiology of Movement in Man." [illegible] masterpieces of art were reproduced in this [illegible] and in the introduction, which dealt with [illegible] physiognomy, Professor Richer studied the relations existing between art and medicine. He has now inaugurated a new course of lectures at the Fine Arts School, showing by the history of art how the human figure has been represented and what were the means at the disposal of artists. Professor Richer deals with Egyptian art, with Greek art, with the influence on art of anatomical studies which began about the thirteenth century, and with the works of the primitive Italian artists. The course will also include lessons in practical anatomy the details of which will be drawn together with figure studies.

The Anatomical Evolution of Fractures which are moved with a View to bring about a False Joint.

At the meeting of the Academy of Medicine held on Dec. 8th M. Cornil gave an account of some experiments made in collaboration with M. Coudray upon the method of repair in fractures and showed various microscopical sections taken at different times during the period of healing. He said that in his opinion fractures which were not kept at rest had but little tendency to produce false joints and generally healed in the ordinary way. If, then, it is permissible to argue from the case of an animal to that of a man, fractures in the latter should not be kept at rest. M. Cornil's opinion goes to support that of M. Lucas Championnière who for the last 20 years has urged that fractures not kept strictly at rest heal twice as quickly as those which are so kept; moreover they are not followed by articular or muscular stiffness. M. Lucas Championnière considers that a fracture should not be immobilised unless there is some great deformity or tendency to deformity of the limb. In every other case gentle movements should be employed but in the case of young children movement should be very carefully used for fear of provoking an excessive amount of callus.

Dec. 15th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Measuring of Blood Pressure in the Right Atrium Cordis.

Professor Gustav Gärtner has brought forward a new and valuable method of clinical examination. It is a well-known fact that the veins of the skin of the dependent forearm look filled, and that they look empty during the elevation of the arm. This old clinical observation forms the starting point of an exact method of measuring of blood pressure in the right atrium cordis. If the dependent arm is slowly elevated and if the blood-vessels of the skin are observed during the process it will be seen that the collapse of the veins in the same person occurs always at the same moment, when the arm comes to a certain level. The turgidity of the veins diminishes gradually as the arm is elevated, until a time comes when the recently prominent walls of the vessels lie flat. In the healthy man this takes place when the forearm under observation is raised to the altitude of the insertion of the fifth, fourth, and third rib. The phenomenon depends upon the pressure in the right atrium cordis. The veins form untransparent manometer pipes, while it is possible to control the standing of blood in the vessels. Thus we have the possibility of measuring the blood pressure in the right atrium cordis.

Death from Electric Shock.

Jellinek's recent experimental researches show that various kinds of animals have different reactions against the influence of electric currents. Horses are killed by the electric current in street cables—i.e., a constant current of 460 volts—while unipolar application of constant current of 110 volts has a bad effect after a time. Small animals, such as rabbits, dogs, and guinea-pigs, are more resistant, while frogs and tortoises are not killed by currents of 10,000 volts. Death occurs through paralysis of the heart and respiration, and animals which recover show similar symptoms to those which occur in man after lightning stroke, such as paralysis, coming on after an interval sometimes, hæmorrhages, and ocular lesions. The injury to human subjects through electricity depends not only upon the tension and amount of the current, but, and in particular, upon the resistance to transmission, the duration of the shock, the direction of the current, and whether there was unipolar or bipolar application. The individual condition of the subject, his clothes and shoes, as well as the constitution of the soil on which he stands, must all be considered. Undamaged skin affords great protection against electric shock, which, of course, diminishes as the skin suffers from the application. Tensions of from 100 to 150 volts demand precaution, tensions of over 200 volts may be dangerous, and of 500 volts even deadly. There is a well-known case where a man was killed by a current of only 95 volts when standing barefoot in a mixture of potash and sugar and molasses, while in Vienna a man, though much damaged, was not killed by a current of 5500 volts, alternating current. The local symptoms caused by electricity are superficial burning, singed hairs, œdematous infiltrations of tissues, or actually ragged wounds, together with injury to the special senses through the eyes and ears. Very interesting observations made by Jellinek show that sometimes tissue which looks at first unhurt, although in the neighbourhood of burnt spots, will later necrose, the injury spreading to the deeper lying tissues, the prognosis in such cases being very bad. Post mortem Jellinek found many small blood extravasations in the grey substance of the brain and the cord.

Dec. 14th

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Patent Medicines and Articles of Adoration.

Dr. S. A. Knopf, a well-known authority on tuberculosis, in a pamphlet recently issued by the committee on the prevention of tuberculosis of the Charity Organisation Society of New York, describes many methods whereby the danger of spreading contagion by consumption may be lessened. The writer severely criticises the adoration of certain articles and the endorsement of patent medicines. He writes as follows: "It might be of advantage if such articles of adoration as crosses, statues, or, as in Greek churches, pictures, which are often kissed by devout worshippers, were included in the periodic disinfection. Kissing the Bible when taking an oath should be discouraged by jurists and divines." Referring to the endorsement of patent medicines Dr. Knopf says: "Ministers of all denominations should consider it beneath their dignity to allow their names to be used to advertise patent medicines and other secret remedies. I am convinced if they were aware of the fact that many of the advertised patent remedies contain as much as 30 or 40 per cent. of alcohol and often more dangerous ingredients they would refrain from endorsing the use of medicines of whose composition they have not the least idea. Neither should religious newspapers lend their columns to the advertisements of nostrums and patent remedies of all sorts. It is to be regretted that patent medicines are also not unfrequently recommended by statesmen and legislators. Their personal endorsement of this or that secret remedy, given without forethought and perhaps even with good intentions, has often done irreparable harm to the sufferers." The wholesale endorsement of patent medicines by men and women in good positions is a crying evil on this side and it is to be hoped that Dr. Knopf's plain speaking may do some good. The chief sinners in this respect are clergymen who, not content with advising as to a person's spiritual affairs, too often take upon themselves the rôles of physicians. It would appear from a perusal of accounts which are to be read now and again in THE LANCET that British clergymen are somewhat addicted to prescribing for the bodily ills of their flock and to recommending patent medicines, although not to the extent that prevails here. There is little doubt that clergymen give medical advice and endorse patent medicines with the best intentions in the world, but good intentions unless accompanied by knowledge usually bring about bad and unexpected results. The bodily care of the individual is therefore best left to those who have made a study of that matter and the public should be warned against accepting the advice of well-meaning but irresponsible persons.

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[1] THE LANCET, July 4th, p. 61.

Two Motor-men for Electric Trains.

The *New York Medical News* in its issue of Nov. 28th strongly urges that two men should be placed in charge of all electric trains. The *Medical News* article says in part: "Many things may happen unexpectedly to a man that will render his position of motor-man likely to be a source of danger to those whose lives are dependent in all emergencies on his good mental and physical condition. During the ordinary hours of the day usually at least one of the other train-men is in a position to note any presages there may be of impending danger. During the rush hours, however, the crowd makes this absolutely impossible and passengers themselves are too uncomfortable, as a rule, to take any precautions looking to their safety." It is pointed out that a motor-man may be suddenly attacked by disease or may be suffering from the incipient stage of some severe internal ailment, such as pneumonia or an acute attack of nephritis, and may easily over-estimate his strength in his desire to put in a full day's work. Accidents, and serious ones, have happened on account of the physical incapacity of the motor-man An occurrence of this nature took place in the vicinity of New York recently. The warning of the *New York Medical News* is timely for London, seeing that the metropolis will soon have many miles of railroad on which the cars will run by electricity. There can be no doubt that accidents would be avoided by adopting the plan suggested by the *Medical News*. Furthermore, a pleasant sense of security would be afforded to the general public who have learned by the unfortunate experiences of the past few years somewhat to distrust electricity as a motive power, or rather to regard with a lively sense of apprehension the possible catastrophes resulting from its use.

Small-pox in New York State.

The Health Department of New York State has recently reported that small-pox prevails extensively throughout the State. The disease is especially serious in Chautauqua and Cattaraugus counties. The situation in regard to small-pox is also reported as bad at Medina, Orleans county, where there have been 92 cases in two months. The Health Department has stated that health officers are generally doing their utmost to quell the epidemic but receive indifferent support or actual opposition from local boards and citizens in the enforcement of vaccination and quarantine. Weekly bulletins will henceforth be issued by the department until the situation is materially improved, naming the places where small-pox exists, and other steps will be taken towards the enforcement of vaccination and quarantine.

Dec. 7th.

Obituary.

WILLIAM NEWMAN, M.D. LOND., F R C S. ENG.

DR. WILLIAM NEWMAN of Stamford, who died at that town on Dec. 3rd, aged 70 years, was one who in a prominent way upheld the dignity and advanced the honour of his profession. He was born on August 29th, 1833, at Hallfield, near Sheffield, and was the son of Mr. Robert Newman, land agent to Earl Fitzwilliam. He was educated under Dr. Jacob at Sheffield Collegiate School, where he was well grounded in the classics, and even as a boy was practised in the art of public or semi-public speaking. He was a nephew of the late Dr. Freeman Eaton of Ancaster, and began the study of medicine in the house of his uncle, during which time he acquired the friendship of a young nobleman who is now the Earl of Ancaster. He received his medical training at St. Bartholomew's Hospital where he made the friendship of Sir James Paget, Sir Thomas Smith, and the late Dr. James Andrew, besides having a distinguished career. He took the degree of M.D. at the University of London as well as the Fellowship of the Royal College of Surgeons of England, and had he chosen he could have been appointed assistant physician on the staff of St. Bartholomew's Hospital. For a short time he practised at Fulbeck near Grantham, but in 1863 he went to Stamford where he was appointed surgeon at the Stamford and Rutland Infirmary and held the office for 30 years. He then retired and was made consulting surgeon, but in a few years resumed the surgeoncy and began to operate in the infirmary again, and continued to do so until this autumn.

A personal friend sends us the following estimate of Dr. Newman's character: "Newman was a man who never wasted time and he got through a large amount both of work and recreation. He had numerous interests. He was an antiquary, a good draughtsman, an excellent shot; he rode the tricycle, loved animals, and took great delight in gardening. Himself a great reader and lover of books, he took much interest in education and was a very valuable member of the educational authority at Stamford. Although a magistrate he seldom sat on the bench. He was a good photographer and had an excellent installation for producing the x rays and the high-frequency current. He collected coins. But these are comparatively minor matters The salient features of Dr. Newman were his eminence as an all-round practical medical man, as an excellent physician, and as an accomplished surgeon. Not less worthy of note were his high character, his devotion to duty, his never-failing self-respect, and rectitude of conduct. His manner did not belie him. He was full of dignity and courtesy and he was remarkable for the care and precision which he carried into all his actions great and small. He was devoted to surgery and enjoyed above all things talking over its problems with a congenial spirit. He scorned humbug and never pretended to know more about a case than he really did. He would spare neither time nor money to get to the bottom of a difficult case. Being reserved and rather austere in manner to strangers, he was not the man to be universally appreciated by the silly and by the superficial At heart he was of a kindly and lovable nature."

For many years Dr. Newman's position in Stamford and the neighbourhood was that of a medical man trusted and admired, a friend loved and respected by rich and poor, great and small, and especially trusted and respected by his professional brethren who constantly called him into consultation. Never did any practitioner do more by his own personal conduct and character to raise the position of the medical profession in his own district than did Dr. Newman, and that steadily and consistently for 40 years. His life-long friend Sir James Paget, who had many points in common with him, said of him that such men as Newman made the profession. He was the author of

"Surgical Cases," "Drainage and Water Supply of Towns," and of various contributions to the journals Being President of the *Lincolnshire* Medical Benevolent Society which this year celebrated its centenary, he compiled the interesting pamphlet of records of that society, which was recently reviewed in THE LANCET In his last illness he was faithfully and devotedly attended by his friend and colleague Mr T P Greenwood and was visited several times by Dr C O Hawthorne He had been losing weight seriously for some months Finally he was attacked with pleurisy and serous effusion on the right side Although relieved several times by paracentesis he gradually sank His heart had not been strong for some years and he had consequently gone to live at the upland village of Luffenham, in a delightful cottage, partly built by himself, with a lovely garden which owed most of its charms to the skill of Mrs Newman For the opportunity of retiring to this particularly healthy village he thanked Lord Ancaster He had married a second time in 1876 Miss Charlotte Cumming of Hall Place By his first wife, Miss Sarah Tinley Newton, daughter of Mr William Newton of Sudbrooke, Lincolnshire, he left two sons and four daughters, by his second wife one son One of his sons is Captain E A R Newman of the Indian Medical Service

SAMUEL WOODCOCK, M D BRUX, L R C P, L R C S EDIN AND L M, L S A LOND

THE death of Dr Woodcock took place on Dec 12th at Manchester He was well known in medico political circles and was at one time a candidate for a seat upon the General Medical Council as a Direct Representative

The following appreciation of him has been sent by our Manchester correspondent —The death of Dr Sam Woodcock removes from our midst one of the most energetic and active minded workers in various fields that the medical profession in Manchester has ever had cause to mourn He died at his house in Stretford road on Dec 12th at the comparatively early age of 63 years He was born near Glossop in 1840 After leaving school he was apprenticed for five years to a medical man at Middleton and after passing through this stage he became for a time an assistant to the house surgeon of the Chorlton Dispensary, so that he had considerable familiarity with routine medical work before going to Glasgow as a student In 1866 he passed as L R C P, L R C S Edin and L M and also obtained the L S A qualification In 1877 he took the M D degree of Brussels His first appointment was that of one of the medical officers at the Withington workhouse, which he held with credit to himself and with the confidence of the board, of his colleagues, and of the inmates until he gave it up to begin practice in Hulme, where he soon became one of the most popular practitioners He held the appointments of district medical officer and public vaccinator for a part of the Hulme district of the Chorlton union and also that of certifying factory surgeon, and won the respect and the affectionate regard of his patients in that populous district by his professional skill and genial kindly disposition But he was known in Manchester almost as much for his political as for his medical activity Though from his infancy he was surrounded by a Liberal environment and from his youth up was a keen and ardent politician, his kindly temper and sense of humour saved him from the bitterness which sometimes accompanies devotion to politics He was a popular speaker, was fluent and racy, and had at command an abundant supply of humour After the retire

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reasons For many years he was a very familiar figure at the Reform Club in Manchester, was chairman of the political committee and had also been president and vice president. In 1891 he became a member of the School Board and took an active part in its proceedings until 1900 In 1892 he was elected a member of the Stretford local board and about the same time was made a magistrate for the city of Manchester At the city police court this week Mr Bri rley, the stipendiary, said that they could not begin business without expressing their sincere sorrow at the death of Dr Woodcock and recording how serious a loss they had sustained, and testimony has been borne by others to his conduct on the bench to his painstaking discrimination, and to the kindness which he showed towards those who were brought before him Notwithstanding the fact that his political and social activities seemed almost to overshadow his medical life Dr Woodcock was a hard-working practitioner and took much interest in the various local medical societies He was an original member of the Clinical Society of Manchester and had been president and vice president He had also held the position of president of the Lancashire and Cheshire Branch of the British Medical Association, and entered earnestly into the questions of medical politics which so greatly interest a large proportion of the members of the Association It need scarcely be said that he took the Liberal view in almost all cases, enforcing it with considerable power and with evident sincerity It should be mentioned that he was a man of strong religious feelings and although a conscientious Nonconformist he was no bigot and worked amicably with those who differed from him in opinion on the School Board and elsewhere Very many will endorse the words of the *Manchester Guardian* "In private life Dr Woodcock's genial disposition and admirable social qualities made him popular with a very large circle of friends"

Medical News.

UNIVERSITY OF CAMBRIDGE —The following medical and surgical degrees were conferred on Dec 10th —

—R T Worthington,

I Pinches Sidney

nith and H H Weir,

Dr D MacAlister, Dr J H Drysdale, and Mr T Strangeways Pigg have been appointed additional examiners for Part I and Mr D Arcy Power and Mr C W Mansell Moullin additional examiners for Part II of the third M B examination

PRESENTATIONS TO MEDICAL PRACTITIONERS —Mr. W S Wade, L R C P Edin, L F P S Glasg who has acted as surgeon to the Wakefield city police for 38 years, was on Nov 26th presented by the chief constable, on behalf of the members of the city police force, with a silk umbrella as a mark of esteem Mr Wade then presented the force with a large framed photograph of himself —On Nov 27th Mr I Hitchins J P, on behalf of the members of the St Agnes (Cornwall) Miners' and Mechanics' Institute, presented Mr William Whitworth, M R C S Eng, L S A., with a framed portrait of himself as a mark of respect and in recognition of his services as honorary secretary of the institute for 21 consecutive years —On Nov 30th Mr Thomas Johnstone, M D, was entertained at a dinner by a number of friends and patients and presented with a silver salver and rose bowl the total weight of which amounted to about 150 ounces The salver bore the following inscription 'Presented to Thos Johnstone Esq M D Edin, M R C P London, by grateful friends and patients on his retirement after nearly 30 years of general practice at Ilkley Nov 30th, 1903' The dinner and presentation took place at the Middleton Hotel, Ilkley

THE CHARGE AGAINST A HERBALIST COMMITTAL FOR TRIAL —At Southwark on Dec 10th, before Mr Paul Taylor, the hearing was concluded of the charge against Jethro Lardent, aged 38 years, herbalist, of Southwark Park road, and Ada Booth aged 34 years, *alias* Lardent, of being concerned together in performing illegal operations upon Miss Rebecca Mitchell Mr Bodkin prosecuted for the Treasury Miss Mitchell, who appeared to be very ill, now gave her evidence in detail She was to pay the prisoners £10 and actually paid £8 She underwent several operations because none were successful Since the prisoners had been in custody she had given birth to a child but it had not lived Dr A P Luff said that certain instruments found in Lardent's shop, one of which was blood stained, could have been used in the commission of the offence of which the prisoners were charged. He had examined 16 pills which, it had been alleged were given by Lardent to Miss Mitchell. Ten of them were composed of aloes capsicum, and sulphate of iron, and the remainder consisted of oil of pennyroyal, ginger, and other vegetable substances. —Lardent I absolutely deny that there was any pennyroyal improve it. We know the disastrous effect of the approval of semi-public bodies to any method in the past

If the society adds a note to the method which it formulates somewhat to the following effect, it might be the means of not crushing out attempts to improve: "Note.—The above method is the best that has been brought to the notice of the Royal Medical and Chirurgical Society up to the present time (here *give* date), but the society will always be ready to consider any suggestion for its improvement or for another method." I am, Sirs, yours faithfully,

Dec. 14th, 1903. A. B. C.

BRITISH MEDICAL BENEVOLENT FUND.

THE treasurer (Dr. Samuel West, 15, Wimpole-street, W.) has the pleasure to acknowledge the receipt of the following further donations in response to Sir William Broadbent's appeal:—"A Friend," per R. D. P., £31 10*s.*; Mr. W. A. Satchell, £11 7*s.*; and Mr. E. W. Thurston, £1 1*s.*

THE DETERMINATION OF SEX.

A SERIES of experiments on the determination of the sex of the fœtus has been made by Dr. A. Ambrose and the results are given in a paper which he has forwarded to us but which is too long for insertion in the present crowded state of our columns. At the outset he expresses a certain amount of approval of the theories of Dusing who holds that the determination of sex is influenced, if not controlled, by the relative degree of generative force in the parents. Guided by this principle, Dr. Ambrose devised a method by which he was able "to alter the generative force of the parents," but unfortunately he leaves us totally in the dark as to the details of the method employed. After pointing out that animals which bring forth more than one at a birth are of little use in such inquiries, he continues as follows:—

> The number of experiments is so small that of course no general deduction can be drawn from them, yet they seem to point in so definite a direction that they are worth recording if only to encourage others in the same way, and extending, as they do, over a period of five years any chance element of season or time may be eliminated. It appeared that the way to go to work was to alter the generative force of the parents, and this could be done either by elevating the male and depressing the female or *vice versâ*. In the cases of cattle and horses convenience indicated the treatment of the female; in that of human beings both sexes respond to treatment.
>
> 1. In all over a period of five years 32 cows were treated, 17 with a view to their production of male offspring and 15 for female. Of these, 15 of the 17 had bull calves and two had female calves; of the 15 treated for female offspring all had female calves.
>
> 2. In the same period 10 mares were treated, five for each sex. Of these, the five treated for males all had males and of the five treated for females four had fillies and one a male.
>
> 3. These experiments were so far satisfactory that it was determined to extend the investigation to the human species, and 30 married couples were treated. Of these, there were 20 who desired boys and 18 had them, while ten wished for girls and nine were born to them.

IMPROPER ADVERTISEMENT.

A CORRESPONDENT informs us that he has seen in the windows of a new house in the south-eastern district of London placards to the effect that

Dr. —— will shortly occupy this house.

He asks us our opinion on the publicity that is thus given to Dr. ——'s residential intentions. In this kind of matter medical men must to a certain extent be a law to themselves. The General Medical Council has more important functions to discharge than to discriminate between the *affiche* which is legitimate and that which is illegitimate. Our correspondent asks us to give our opinion in this particular case, and we think that good taste has been transgressed. It can only matter to Dr. ——'s patients where he lives and he should have been able to notify them of his change of address in the ordinary manner.

A GRIEVANCE OF THE CIVIL SURGEONS WHO SERVED IN SOUTH AFRICA.

To the Editors of THE LANCET.

SIRS,—Will you allow me to protest against the action of those in authority in exacting £1 (instead of 5*s.*), and causing much trouble and inconvenience (not to say loss), from civil surgeons who risked their lives and gave their services for their country by doing at least 12 months' hard military duty in South Africa, because these civil surgeons were not able or forgot to notify their change of address to P.M.O. Army. This seems a punishment that is hardly merited.

I am, Sirs, yours faithfully,

Dec. 8th, 1903. FOUR CLASPS.

THE SHAFTESBURY INDUSTRIAL BETTERMENT LECTURES.

IN THE LANCET of Nov. 28th (p. 1513), in a leading article dealing with the work of the Mansion House Council on the Dwellings of the Poor, a sentence occurs attributing the Shaftesbury lectures to the council. Mr. G. F. Warden, the organising secretary of the Shaftesbury Industrial Betterment Lectures, has written to us stating that this is a mistake and that the Shaftesbury lectures are quite another and distinct organisation. Our information was derived from the report of the council for the year ending June, 1903, which we have consulted again since receiving Mr. Warden's letter. At the bottom of p. 12 of the report is a paragraph which certainly bears the construction that we put upon it, but which, read in the light of Mr. Warden's letter, assumes another signification. Mr. Warden also demurs to a statement in our leading article that the Mansion House Council on the Dwellings of the Poor was responsible for the meeting of members of Parliament on the housing question last July. On p. 9 of the same report of the council it seems to us that a definite claim is made by the council to have performed the work which we attributed to it. We regret to have accidentally belittled the work of the Shaftesbury Industrial Betterment Lectures with the organisation of which we were not familiar.

THE THRIFT OF THE SALVATION ARMY.

To the Editors of THE LANCET.

SIRS,—I was requested to examine two candidates for service in the Salvation Army and to make a report. For this I was offered the fee of 2*s* for each subject and I was told that a medical man had accepted 1*s.* for the same service. The following is a *résumé* of the form which I had to fill up:—*Family history:* Father, mother, brothers, sisters, living or dead? State of their health and cause of their death? *Present state:* State of ears, eyes, throat, tonsils, and teeth, with number of extractions. Examine and report on heart sounds. Examine chest (shape, capacity, expansion, and sounds as ascertained by percussion and auscultation). Examine chest for disposition to tubercle. Has the patient suffered from fits, rupture, piles, rheumatism, varicose veins, small-pox, and skin diseases? What operations have been performed, what bodily defects are present? In females note uterine functions and walking capacity. To these general remarks were to be added.

I wrote to the adjutant major of the Salvation Army stating that the fees proffered for these minute and searching examinations were inadequate but I have had no reply. I inclose the letter brought by one of the applicants to me. I should like to know if any other medical men have had these forms and if they have accepted such fees.

I am, Sirs, yours truly,

Dec. 9th, 1903. GRIFFIN WILKES, M.R.C.S., L.R.C.P., L.S.A.

[INCLOSURE.]

The Salvation Army,
National Headquarters, 101, Queen Victoria-street,
London, E.C., Nov. 9th, 1903.

DEAR SIR,—This letter will be handed to you by an Applicant for service in the Salvation Army. As a large number of such Applicants, who have been duly passed by Medical Men, have had to return to their homes, after a short trial, as physically unfit, it would be of considerable assistance to us if, in filling up the inclosed Certificate, you would kindly give special attention to the following points:—

The work of the Salvation Army is hard. It differs very much from the ordinary routine of regular Pastors, Lay Evangelists, or Bible Women, and makes heavy demands upon the whole nervous system as well as upon particular organs. Meetings are held every day. Speaking and Singing is constant. Any weakness of the lungs, throat, or heart is especially likely to develop difficulty. Functional irregularities in Female Applicants are of serious importance, and when the menstrual flow is excessive and prolonged, or when it occurs too often, it is desirable that this should be especially mentioned.

Nevertheless, it frequently happens that strong and wiry constitutions stand the work well, even though there be weakness in particular directions. On the other hand, you will place us under obligation if you will kindly point out Applicants who are generally weak, though you may be unable to detect any actual organic disease or deficiency. Women who are unfit to walk reasonable distances should be especially named to us.

You are, of course, aware that open air work, exercise, and regular habits (such as are required from our Officers) are extremely useful to young people, especially to those who may now be working under unfavourable conditions, e.g., in the unhealthy atmosphere of Factories, &c., so that in some cases of present weakness the change to our service would, no doubt, be permanently beneficial. We are most anxious to avoid throwing burdens on any who are not physically strong enough to carry them, and I thus venture to trouble you with these particulars.

I am, dear Sir, yours faithfully,

THOS. B. COOMBS.

*** Mr. Coombs makes out an excellent reason for the close medical examination of candidates for enrolment in the ranks of the Salvation Army but we see no reason why medical men should not be paid for helping the Salvation Army in the selection of recruits.—ED. L.

WE have received a manuscript entitled "Diphtheria: Some Statistics and a Point of Treatment," which bears neither the name nor the address of the author.

◆

Medical Man writes to us inclosing a pamphlet which he says was distributed to young and old at a football match held recently in the south of London, and asks us to judge whether it is a fit and proper publication for the hands of the laity. The pamphlet is an obscene publication termed "Vitality," and is

published by the Health Culture Publishing Company of 22, Budge-row, Cannon-street, London, E.C. Is this a trade name adopted by a person called Jonathan Nicholson, who used to conduct "The Magnetic Nerve Invigorator Company" of the same address, and on whose methods we have had occasion already to comment unfavourably (THE LANCET, Nov. 8th, 1902, p. 1297)? The advertisements in "Vitality" include the business cards of so-called "physical culture" specialists, the claims to attention of proprietors of bath cabinets, and magnetic (?) apparatuses. The advertisements also re [illegible]
weakness, a douche [illegible]
treatises, the literary [illegible]
magnetic outfits" (for nervous and sexual ailments). The contents of the magazine are in keeping with the advertisements. Articles on physical culture, written apparently to puff the wares advertised, are stuffed full of preposterous and indecent nonsense. There is no difficulty in guessing our reply to our correspondent's question. The paper is not fit.

Surgeon.—We have been unable to find the name of the makers of the preparation in question. We have seen it advertised in American journals as an analgesic and antipyretic.

Practitioner, in our opinion, is at liberty, if he thinks it advisable, so to style himself on his door plate.

Medical Diary for the ensuing Week.

OPERATIONS.

METROP [illegible]

MONDAY (21st).—London ([illegible]
Thomas's (3.30 P.M.), St. [illegible]
Middlesex (1.30 P.M.), [illegible]
Samaritan (Gynæcologic [illegible]

TU [illegible]

(2 P.M.).

[illegible]

(2 P.M.)

SATURDAY (26th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.) Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.) Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES.

TU [illegible] SOCIETY (Apothecaries' Hall, [illegible] Meeting. 4 P.M. Papers —Dr. [illegible] on of Drugs on the Pulmonary [illegible] for the More Thorough Study of Therapeutics.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.				TO THE COLONIES AND ABROAD.			
One Year	£1	12	6	One Year	£1	14	8
Six Months	0	16	3	Six Months	0	17	4
Three Months	0	8	2	Three Months	0	8	8

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, MR. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 17th, 1903.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Rain fall.	Solar Radia in Vacuo	Maximum Temp. Shade	Min Temp.	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
Dec. 11	29.32	S.W	0.31	64	48	43	42	44	Cloudy
" 12	29.53	S.E	0.07	61	48	38	41	42	Hazy
" 13	29.37	S.E.	0.18	61	50	42	46	48	Cloudy
" 14	29.62	S.W	0.01	61	50	45	44	45	Cloudy
" 15	29.73	S.E.	...	56	46	43	42	44	Cloudy
" 16	29.61	S.E	...	58	45	41	40	42	Cloudy
" 17	29.74	S.E.	...	49	47	41	42	44	Foggy

During the week marked copies of the following newspapers have been received: *Coventry Herald, Birmingham Daily Mail, Reading Mercury, Mining Journal, Local Government Chronicle, Scientific American, Liverpool Courier, Westminster Gazette, Pall Mall Gazette, Daily News, Irish Times, Nottingham Guardian, Aberdeen Free Press, Aberdeen Free Press (Weekly), Boston Independent, Hertfordshire Mercury, Windsor and Eton Express, Standard, South Wales Daily News, Walsall Advertiser, Surrey Advertiser, &c.*

Communications, Letters, &c., have been received from—

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Y.—Mr. R. Young, Norwich.

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An Address

ON

THE DIAGNOSIS AND MANAGEMENT OF DOUBTFUL CASES OF DIPHTHERIA.

Delivered before the Medical Officers of Schools Association on Nov. 26th, 1903,

BY F. FOORD CAIGER, M.D., F.R.C.P. LOND.,
MEDICAL SUPERINTENDENT OF THE SOUTH-WESTERN FEVER HOSPITAL, STOCKWELL.

MR. PRESIDENT AND GENTLEMEN,—Apart from its purely scientific aspect the diagnosis of any infective illness possesses a special interest for the practitioner of medicine in view of the various measures of a preventive character which he may feel called upon to adopt. And to the members of this society who, in virtue of their office, are held responsible for the health of our large schools, each of which may be regarded as an aggregation of particularly susceptible subjects, the remark applies with special force. The medical officer to a large public school is so frequently called upon to decide as to the nature of doubtful cases of infectious illness, and the issues dependent upon his decision are in some instances so important, that he must necessarily have devoted a good deal of anxious thought and critical consideration to the elucidation of such questions. Fully realising this, I feel no small diffidence in addressing a society, most of the members of which, by reason of their special knowledge and experience, apart from their high scientific attainments, must rightly be regarded as experts, and I take this opportunity of expressing my appreciation of the honour you have done me in asking me to open this discussion. For the purpose of discussing the subject with which we are concerned this afternoon—viz., the diagnosis and management of doubtful cases of diphtheria—I would first direct your attention to the all-important question of diagnosis and afterwards to the consideration of the measures of a preventive character which have for their object the limitation of the spread of infection.

A well-developed attack of diphtheria in which definite membranous exudation is visible on the fauces is not likely either to escape recognition or to be mistaken for anything else. It is quite otherwise, however, in respect to those sore throats in which no exudation at all can be detected or at most a little cheesy deposit on the site of the follicular crypts, or perhaps one or more small necrotic-looking areas on the surface of the tonsils. The real nature of such cases is often very difficult to determine on clinical evidence alone. The same thing is true in respect to purely nasal diphtheria, which is very likely to escape detection altogether, especially when, as is usually the case, the patient presents but little if any indication of illness. It is to the purely nasal cases that I am referring Instances in which the nasal cavities are involved, either by extension, or concurrently with the fauces, are, as is well known, characterised by more than average severity. These nasal cases are a distinct source of danger to the community by reason of the insidious character of the affection and in many cases their existence has only been revealed after the lapse of a considerable period of time by their having infected other persons with severe and even fatal diphtheria. The havoc which may result from the presence of a single unrecognised case of nasal diphtheria in a school, institution, or ward in a children's hospital may be easily imagined and need hardly be seen to be appreciated, and in any investigation into the source of an apparently sporadic outbreak of diphtheria the importance of carefully examining the condition of the nasal cavities of those who have been in contact with the sick cannot well be over-estimated.

Although a considerable amount of assistance in the diagnosis of doubtful cases of diphtheria is usually to be derived from a careful consideration of the clinical appearances it is hardly going too far to say that at the present day the nature of a doubtful attack is practically determined by the result of bacteriological examination. Now without intending for a moment to minimise the immense importance of bacteriological examination in the hands of an expert observer, it cannot be denied that the insufficiency of our present knowledge on certain important points connected with the bacteriology of diphtheria, apart from a fallacy which is inseparable from the method itself, materially detracts from the complete reliability of the bacteriological test. I refer more particularly to the difficulty which is frequently experienced in the identification of the bacillus, owing to our uncertainty as to the limits of intranormal variation, both in respect to its form and virulence. The fact has long been recognised that in diphtheritic as in doubtful and even healthy throats bacilli are not infrequently found which more or less closely resemble the diphtheria bacillus but which are innocuous when injected into animals. It has been customary to refer to such organisms collectively as "pseudo-diphtheria" bacilli, without regard to certain important differences which are now recognised as existing between them. The term has proved an unfortunate one as tending to cause confusion and its use should certainly be restricted. Indeed, it would be better that the term "pseudo-diphtheria" were dropped altogether. The organism which has been most frequently referred to under this name is the Hofmann bacillus, of which the special characters are now pretty generally known. It was originally described by Löffler in 1887 as not infrequently present in diphtheritic throats and though for this reason it was frequently associated with the true bacillus which it closely resembled Löffler found it invariably innocuous to animals. In the following year Hofmann further extended the inquiry and showed that the bacillus was even more often present in sore throats which were not diphtheritic, and indeed that it could by no means infrequently be recovered from the throats of perfectly healthy persons. He, like Löffler, found the bacillus devoid of virulence and came to regard it as of a distinct species. This important observation of Hofmann, that the bacillus which bears his name is often present in normal throats, has been amply confirmed by a number of subsequent observers, notably by Roux and Yersin in France, and in this country by Cobbett and Graham-Smith in the course of certain admirably conducted investigations into outbreaks of diphtheria which occurred within recent years in Cambridge and Colchester respectively.

The [illegible] whether, under favourable conditi[illegible] is capable of developing into a [illegible]s been a fruitful source of experiment and discussion amongst bacteriologists for years. With but few exceptions observers have confessed their inability to effect this conversion by artificial means. Richmond and Salter, it is true, claim to have succeeded by passing the organism through several generations of finches; Hewlett and Knight state that they were eventually successful in imparting virulence to what appeared to be a typical Hofmann bacillus by carrying it through a number of generations on different culture media, but in neither case were the experiments altogether convincing. More recently, too, Lesieur claims to have brought about this result in three different ways: (1) by the introduction of the bacillus inclosed in collodion capsules into the peritoneum of rabbits; (2) by long-continued cultivation in peptone broth (in one case eight months being required); and (3) by simultaneous inoculation of the staphylococcus aureus. But the data on which Lesieur's claim is founded are wanting in completeness. If such transition be capable of taking place, however gradually, in the human subject our views on the etiology of diphtheria, having regard to the frequent presence of the Hofman bacillus in the normal throat, will have to be materially extended and our measures of prevention reconsidered. So far, however, whatever be the real possibilities in the laboratory, no evidence has been adduced that this ever does take place in nature and the balance of opinion is opposed to the Hofmann bacillus as a potential source of diphtheria.

Now the Hofmann bacillus, although, as I have stated, it is occasionally present in diphtheritic throats in association with the true bacillus, is readily distinguishable from the Klebs-Löffler organism by certain morphological, cultural, and biological features which are now well recognised. It would therefore seem permissible to speak of it as a "pseudo-bacillus"—if it be necessary to retain the term—and to assume that it is specifically distinct. In respect, however, to certain other bacilli which are frequently present in the throats or nasal passages of those who, without showing any obvious affection themselves, have been in close contact with the disease the relation is by no means equally clear. I refer to those bacilli which are also commonly classed as "pseudo-diphtheritic," which, though quite indistinguishable from the true bacillus in their morphology, staining, and cultural reactions—especially the power of producing acid in glucose broth—are found to be devoid of any virulence when injected into guinea-pigs. Whether such organisms are attenuated diphtheria bacilli, capable of acquiring virulent properties under favourable conditions, or whether they are specifically distinct, has not yet been satisfactorily determined. The inadvisability, however, of applying the term "pseudo-diphtheritic" to an organism which simply differs from the genuine bacillus in respect to its virulence must, I think, be admitted, in view of our ignorance, not only as to the extent to which the virulence of that bacillus may vary, but also as to the factors which are responsible for it. The settlement of this question as to the relation which the one organism bears to the other must have an important bearing on the precautions which should be undertaken in the presence of an outbreak of the disease and to this subject I propose to return again. From the point of view of diagnosis with which we are at present concerned it appears to me to be most desirable that an organism having the characters above referred to should be classed as diphtheritic, and should the mucous surface from which the organisms have been derived present any, even the slightest, sign of inflammation the case should be diagnosed as diphtheria accordingly. Such, then, are the indications which appear to be derivable from a bacteriological examination in cases where bacilli bearing a distinct resemblance to the diphtheria organism are detected.

Now what value should be attached to a negative result? I have little hesitation in saying, "Very little indeed," unless such result is confirmed by at least one, and preferably two, subsequent examinations, if possible on succeeding days. If the faucial secretion of diphtheria convalescents be carefully examined daily during the third and fourth weeks of their attack in more cases than not the results will prove more or less contradictory. The bacillus may not be recoverable for a day or two, perhaps more, to reappear again on the day following, or it may be found continuously except on some single occasion when it may escape detection. Amongst the occupants of a diphtheria ward such vagaries are no doubt sometimes to be explained by actual reinfection by another patient, but the same thing, though, I believe, less frequently, may be observed in the case of persons who are treated in a room to themselves, in which case no such explanation is tenable. The fact cannot be ignored that a negative result simply means that the observer has failed to find the bacillus, not necessarily that the bacillus is not there. I can call to mind some half-dozen cases in which the clinical and post-mortem evidences were conclusive of diphtheria, yet repeated bacteriological examination by an expert observer—in three of these instances the examination was made by one whose experience in this particular field is probably unsurpassed in this country—entirely failed to reveal the presence of the diphtheria bacillus. Three of these patients subsequently developed paralysis and two died from cardiac failure. These instances are, doubtless, very exceptional, but I simply mention them to emphasise an ever-present fallacy, the recognition of which is not by any means so general as it should be, if one may judge from the frequency with which a single unconfirmed negative result is accepted as sufficient to disprove the presence of diphtheria.

A failure to detect the bacillus, though present on the fauces, may result from an error at any one of three stages of the experiment. Bacilli may escape detection by the observer when making a microscopical examination, owing to their being but few in number in comparison with the other micro-organisms growing in the culture. Or, though present on the swab, they may fail to grow in the culture, owing to defective insemination or by reason of their reproductive capacity being lowered, if not entirely annulled, as a result of previous antiseptic applications to the throat or, finally, they may escape attachment to the swab, in consequence of their being but sparsely distributed on the mucous surface of the fauces. The chances of failure are materially lessened by exercising great care in taking the swab and by repeating the examination on one or more subsequent occasions. It is very desirable that an interval of at least two hours, and preferably more, should be allowed to elapse between the time of using any antiseptic application to the throat and the taking of the swab. This should be firmly pressed against the faucial surface at more points than one, especially where any trace of exudation can be discerned, and the swab at the same time should be rotated between the finger and thumb so as to insure its whole circumference being impregnated with secretion. And the same precaution should be observed when rubbing the swab upon the surface of the culture medium.

The exercise of care in the impregnation of the swab is of particular importance in view of the valuable evidence which may often be derived from an immediate examination of a cover-slip preparation made directly from it when stained by Neisser's method. Having regard to the fact that such examination is within the reach of any practitioner who is equipped with a $\frac{1}{12}$th inch immersion lens and a slight familiarity with bacteriological technique, early information as to the positive nature of a diphtheritic throat may often be derived on the spot without having to wait the 24 hours or so which must usually elapse before the report on the result of cultivation can be received from the laboratory. Should the examination of the swab, however, prove negative the evidence is of little value, even less so than that yielded by a single negative culture, and the laboratory report must be awaited before coming to any decision as to the diagnosis. In any case the examination of the swab, whether negative or positive, should be confirmed by subsequent cultivation. In the course of an investigation into the value of Neisser's stain on 100 consecutive cases admitted into the South-Western Fever Hospital certified as diphtheria, which I carried out some two years ago in conjunction with Dr. R. M. Beaton and Mr. W. C. C. Pakes of Guy's Hospital and which was subsequently recorded in the Transactions of the Pathological Society, the proportion of cases of proved diphtheria (both clinically and bacteriologically) in which the presence of diphtheria bacilli was revealed by a preliminary examination of material taken direct from the swab and stained by Neisser's method was no less than 37 per cent. Incidentally, I take the opportunity of recording my belief in the comparative value of Neisser's stain over all others in the diagnosis of diphtheria, a belief which is shared by many experienced bacteriologists both at home and abroad. Neisser in his original communication regarded the reaction as distinctive in young cultures grown at 35° C. Fraenkel, and more recently Lesieur, have stated their belief that, short of inoculation of animals, it is the most trustworthy test we possess. Dr. W. T. G. Pugh of the North-Eastern Hospital, after an experience of three years, during which period it had been used as a routine confirmatory test, speaks most highly of its value. Bronstein found that in 135 out of 150 cases of proved diphtheria the bacillus stained by Neisser's method was detected by direct examination of the swab and the results obtained by Beaton, Pakes, and myself by this procedure I have already referred to. In our experience Neisser's method has proved, on the whole, more trustworthy than staining by Löffler's methylene blue, though, like all others, not invariably reliable. The appearance presented by the bacillus, moreover, when stained by Neisser's method is a very striking one and on that account not likely to be mistaken by an observer of but little experience in bacteriological examination, a point of no small importance if, as I suggest, an immediate microscopical examination be made from the swab.

The disabilities to which I have referred undoubtedly detract from the authority of the bacteriological test as commonly applied and for this reason it should be regarded as of subsidiary value in cases where the clinical indications are at all distinctive. In cases, however, where the symptoms are anomalous or actually wanting the test is of the highest importance; indeed, it may be said to furnish the only criterion available. I refer especially to that class of sore-throat in which little, if any, exudation can be seen although the tonsils may be more or less enlarged and the adjacent faucial structures obviously inflamed, and to those nasal affections in which nothing beyond a mucous discharge, attended perhaps with slight soreness of the external nares, can be detected. In the differentiation of follicular tonsillitis and faucial diphtheria some assistance can often be derived from the clinical aspect of the case if attention be directed to the following particulars. In follicular tonsillitis, exudation, when present, occurs for the most part in spots, it is usually somewhat cheesy or friable in consistence, often limited in situation to the openings of the follicular crypts, and the spots but rarely coalesce into a definite pellicle. Even if they do the exudation hardly ever spreads beyond the limits of the tonsil. It sometimes appears to encroach on the pharyngeal wall, but never, as far as I know, extends on to the palate. Actual extension of membrane on to the palate or uvula is almost distinctive of diphtheria. In follicular tonsillitis it is usual for both sides to be about equally involved, whereas a diphtheritic affection is often more marked on one side than the other, and the same is true of the glandular enlargement which is apt to be more pronounced in diphtheria. The degree of pyrexia is likely to be greater in tonsillitis, and, indeed, it may be stated without fear of contradiction that the constitutional disturbance generally is likely to be more severe in follicular tonsillitis than in a case of diphtheria sufficiently mild as to be mistaken for it. Rhinorrhœa is relatively uncommon in follicular tonsillitis and the same may be said of albuminuria which is a frequent symptom in diphtheria. The occurrence of hoarseness, stridor, or a croupy cough is very suggestive, while the advent of paralysis or cardiac disturbance at a later date is, of course, confirmatory of diphtheria. By a careful consideration of all the foregoing points a satisfactory diagnosis can often be arrived at. With respect to those cases in which no abnormality can be detected beyond the presence of a mucous rhinorrhœa it is usually quite impossible to differentiate diphtheritic rhinitis from a simple nasal catarrh. Careful inspection of the anterior nasal fossæ through the external nares may reveal the presence of membrane, either on the septum or floor or the inferior turbinate, but in the majority of cases no exudation whatever is visible, even though the discharge may be teeming with diphtheria bacilli. The white appearance presented by a patch of Schneiderian mucus is a possible source of error, as it is very likely to be mistaken for an exudation unless due care be exercised in the examination. Some degree of redness, and occasionally an impetiginous excoriation of the skin immediately within the nostrils may often be detected. This, when present, is strongly suggestive of diphtheria. It is dependent upon the irritant character of the discharge, a quality also shared by the rhinorrhœa which so often follows scarlet fever in young children.

Having now referred to the chief evidences on which we have to rely in the diagnosis of doubtful cases of diphtheria, it remains to say a few words about the preventive measures which should be undertaken with the object of checking the spread of the disease. On becoming aware of a case of diphtheria among the members of a community living together in the close association which is incidental to school life, I think all must be agreed as to the advisability of immediately adopting the following precautions. 1. Isolate the patient. 2 Disinfect everything which he is likely to have worn, touched, or handled and also the room in which he has been sleeping immediately before the attack. 3. Examine the throats and nasal passages of all persons with whom he has been in especially close contact, such examination, if possible (and in a school it always should be possible) to include a bacteriological examination. 4. Isolate, or at any rate exclude, all "contacts" who are found to harbour even doubtful diphtheria bacilli on their mucous membranes and all (even though a bacteriological examination proves negative) who present any suspicious appearance of the throat or nasal fossæ. 5 Search for any other possible source of infection besides a previous case of diphtheria, not only as serving to explain the present attack but as a possible cause of fresh cases. (In this connexion the possible agency of milk, drinking utensils, cats, wind instruments, &c., should be the subject of careful inquiry.) 6. Do everything which may possibly serve to lessen the infectivity of the patient and thus shorten the period of necessary detention.

Now in school life the close and intimate association of the scholars during the hours alike of work, play, and sleep and the special susceptibility to diphtheria incidental to their age are potent factors in favouring the spread of the disease. On the other hand, the fact of their living under disciplinary control, their supervisors being well educated and presumably intelligent persons, and the special facilities for isolation which are nowadays provided at most of the public and the higher class private schools should prove of material assistance in giving effect to the various measures to which I have referred. Although I hardly think there can be much room for difference of opinion as to the preventive measures which should be adopted at the outset there are several points [illegible] the isolation of "contact[illegible] treatment of the patient [illegible] discussion.

Let us first consider what bearing the presence in the throat and nose of diphtheria bacilli has upon the patient's capacity to infect other persons. Now, if the Klebs-Löffler bacillus be accepted as the causative agent in diphtheria it would seem but logical to regard every person harbouring these organisms in their mucous membranes as a potential source of diphtheria. It does not, however, necessarily follow that the conditions essential to successful infection are actually present. If they were diphtheria would be a good deal more common than it is having regard to the frequency with which the diphtheria bacillus is present in the throat or nose of apparently healthy persons. I am using the term "diphtheria bacillus" in the wider sense which I have already referred to—*i.e.*, as including all bacilli which are indistinguishable from the Klebs-Löffler bacillus in respect to their form, staining, and cultural peculiarities but the virulence of which has not been tested. The frequency with which diphtheria bacilli are to be found in normal throats is undoubtedly influenced not only by the fact of whether or not they have been in contact with the disease but also by the [illegible] For [illegible] efully [illegible] bacilli were detected by Kober, Park and Beebe, and by Denny in 2·7 per cent. of the throats of healthy persons who by careful inquiry were ascertained to have had no recent contact with diphtheria the mean of the examinations made by different observers in connexion with various outbreaks was, for the relatively close "contacts" in the household, 51 per cent.; for the more distant "contacts" in institutions for the sick, 40 per cent.; for poorer schools in which diphtheria was present, 24 per cent.; and for the class of general "contacts," 12 per cent. In a large proportion of the cases included in these records the virulence of the bacilli was not tested but in a good many it was and of these the majority proved to be virulent; yet very few of these persons developed an attack of diphtheria.

The very interesting question naturally follows, How is it that bacilli of proved virulence may often be found living in the human throat and yet their presence turns out to be quite innocuous to their host and only occasionally a source of infection to others with whom he comes into contact? In the latter case it is not unreasonable to assume that the number of bacilli actually present in the throat would in large measure determine the chance of some being transmitted to others, whatever their ultimate fate when they get there. In the former case the question of access can hardly arise, since the bacilli are already in possession and their reproductive capacity in a suitable medium and their virulence have already been proved by experiment. It would seem only fair to infer, therefore, that in these cases the failure of the bacilli to set up diphtheria in the person harbouring them is due to the absence of certain factors which are essential to the development of their full vital activity, while their failure to set up the disease in others would appear to be chiefly ascribable to their enfeebled reproductive capacity, as a direct result of which the likelihood of their spreading the disease would be relatively slight, since the number of bacilli available for transmission would remain proportionately small, however favourable to development the conditions might be in the throat of a chance recipient. In conformity with this view we come to recognise the existence of what might appropriately be termed a state of "active infectivity" in the host as opposed to the "potential infectivity" attaching to a person simply in virtue of his harbouring virulent bacilli in his mucous membranes. In the latter case if one may be permitted a simile from another class of combatants the bacilli might be said to be on "half pay," their fighting qualities though latent being [illegible] active servic[illegible]

For the pu[illegible] to allow an i[illegible] again to mix with the community, it is highly important that the conditions which are capable of so modifying the vital activity of the bacillus as to influence the "infective capacity" of the host should be clearly recognised. From a careful consideration of the evidences drawn from an experience extending over a good many years I am convinced that the most important factor is the presence of local inflammation, whether it be of the kind which in our ignorance we call simple or that definitely associated with the presence of pyogenic organisms.

The effect of inflammation in awakening the infective activity of the diphtheria bacillus is well illustrated by the recrudescence of the local lesion which may often be observed in the diphtheria convalescent as the result of an ordinary catarrh; and in the case of the infected "contact" by his developing definite diphtheria. The same thing may often be seen when scarlet fever occurs during convalescence from diphtheria, the tonsils once more becoming covered with exudation, to be followed in many cases by paralysis. So, too, when measles occurs concurrently with, or very shortly after, diphtheria. In these circumstances the condition before the days of antitoxin usually proved fatal by reason of the rapid and excessive formation of membrane in the air passages. If we admit the power of local inflammation to arouse to a state of active infectivity bacilli previously inactive, it necessarily follows that the increase in their numbers which it implies must materially augment a patient's infective capacity, and hence on theoretical grounds one comes to regard the presence of either faucial or nasal inflammation, however slight, as a sufficient reason for prolonging his detention. Confirmatory evidence of a practical character may be derived from consideration of the circumstances under which "return cases" usually arise, the common experience being that as the result of taking a cold shortly after returning home from the fever hospital a child is noticed to present evidence of nasal or faucial mucous relaxation, with the result that other members of the family are attacked with diphtheria. It is now some 10 or 12 years since the late Sir Richard Thorne as a result of his wide experience in the investigation of outbreaks of the disease noted the fact that the appearance of genuine and widespread diphtheria was often preceded by the occurrence of anomalous cases of sore-throat, characterised by little virulence and of limited distribution. He recorded his belief in the occurrence, in connexion with such outbreaks, of what he termed "a progressive increase of the property of infectiveness," a belief which is in accord with the explanation I have suggested.

Now as there can be no object in maintaining isolation after an individual has ceased to be a possible source of infection to others, it is important to ascertain whether any means exist by which the infective capacity of a person harbouring diphtheria bacilli can be destroyed or at any rate curtailed. This result might be attained either by destroying the virulence of the bacilli or by reducing their number and consequent chance of dissemination. As a possible means to this end one naturally turns to antiseptics. That these agents, as their name implies, are capable of inhibiting, and if used in sufficient strength of altogether destroying, the reproductive capacity of micro-organisms growing under the artificial conditions of the laboratory is a well-proven fact and certainly justifies the inference that they would not be without some influence upon diphtheritic and other infective organisms, even when living under the altered conditions which characterise their existence in the human throat. This supposition is confirmed by actual observation. Not only do we usually notice that a fall of temperature almost immediately follows the adoption of efficient antiseptic irrigation of the throat in faucial diphtheria, quite apart from that produced by an injection of antitoxin, but in the slighter cases a microscopical examination of the swab taken on the day following the commencement of the treatment will commonly reveal a pronounced diminution in the number of bacteria in comparison with that observed on previous occasions Moreover, the influence of antiseptic irrigation upon the reproductive capacity of the bacilli is frequently evidenced by their failure to grow in culture, should the swab have been taken within two or three hours after the antiseptic has been used, a fact which suggests the desirability of repeating the treatment at frequent intervals.

The power of antiseptic irrigation of the faucial or nasal passages to lower the virulence of the diphtheria bacillus, however, is more doubtful. Roux, amongst others, has shown that its attenuation can be brought about *in vitro* in various ways, amongst which the impregnation of the culture medium with a trace of an antiseptic is one of the most efficient. From these experiments we might argue that such might not improbably be effected in the human subject; but having regard to the fact that a partial reduction of virulence of the bacilli takes place in many cases normally during convalescence its occurrence, I believe, has never been satisfactorily established. Now out of the long and formidable list of antiseptics I prefer for irrigation of the fauces a solution of chlorine. Not the liquor chlori of the Pharmacopœia but an acid solution of chlorate of potash containing free chlorine. The preparation is as old as the hills, but I know of nothing better or indeed so good. The solution I use is prepared by pouring five minims of strong hydrochloric acid on to nine grains of the powdered salt and shaking up with an ounce of water gradually added. This during the acute stage of the attack is used mixed with an equal bulk of hot or iced water every two to four hours according to the severity of the case and whether or not the patient actively resists the treatment. During convalescence it may be used less frequently. For the nasal passages, in consequence of the somewhat irritant effect of the chlorine gas, I usually employ a solution of boric acid. An alternative to either of the above is a 0 5 per cent. solution of formalin, but its use is by no means pleasant. The value of chlorine solution has quite recently received confirmation from the results obtained by Dr. Mervyn H. Gordon in the course of an investigation into the comparative antiseptic effect of various solutions upon microorganisms present in the mouth. Some of the best known antiseptics were tested by Dr. Gordon and of these chlorine came out at the top of the list, a fact which was to me very satisfactory. Another agent which is capable of exerting no small influence in lessening the infective capacity of the diphtheria convalescent is free oxygenation. It acts beneficially both by its direct restorative effect on the system and by tending to render the tissues less favourable to the maintenance of bacterial existence.

On theoretical grounds we must admit the desirability of keeping apart from the community all persons so long as they harbour diphtheria bacilli, whether such have resulted from an attack of diphtheria or have been acquired simply by contact with the disease. Unfortunately, it is not always practicable to do so on account of the long persistence of the bacillus in some individuals. Although there are practical difficulties in the way of enforcing a rigid isolation for any great length of time in the case of some persons, particularly those who are bread-winners, the same objection could not be urged in respect to school attendance and, whether a day pupil or a boarder, every scholar should be excluded from school until the throat and nose, as a result of three negative examinations, may be assumed to be free from diphtheria bacilli—that is to say, bacilli indistinguishable from the Klebs-Löffler organism in respect to their morphology, staining, and cultural reactions. The usually accepted view as to the relation of the Hofmann bacillus—viz., that it is a distinct organism and incapable of ever being converted into the Klebs-Löffler bacillus—I have already referred to. That the Hofmann bacillus, however, should play no part whatever in the development of diphtheria is perhaps not equally clear. The fact that certain observers have described outbreaks of apparently infective sore-throats in which the Hofmann bacillus alone was present and that in some of the cases fibrinous exudation *plus* Klebs-Löffler bacilli were also detected would appear to suggest that in certain circumstances the Hofmann bacillus may act as a predisposing factor in the development of the true disease. Dr. Joseph Priestley has recently described an outbreak of infective throat illness in a school in Lambeth characterised by tonsillar exudation and pyrexia in which the typical Hofmann bacillus and no other was present in 33 out of the 43 attacks. The metropolitan branch of the Society of Medical Officers of Health after careful consideration of the evidence has lately affirmed its belief "that cases clinically resembling diphtheria but in which the Hofmann and not the Klebs-Löffler bacillus is found are infectious and that, consequently, the usual precautionary measures of notification, isolation, and disinfection should be undertaken." Whether the Hofmann bacillus is competent to set up an infective membranous angina or not it would certainly be impracticable, in view of its comparative ubiquity, to make the simple fact of its presence in the throat or nose a test of the necessity for isolation. Roux and Yersin found it present in 44 per cent. of the children attending a school and in 27 per cent. of the patients in a hospital ward in which in neither instance diphtheria had occurred for many months previously. Cobbett detected it in the throats of 23 per cent. of a large number of healthy persons who had not been in contact with any known diphtheria, the proportions in well-to-do and poor persons being 4 per cent. and 25 per cent. respectively, while amongst 2198 non-infected "contacts" examined by Cobbett and Graham-Smith the Hofmann bacillus was found in nearly 40 per cent.

The average length [illegible] are said to persist in [illegible] eight to 24 days aft[illegible] The average period in a series of cases examined by myself was 20 days, but its duration in patients living in diphtheria [illegible] [illegible]ore protracted than in those [illegible] In a fair number of cases [illegible] weeks, in a few more than eight weeks, and in exceptional instances bacilli may be detected as long as three months after the attack. The longest time on record is, I believe, 363 days. The presence of adenoids appears to be often responsible for undue persistence of the diphtheria bacillus, just as they are a frequent source of chronic nasal discharge. Great care should be taken that the naso-pharynx is free from bacilli before any [illegible] their removal.

[illegible] [illegible]e period of potential [illegible] [illegible]theria bacilli on their mucous membranes and of lessening the chance of their actually infecting others I would strongly recommend the efficient flushing out of the fauces of all infected "contacts" three or four times a day with some reliable antiseptic solution, preferably chlorine, by means of an indiarubber-ball syringe, and in the case of a person actually suffering from the disease the same procedure may with advantage be instituted from the outset as a matter of treatment. No amount of gargling, spraying, or swabbing will be equally effective. In respect to the nasal passages an equally good result, unfortunately, cannot be obtained, since it is practically impossible effectually to reach their various diverticula. These, as might be expected, provide an excellent retreat for the bacillus. During the period of isolation as much time as possible should be spent in the open-air and out-of-door exercise should be encouraged. I should think that the instances where any real difficulty is likely to be encountered in carrying this out must be very uncommon, especially in good class schools where some facilities for segregation are usually existent.

The injection with antitoxin of all "contacts" proved to be harbouring diphtheria bacilli has been recommended but it is quite without effect in hastening the disappearance of the bacilli. In so far as it is competent to avert the danger of an attack and so be a means of restricting the multiplication of organisms capable of spreading the disease the injection of antitoxin is worthy of consideration. I am not prepared, however, to recommend its indiscriminate adoption as a prophylactic measure in the case of apparently healthy "contacts" living under skilled observation simply because diphtheria bacilli are present in their mucous membranes. In the case, however, of schools for very young children, particularly of the poorer class, there is a good deal to be said for the practice. Antitoxin should always be given, without exception, in the case of an infected "contact" who presents any indication, however slight, of either faucial, nasal, or laryngeal inflammation.

HOW TO TREAT A CASE OF INSANITY.[1]

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INSANITY is more easily described than defined and it is significant that the most modern authorities do not attempt to give a definition. In a previous lecture here[2] it was pointed out that the age, circumstances, and surroundings of the individual and the period in which he lived were all necessary factors in the determination of insanity. The practical point to be considered, however, is one of conduct, and the conduct of an ordinary member of society which tends to the detriment of himself or his neighbours may be such that his sequestration becomes justifiable or even necessary and obligatory. Society, acting for its own protection, establishes certain rules and regulations of a self-restraining character which the various members, having a common object in view, abide by and are [illegible] the common welfare. Failure to [illegible] rules which the reflective wisdom [illegible] down entails punishment, but this may be mitigated, if not altogether avoided, when by incapacity through disease or in some other way the offending member fails to apprehend the nature or the quality of the act he has committed in infringement of the law. This mitigation implying as it does an exculpatory plea, connotes mental unsoundness, a weak or an ill-balanced mind, and involves either a generous interpretation of the law or the vexed question of irresponsibility, a subject which for nearly two centuries has been a debatable theme between medical and legal minds. The reason for the appearance of the legal authority on a medical point was due to the fact that medical men, in order to bring an insane person and his property under control, had to invoke the aid of jurisdiction. The question of responsibility was discussed by Hale several centuries ago. He insisted that the test of criminal responsibility should be the level of understanding of a child of 14. It was pointed out that this meant the identification of "healthy immaturity" with "diseased maturity" and later, in 1723, Tracey insisted that to establish the plea of irresponsibility the person should be totally deprived of understanding and memory and be as an infant, a brute, or a wild beast. Kenyon suggested, in 1800, that the question of insanity should be limited to the time the act was committed and such was the custom until, in 1812, Mansfield urged that the criterion of responsibility should be a knowledge of good and evil. In 1843 Tindal recognised partial insanity by insisting that the question of right and wrong should only be considered in regard to a particular act, but it was pointed out that the affection and the will may be diseased without the reasoning powers—thus recognising moral insanity; but Stephen pointed out that a man could not know the nature and the quality of an act who was deprived by disease of the power of passing a rational judgment on the moral character of such an act. Section 116 of the present Lunacy Act recognises disease or age as causing insanity and incapacity to manage one's own affairs. I have very cursorily referred to this question of responsibility which may on a future occasion be very much further elaborated. The first legal enactment dealing with the insane is an unrepealed statute, *De Prerogativa Regis*, 17 Edw. II., by which, as a survival of feudalism, when everything belonged to the king or the lord, the care and custody of the insane belonged to the Crown By this early statute the king took the rents and profits of an idiot's lands for his own use during the life of the idiot, subject only to an obligation to provide the owner with necessaries. In the case of a lunatic the king was a trustee for his benefits and those of his family. Juries, therefore, where they could, avoided a verdict of idiot in the two forms of inquiry then in vogue—viz.: *de iodota inquirenda*, and they founded their conclusion upon the alternative *de lunatico inquirendo*, a form which survives at the present day Hence it became very desirable that some definite distinction should be drawn between these two states and, with the yearning for definitions characteristic of the legal mind, great lawyers contrasted *non compos mentis* with *fatuus naturalis* by forming a definite limitation to the capacity of an idiot. Under one set of expositors the mental capacity of an alleged idiot limited him to telling his age, stating who his father and mother may be, and to counting 20 Another set of authorities determined his idiocy by his ability to name the days of the week and measuring a yard of cloth The Idiots Act of 1886 put an end to this definite limitation by recognising the fact that an idiot was educable and removing him from Coke's definition that an idiot was "one who from his nativity by a *perpetual infirmity* was *non compos mentis*." The tendency of modern law has developed in the direction of deciding the capacity of a person alleged to be insane by considering this capacity with reference to the kind of conduct which brought his mental condition into question, and to limit the inquiry to the time at which the abnormal phase of conduct occurred. By the present Lunacy Act, passed in 1890, evidence in proof of mental unsoundness at an inquisition is limited retrospectively to two years before the date of the inquiry, and the Act also makes it necessary to consider the state of mind of the alleged lunatic at the time the inquisition is held.

Terminology, distinctions and import.—Before we enter upon the question of dealing with cases of insanity it is essential to be clear in regard to three terms that are frequently used in speaking of insane patients and which should be definitely understood—viz.: *illusion*, *hallucination*, and *delusion*. By an *illusion* is meant a real impression produced upon the sensorium through one or other of the senses, but appearing in consciousness very different from the actual fact; an illusion is *objective* in relation to the sensorium and the element of logical inference is slight. *Hallucinations* arise when no impression has been produced upon any of the senses and is a new creation due to an abnormal condition of the sensorium itself; it is *subjective* in relation to the sensorium. It is a false perception arising from within and is largely independent of an external stimulus. Thus, if the tolling of a bell be heard and be interpreted as the sound of human voices it is an illusion; but when no sound is audible and human voices are declared to be heard then it is a hallucination. *Delusion* pertains to the *mind* only and not to the *senses*. It is due to a perverted or morbid mental action, which prevents the subject from realising the falsity of his belief, either by the evidence of his senses or otherwise. A man calling himself the Creator or the Saviour, or stating that he is 10,000 years old labours under a delusion. The types and varieties of delusions are almost endless; sometimes they constitute the sole disorder, which is then termed "delusional insanity." When limited to one topic they form the monomanias—the popular conception of insanity. Many of these delusions become systematised and enlarged, as is seen in the inmates of asylums for the insane.

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[1] A lecture delivered at the Medical Graduates' College and Polyclinic, Nov. 17th, 1903.

[2] Jan. 16th, 1903, Mental Unsoundness amounting to Certifiable Insanity and its Diagnosis, a lecture delivered at the Medical Graduates' College and Polyclinic, THE LANCET, June 6th, 1903.

The terms above referred to are of pathological importance in their natural order, for *hallucination* probably indicates a deeper reduction than an *illusion*, which may only be dependent upon some peripheral abnormality of the special senses. *Delusion*, again, indicates that a definite combination of false impressions has become the basis of a belief which cannot be reasoned with, and may indicate some chronicity, for it is of a somewhat persistent nature and involves more or less elaborate reasoning processes. These perversions of the senses and intellect form the substratum of thought in the insane and they serve as motives to action precisely as they do in the sane. It is necessary, therefore, to seek for them and to ascertain how far these morbid thoughts influence the conduct which is under consideration. Much assistance may be obtained by bearing in mind the comparison between the present mental condition and that which characterised the patient formerly. Lord Eldon laid down a doctrine which has been accepted by his successors, that "mere weakness of character, mere liability to impulse or susceptibility of influence, good or bad, mere imprudence, extravagance, recklessness, eccentricity, or immorality—no, not all these put together would suffice to establish a verdict of insanity; except upon a review of the whole evidence they could be referred to a morbid condition of the intellect." What to most minds would be more conclusive of a "morbid condition of the intellect" than an unlicensed indulgence in the irregularities described above? It is essentially in the contrast between the present and the past that insanity is diagnosed, and the fact that such moral departures, as above referred to, come on in persons in whom an opposite, or at any rate a different, character formerly prevailed, is strong circumstantial evidence of insanity. In clearly marked cases of hallucinations or delusions there is, as a rule, no difficulty of diagnosis, but cases of rambling incoherence and delusions are not infrequently met with which require some elucidation and reference.

Diagnosis.—It is not expected that a medical man whose experience is not constantly with the insane shall diagnose the many and subtle varieties of insanity with the readiness of one versed in the treatment of every form of mental disease; but it is expected of him that he should not deprive of his liberty and incarcerate as insane a person who is suffering from the effects of fever or other temporary inflammatory states, as has been done on more than one occasion within my experience. For instance, the delirium of fevers such as typhus and typhoid has been mistaken for acute mania. I have seen the delirium of typhoid fever, as also that of pneumonia, mistaken for such and a certificate issued accordingly. Delirium is always a sign of nervous disturbance and it may be caused by a general affection of the whole economy operating upon the nervous system, as in the above-named fevers, in scarlet fever, small-pox, severe inflammation of the lungs or meninges from severe injuries, through the effects of alcohol or chloroform, and in uræmic poisoning. In high fever and in long protracted febrile states delirium is exceedingly common before a fatal termination, but in nearly all cases it is preceded for some days by symptoms characteristic of the disease on which it is dependent. The character of the delirium is in most cases incoherence or a quiet rambling and it occurs generally at night when the patient is drowsy and no one is addressing him. Frequently associated with it are hallucinations of vision. The temperature is often a reliable guide. In delirium it is high and there is a quick pulse, furred dry tongue, parched skin, injected conjunctivæ, and high-coloured urine. These conditions are the exception in the most common forms of acute mania, and it may be laid down as a good rule that in cases where the temperature is distinctly above the normal the examination should not be regarded as complete until it is ascertained whether inflammatory action in one of the principal organs or one of the continued fevers be not the cause of the mental disturbance.

Acute meningitis has been mistaken for mania; the mental phenomena greatly resemble one another; but the headache, vomiting, intolerance of light and sound, with suffused eyes, contracted pupils, and the high temperature should warn us. Delirium tremens has been mistaken for insanity but the finer distinctions between insanity requiring a certificate and transient delirium tremens are rarely drawn. The sudden and impulsive motor disturbances of alcoholic intoxication not infrequently require restraint, and it is not improbable that residence in a well-conducted asylum may prove very salutary to the slaves of alcohol; still, in my opinion, it is improper that such cases should be classed with the insane, for the stigma clings to them and militates much against their future prospect in regard to sobriety when they leave the asylum, as also against their material prosperity when discharged. Speaking generally, the diagnosis of delirium from the varieties of mania rests much more on the co-existence of gross physical disease accompanying the former than on any marked differences in the *mental* symptoms.

It is within my experience that insane persons may only display insanity at intervals and in the society of certain persons. I have known insane persons to have sufficient cunning to exercise self-control in the presence of strangers, hiding their delusions for a long time, although these were, in one recent case, of the nature of aggravating aural hallucinations, and in another of marked morbid abdominal sensations. The different varieties of insanity need hardly be considered here in regard to diagnosis, but it may be mentioned that general paralysis is almost invariably attended with the Argyll-Robertson phenomenon, and it needs asylum or hospital care; whereas insanity accompanying confinement should, in my opinion, be treated, for six weeks if possible, outside an asylum or hospital before a certificate is deemed necessary.

Examination of the insane.—This must necessarily vary with each case and according to the social status, habits, mental peculiarities, and other features of the patient. When called upon it is, in my opinion—although some differ from this—far better for a physician to be introduced in his actual capacity as a medical adviser rather than be announced as "Mr.," concealing his real character and making it appear that a visit is being paid casually. A patient is more likely to commit a dangerous act through this deception than by being actually informed that a physician was visiting. When in the presence of the patient it is best to endeavour to gain his confidence by a few well-chosen general observations and a great guide will be found in the physiognomy or the general expression of the countenance, peculiarities of dress, arrangement of the room, &c. Following these preliminaries the investigation should extend to medical points, covering the special senses, such as noises in the ear, voices or whispers, and what they say. A direct question: "Do you answer them back?" may elicit marked delusions otherwise concealed or suppressed, although based upon definite aural hallucinations. Disturbances of common sensation, such as animals creeping over the skin, electricity and galvanism, or "marconigrams" transmitted may be elicited, or possibly delusions may be evoked from answers to questions relating to the home and family, to business prospects, or religious views. Great public movements, important questions, or sensational news almost always interest and affect the mentally unstable, and there are at the present time persons recently admitted into Claybury either as Miss Hickman herself, or those specially commissioned to search for her, or who have elaborate theories as to her disappearance and death. During the interviews with a mental case sufficient will be noted in regard to the memory or the faculty of ideation to justify conclusions, but if the patient be reticent or indignant with the "idea of being ill" a tactful sympathy with him may bring out marked delusions of persecution or suspicion which *the friends themselves* and *those most intimate* with him had failed to observe fully. A patient disinclined to converse may express his views more freely in writing, and it is well in cases of marked reserve to direct the inquiry to suicide, as suicidal attempts are not infrequently contemplated or made in patients disposed *to mental depression.* If this be so care should be taken that the patient is never left by himself. Finally, the family history, although difficult to obtain and a delicate inquiry, is often found to be invaluable for clearing the diagnosis. Any history of nervous diseases in the family—the different neuroses being strongly hereditary and often mutually interchangeable—may be of great assistance towards forming a conclusion.

Course to adopt and in what form.—Having said so much the urgent question is: "What is to be done?" Without enumerating the different forms of insanity and their detailed treatment it may be stated generally that some varieties are suitable for home treatment. These are especially forms of insanity referred to malnutrition, such as those caused by excessive lactation or the conditions accompanying the puerperal state; transient toxæmic states, such as those *due* to *drink* or *drugs,* and the temporary insanities of young persons; quiet and harmless weak-minded cases; and certain cases of general paralysis in the last stage, whose friends are desirous of avoiding the much-felt stigma when a father or husband is said to have died in an asylum. With these exceptions it may be very definitely asserted that the treatment of the patient is much better away from home, and such cases as early general paralysis, insanity associated with epilepsy, any acute insanity not the foregoing recommended for home treatment and acute exacerbation in an otherwise quiet and chronic case, melancholia with refusal of food—for such are potential suicides,—cases of chronic delusional insanity or monomania with systematised fixed delusions—for such are potential homicides—these are all better treated in institutions. They require very special supervision and the sooner they are removed from home the better for themselves and their friends.

Classes of patients and methods of dealing with them—As is well known, cases of insanity are divided, according to law, into three classes. For each of these classes there is also a different law, so that in lunacy there is indisputably "one law for the rich and another for the poor." The three legal classifications are: (1) private patients, (2) pauper, and (3) criminal. Taking these classes in their inverse order, firstly, criminal lunatics need not be considered, as before being certified they are objects of special solicitude elsewhere. There are two classes of them, called respectively (*a*) the "Home Secretary's lunatics"—i.e., criminals who become insane before or after trial and who may be sent to an asylum by the Home Secretary's order; and (*b*) the "Sovereign's lunatics"—those who are insane on arraignment or "found guilty but insane." These latter are consigned to Broadmoor during the King's pleasure. Pauper lunatics are those who cannot pay, or whose friends have not the means to pay, for their maintenance, amounting at the lowest estimate to about £1 per week. To be admitted into a county asylum as a pauper lunatic the procedure is simple. The police constable or relieving officer of the district is informed, the parish medical officer fills up the certificate, and a justice orders the patient to be detained. I am not infrequently asked how a lunatic who may be annoying a certain person can be dealt with, as under the Act it is no one's duty to give the information. The friends may refuse the petition that the person should be removed and the landlord may also refuse, as whoever signs the petition enters into a contract to visit every six months. In such a case a private patient can be dealt with as if a pauper, and paragraph A covers such cases. If a person is suspected of being a lunatic a private letter addressed to the Commissioners in Lunacy may be sufficient to commence an action. The Commissioners have caused inquiries to be made under a section of the Act dealing with an alleged lunatic not under proper care and control.

Reception of pauper lunatics.—An order made for the reception of a lunatic if made by a justice otherwise than upon petition is called a "summary reception order." Such orders may be made as follows: A, lunatics not under proper care and control or cruelly treated or neglected; B, resident pauper lunatics; C, lunatics wandering at large; and D, lunatics in workhouses who ought to be sent to an asylum.

A. Every constable, relieving officer, or overseer who has knowledge that any person within his district who is not a pauper and not wandering at large is deemed to be a lunatic and is not under proper care and control or is cruelly treated or neglected must within three days swear such information before a justice being a judicial authority under the Act. *Upon such information on oath of any person whomsoever* the judicial authority may visit the alleged lunatic and must, whether making such visit or not, direct two medical practitioners separately to examine him and to certify as to his mental state. The judicial authority upon being satisfied that the said information is correct and that the person is a lunatic, and a proper person to be detained under care and treatment, may direct the lunatic to be received and detained in an asylum named in the order, and to which, if a pauper, he might be sent under the Act. (After admission into the institution he is classified as a pauper until it is ascertained that he is entitled to be classified as a private patient.)

B. Every medical officer of a union who has knowledge that any pauper resident within his district is deemed to be a lunatic and a proper person to be sent to an asylum must inform the relieving officer of the district within three

mental state, and if satisfied that the person is a lunatic and a proper person to be detained under treatment, may by order direct his detention in the institution named therein.

C. Every constable, relieving officer, or overseer who has knowledge that any person (whether a pauper or not) wandering at large within his district is deemed to be a lunatic must immediately apprehend or cause him to be apprehended and taken before a justice, unless the justice examines the alleged lunatic where he is (within his jurisdiction). The justice must examine him and call in a medical practitioner to certify as to his mental state, and may, if satisfied that he *is a wandering* lunatic and a *proper person to be detained* under care and treatment, by order direct his detention in an institution to which pauper lunatics from that place may be sent under the Act. (The lunatic is then detained as a pauper until it is ascertained that he is entitled to be classified as a private patient.)

D. Every relieving officer upon receiving notice from the workhouse medical officer that a pauper in the workhouse is a lunatic and a proper person to be sent to an asylum must
within three days give notice t
where the workhouse is situat
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belongs) The justice must
in a medical practitioner to certify as to his mental state, and if satisfied that the person is a lunatic and a proper person to be sent to an asylum may by order direct his detention in the institution named therein.

(Section XXIII.) A reception order may also be made by two Commissioners in Lunacy in the case of a lunatic not in an institution or workhouse.

Note.—In each case the reception order must be accompanied by a medical certificate (in Class A two certificates are required) and dated within seven clear days *after* the date of the medical examination. The justice or judicial authority making the order need not necessarily be the justice or judicial authority to whom notice was given by the relieving officer, but must have the same jurisdiction.

Removal to workhouses in urgent cases.—If it is necessary for the public safety or the welfare of the alleged lunatic that before the above proceedings can be taken he should be placed under care and control, the relieving officer or constable may remove him to the workhouse of the union in which the alleged lunatic is, and, unless there is no proper accommodation, he must be received and detained therein while the proceedings are being taken, but not for more than three days unless the medical officer of the workhouse signs a certificate under Section XXIV. (1) or a justice's order is obtained for his detention therein. Three years' *consecutive residence* in a locality constitutes what is termed "a settlement" and entitles a pauper patient to admission into the asylum provided for that particular district. Pauper patients are cared for by the counties or *joint counties, city* or borough authorities in England in their several institutions, but workhouses also form one of the institutions for the care of the insane poor, and Leavesden, Darenth, Caterham, and Tooting Bec asylums are examples of those for London.

Reception of private patients.—The mode of reception for private patients, to which we shall presently refer, is the same for all, whether received into county asylums or into institutions especially provided for them. There is another class of patient, not included in the three distinct classes previously mentioned—namely, the *bonâ fide* patient who is not certifiably insane. He may be conscious of a coming recurrent attack or he may feel a dread or awe of an impending mental breakdown for the first time. He may be safe with the minimum of supervision but not safe alone. Such a person may enter a registered hospital or a licensed house as a voluntary boarder. He merely expresses his wish in writing and this must be sanctioned by the consent of the Commissioners in Lunacy for a registered hospital or a justice must grant permission into a licensed house, but the boarder, once admitted, is free to leave the institution by giving 24 hours' notice in writing; or, on the other hand, he may be certified by direction of the Commissioners in Lunacy although he has given notice to depart. In such a case the patient not infrequently thinks that he has been tricked and it is certainly not a satisfactory procedure. At present no legal facilities exist for private patients to become voluntary boarders either in county or other public asylums where private patients are received.

Accommodation provided for the different classes.—There are suitable "institutions" for each of the classes enumerated and they may be summarised as follows: (1) institutions, a term used in law to signify (*a*) asylums, (*b*) registered hospitals, and (*c*) licensed houses; (2) workhouses; (3) houses in which patients are "boarded out"; and (4) private houses (unlicensed) for not more than one patient, called by law "single patients." These are the four classes of reception houses recognised by law for insane private patients. (*a*) Asylums, as already stated, are county, joint-counties, city, borough, or district asylums. (*b*) As to registered or lunatic hospitals, they are institutions such as Bethlem and St. Luke's Hospital in London, St. Andrew's Hospital in Northampton, and the Cheadle Royal Asylum near Manchester. There are 14 of these institutions in England and Wales. They are registered by the Commissioners in Lunacy. They were originally endowed by private philanthropy, and they receive paying as well as free patients, the latter usually belonging to the middle classes, the balance of profit derived from accommodating paying patients being applied to the support of those unable to pay. These hospitals are managed by committees and do most excellent and much appreciated charitable work. (*c*) The Lunacy Act of 1890 enacted that no more houses or private asylums should be licensed—thus creating a monopoly in these establishments—but it granted permissive power for local authorities to build such accommodation for private patients as they might deem necessary. Several counties and some cities and boroughs availed themselves of this and have provided inexpensive accommodation at low rates of payment for private patients, the charge made varying from £1 to £2 per week. Accommodation is provided in one of the London asylums for female private patients at a charge of 16*s.* per week and for male patients at from 30*s.* to £2 2*s.* per week.

Licensed houses or private asylums are generally managed by a resident medical proprietor.

What is called "single care" or an unlicensed private house is when a patient is certified (two certificates, the petition, and the magistrate's order) to the single care of any one person; but no one, without the special consent of the Commissioners in Lunacy, can take more than one certified patient. Special stringent reports and conditions are prescribed by the law in the case of persons under "single care" and if the house selected be that of a registered medical practitioner he is not allowed by law to be the visiting medical attendant. Provided that no one makes a profit by keeping the patient the friends or relatives may take a house and place it under the charge of nurses or attendants, with a medical man to visit.

These are at present the legal institutions for the treatment of private lunatics, but some consulting physicians admit that, for reasons of pure humanity, they may evade the law and send a mental patient uncertified—who, by the way, may be certifiably insane—into the care of nurses or a medical man who receives payment. As it is illegal to receive profit from keeping a lunatic uncertified—i.e., a patient certifiably insane but not certified—this practice has led to prosecutions. Hope is expressed that fresh lunacy legislation may be passed to permit of a mental patient in the stage of incipient insanity being cared for, at adequate payment, under proper restrictions, and presumably under the care of those who have given proof of special experience and personal fitness, and who can in addition show a distinct recommendation for the character of the household and the home.

Patients suffering from incipient insanity are not infrequently recommended by the neurologist to travel. They go forth and in many cases they never return. Upon this point it is not too much to say that valuable lives which might be restored are lost through the failure of the person consulted to apprehend the nature of mental depression and the gravity of the consequence of sending such a person travelling away from home. There is no justification for ordering a person with any symptoms of actual insanity to leave home on a sea voyage or a journey.

Perhaps it may be mentioned here that no mechanical restraint may be used—except for medical or surgical reasons, or to avoid danger to himself or others—in the case of certified patients, and when used notice of the same must be sent to the Commissioners in Lunacy. About this matter of mechanical restraint the official authorities are most particular. Restraint is rarely used in any "institution." Since the opening of Claybury—a period of ten and a half years, during which time nearly 10,000 patients have been treated—restraint has never once been used to control a violent patient.

Treatment.—As to the treatment, the description of the symptoms and course of Hamlet's illness suggest the remedies—

> "And he, repulsèd,
> Fell into a sadness; then into a fast;
> Thence to a watch; thence into a weakness;
> Thence to a lightness; and, by this declension,
> Into the madness whereon now he raves,
> And all we wail for."

Whether the patient be treated in his or her own home, or in any of the "institutions" provided under the Lunacy Act, adequate nursing is essential and must be provided. In a private house where a patient is more difficult to control than in an asylum, two or more nurses will be required by day and a night nurse will also be necessary. Insane persons, when treated in their own homes, often develop a mistrust in members of their own family and this may lead to a tragic end. For some cases one nurse will be sufficient, more especially if the nature of the case will permit of the nurse sleeping in the patient's room at night. A mental nurse is absolutely necessary for a mental case, and preferably a young person with asylum experience whose record of training is supported by certificates in mental nursing, for only those accustomed to and familiar with the insane are of any service in this illness. It is by the help of efficient nursing that an attack of insanity may be cut short, the risk of accident or suicide averted, the anxiety of relatives and friends relieved, and valuable lives restored to reason. Tact, watchfulness, untiring patience, sympathy, geniality, and good temper are essential qualifications for nursing the insane, and a good attendant is of incalculable value in the home treatment of any case of insanity. Similar previous experience is, therefore, an essential qualification. Ordinary hospital nurses are totally unfit for nursing the insane and they should not be employed. There are numerous nursing homes and institutions where self-reliant, prudent, and thoughtful nurses—total abstainers most of them—can be obtained at what may be almost called a moment's notice. If mental nurses be not total abstainers it is a rule with them in private nursing not to take any alcoholic stimulants while on duty.

At the present time before a well-to-do person is placed in an asylum home treatment is given a fair trial, so that in the early stages of mental disease every effort in such a case should be made to promote recovery through the aid of private nursing. The risks are usually greater in a private house, from stairs, open windows, knives, razors, &c. Windows must be blocked, possible weapons removed, locks taken off, superfluous furniture discarded, pegs, &c., removed, and all medicines, drugs, and poisons placed securely under lock and key. When patients are treated in their own homes the vigilance of friends not infrequently aggravates, if it does not suggest and develop, suicidal impulses. When a patient undergoing home treatment shows any suicidal tendency that patient should never be left alone or out of sight for one instant. He should be followed even to the lavatory, he should have his food specially cut up for him, no strings should be permitted to the clothing, and someone should sit up and be on guard all night. Daily written notes of the temperature, food taken, sleep obtained, exercise in the open air, and any change in the mental symptoms or the body weight should be recorded to, and required by, the medical attendant. As to sleep, this is often the greatest trouble; sleepless nights possibly mean noise, excitement, and violence by day. These latter are the symptoms which as a rule determine asylum treatment.

The remedies which favour sleep are either *direct*, which *act primarily upon the central grey matter or its blood-supply*, or *indirect* which are not in themselves narcotics but favour sleep by removing disturbing elements. Among the latter are iron which by relieving anæmia also relieves the *restlessness and sleeplessness often accompanying it.* Iron has exercised marked benefit in cases of epileptic insomnia. Digitalis, by adding tone to the cerebral arterioles, effectually prevents passive congestion in lax arteries when the patient occupies the recumbent position; it also probably causes a due amount of cerebral anæmia. Tartar emetic lessens arterial pressure and acts as a vascular sedative; it is very useful in the restlessness of sthenic inflammations and when combined with opium it is very effective in lessening sthenic delirium. Alcohol, administered with easily digestible *nourishment during periods of* exhaustion, especially just before retiring to rest, is a most valuable sedative.

Of the direct sedatives bromide of potassium is certainly *the simplest if it be not the most efficacious.* It is very useful in the insomnia of overwork and the restlessness arising from reflex affections; it can be given alone in 20-grain doses three times a day or in combination with chloral (15 grains) which is the best remedy for simple insomnia, and there are no unpleasant after-effects from the combination. If chloral hydrate is prescribed for old people care should be taken to have a hot-water bottle in the bed and the feet kept warm. Opium has the disadvantage of (1) losing effect from the toleration which follows repeated doses and of (2) *setting up digestive troubles, but it is very* useful as an anodyne, either in 10 minim doses of the tincture, or in subcutaneous injections of morphine, one-sixth to one-half of a grain. Opium is very suitable in cases of sleeplessness in *restless* old people and seems to act on them as a sedative stimulant. Sulphonal in 20 grain doses *three times a day,* taken in warm milk or beef-tea, acts as a marked muscular depressant, but it is apt to cause intestinal trouble and its action is cumulative. It is best given for continuous excitement, *for a few days at a time,* and then withdrawn. To control sudden violent aggressive motor excitement it is of no use. Some chronic noisy cases do very well with a dose of sulphonal at night. Trional in similar doses is less depressant but is also an intestinal irritant owing to its insolubility. There is no better remedy than a hypodermic injection of hydrobromate of hyoscine, from $\frac{1}{200}$th to $\frac{1}{50}$th of a grain. The effect is very fleeting but it is immediate; the patient is as excited as ever the next day or even in a few hours, but care should always be taken to visit the patient *frequently after the* injection, and it may be advisable to combine with the hyoscine a subcutaneous dose of strychnine. Hyoscine is used less to procure sleep than reflexly to cause muscular paralysis. Paraldehyde in one drachm doses is a valuable sedative for old people, or those in whom the circulation is feeble; it does not weaken the heart; the pulse gains in strength under its action; it is not an irritant, but, on the contrary, is usually borne well by the stomach; it is superior to chloral for the *insomnia of alcoholic delirium*; and *as a* hypnotic in cerebral affections it is most useful. Noisy paretic dementia, the multiform manifestations of hysteria, and the convulsive neuroses are all greatly improved by it and it can be taken alone in water or with milk or beef tea. Cannabis indica, in combination with bromide of potassium, has been recommended by some for epileptic excitement, nervous insomnia, or acute mania, but my experience fails to recommend it. In some women it produces very unpleasant hallucinations, and the benefit, reported in the *experience of others, may perhaps be due to the simple* bromide, often used in combination with it in the formula "bromidia." Bromide of potassium in large doses of from four drachms to one ounce has been recommended for maniacal excitement. Perhaps the best cure for sleeplessness as well as motor excitement *is open-air exercise. Sleep can* often be obtained by special attention to diet and artificial feeding may become most important. When a patient refuses food, gentle and firm persuasion may overcome the refusal; beyond this the nurse should never go. No apparatus for forcible feeding should be employed by any other than a medical man—who chooses his own method, either by the mouth or with the use of the nasal tube. Feeding is the sheet-anchor of treatment in many cases of early toxæmic insanity, such as the puerperal form, and artificial feeding should be resorted to early and often, during every quiet interval and at each opportunity, to compensate for the profound exhaustion—often intense—caused by restlessness and *maniacal delirium.*

One of the most important points in treatment is attention to the state of the bowels, for constipation is a most prevalent irregularity in the insane. Calomel in doses of ten *grains is easily borne* and is probably the best purgative. Croton oil, even in as large a dose as two minims, is often ineffective. It is difficult to get the insane to take tabloids or pills and almost impossible to give these with food—even if it were desirable. Epsom salts or some of the foreign well waters such as "Hunyadi Janos," are very effective when given daily and in free doses—generally twice or three times the dose required for a sane person.

Restraint, to which reference has been made, should never be permitted in a private house; when it appears necessary *the time for home treatment is over* and asylum care is urgently indicated. Asylum treatment often renders unnecessary the excessive and damaging used of narcotics, calmatives, and restraints, which are so often used to prevent *the noise and destructiveness of patients treated in their* own homes. The treatment in asylums consists in diverting the morbid mind into healthy channels, the removal of disturbing causes, and the encouragement and example to industry afforded by those in attendance. Perseverance, attention, uniform kindness, yet firm determination, are characteristics always appreciated in the asylum nurse. It is not too much to say that the regular routine of asylum life tends to favour regular processes of thought and reflective action which are often the first symptoms of recovery in patients who have suffered from delusions. In *the asylum* there is constant, but not too direct, watchfulness and supervision combined with forbearance and respect. These characteristics form what is usually termed the elements of psychic or moral treatment and they are invaluable in asylum as well as *in home treatment. They constitute nothing that* is new and they are the basis of the practice of general as well as asylum physicians.

Procedure.—In dealing with this aspect it has evidently been decided that the time has arrived when the person has to leave home and the case of the private patient alone needs consideration, for the procedure for the pauper lunatic is simple and the criminal lunatic is already in legal hands. The method for placing a private patient under legal care is one of two alternatives: either the *de lunatico inquirendo*, which is an inquisition held by one of the two Masters in Lunacy, before a jury, of whom 34 may be summoned by the sheriff, but not more than 24 are empanelled, and at least 12 of these must concur. Counsel for the petition must conduct the proceedings in a "judicial spirit," and no evidence of alleged insanity over two years previously must be tendered, the point being to keep to one or more of three special issues—viz., that at the time the person (1) is of unsound mi [illegible] or (3) is incapabl [illegible] lunatic may be [illegible] oath either in o[illegible] an inquisition are public. When a person has been found insane by inquisition he may traverse these findings—i.e., he may get the verdict set aside by proceedings determined in the Court of King's Bench or at the assizes, otherwise he remains a lunatic either until recovery, when the finding of the inquisition is put an end to by a *supersedeas* or is annulled by *his death.* When a lunatic is "*so found by* inquisition" a committee of the person and a committee of the estate are appointed, the one interested in his life and the other in the good management of, and possible succession to, his estate. The Masters in Lunacy hold all inquisitions and they make summary inquiries. *They may also make* consequential inquiries dealing with the person and property of any lunatic, should his property be of the value of £100 a year. If his property be of less value than £200, and if no relatives or friends will investigate, the inquiries are made by the county court judges, as also if the case be one of partnership and the assets are less than £500. Finally, inquiries may be made by the guardians of any union.

Section 116 of the Lunacy Act, 1890—the great practising section for lawyers—enables the Master in Lunacy, on a summons being taken out in his chambers and heard before him, to apply powers of management and administration of the estate in the case of (1) lunatics, not so found by inquisition; (2) every person lawfully detained within the jurisdiction of the English courts as a lunatic and not so found by inquisition; (3) in the case of insanity through mental infirmity arising from disease or old age; (4) in the case of persons insane, with an estate of not more than £2000, or yielding £100 a year; and (5) in criminal lunatics, continuing insane, and remaining under confinement. The other method of placing a private patient, or a patient not a pauper and not so found by inquisition, is through a "reception order" signed by a justice, upon petition of a near relative, and accompanied by two medical certificates. The order may, as already stated, be made summarily, without a petition; it may also be made by the Commissioners in Lunacy themselves, or in the case of a lunatic so found by inquisition the order may be made by the committee of person.

As to (1) the petition, (2) the order, and (3) the medical certificate. The petition must be signed by a relative of the patient if possible; if not, the reason why it is not so signed must be stated. The petitioner must not be related to, nor connected with, either of the medical certifiers and the petitioner must have seen the patient within 14 days of the presentation of the petition. The medical certificates imply an exceptional power granted by the State to members of our profession, in using which we deprive the subject of his personal liberty, his civil capacity, his social, financial, political, and even his domestic rights. Such a power is not given to any other functionary in the land; hence insanity becomes a very serious issue, and all the legal machinery from the justice of the peace to the Lord Chancellor himself may be set in motion. In stating that a person is mad it must be proved and it must be committed to writing. All the reasons must be given, a slip of the pen, an inaccuracy as to date, as to one's own registered qualification, or as to the residence of the patient will render the certificate invalid, and the whole process must be repeated. So particular are the Commissioners in Lunacy that they have even ordered the discharge of a patient on the ground that the certificate was invalid, for the reason that it did not contain the number of the house in which he lived. On another occasion the same thing happened because the medical men signed certificates, not from what they observed on any particular day, but from what was known to them in consequence of having attended the patient during a considerable period of time previous to certifying. A failure to comply with any of the legal requirements is fraught with an unusual amount of danger, for the law punishes severely when certificates are given improperly, whether through ignorance, inadvertence, or wrong intention. Indeed, any person thinking himself aggrieved may by the law of the land obtain, upon his discharge, copies of the documents upon which he was incarcerated, and may sue and prosecute the granter of the certificate, possibly involving his professional and financial ruin. Good faith and reasonable care must be proved by the certifier. With regard to the medical certificate, it holds good for seven days and one of the certificates must, if possible, be signed by the usual medical attendant of the patient and if not the reason must be given. The two medical men, who must not be related or partners, must see the patient separately and the examination, if the certificates are signed in England or Wales, must take place in England; similarly with respect to Scotland and Ireland. The certificates must be signed within seven days of the presentation of the petition. No medical man may certify his wife or his immediate relatives; neither may he be connected with, nor in any way interested in, the institution into which the patient is to be received. The certifier must write down facts observed by himself at the time of the examination, otherwise the certificate is invalid. Those relating to incoherence, violence, or refusal of food are generally evident. Such statements as great taciturnity, complete seclusion from society, aversion to cleanliness, or wandering about the streets at unreasonable hours are sufficient. A statement by the person that he, or she, is lost and is without hope of forgiveness, that he will be taken to prison and die a miserable death, that the devil whispers in his ear that he has committed the unpardonable sin, or the fact that he is violent in his conduct and unable to take care of himself, is ample and clear ground for certifying. It is well to avoid the use of conventional and vague terms such as "bad temper," "excitement," and "emotional" in the certificate. If the symptoms of insanity be obvious to the most obtuse layman this in itself is not a sufficient guarantee that the certificate is valid. The provisions of the statute must be fulfilled, not only in the spirit but also in the letter. If a false certificate be given the certifier is guilty of a misdemeanour and the greatest care should always be taken that the statements made are relevant, exact, and accurate.

The petition, together with the two medical certificates, should be presented to a magistrate "specially appointed" under the Lunacy Act or a county court judge, or a stipendiary magistrate. Either of these may sign the order for the person's detention, without necessarily seeing the patient who must be received into the specified place within seven days of the signing of the order. If the patient is received into an asylum or hospital—not having been seen by the magistrate—he is presented with a notice of his right to an interview with a justice, and the patient exercises his own choice, a magistrate being summoned if he so wishes. Any *magistrate not "specially appointed" can sign an order,* but in that case the order must be countersigned by a specially appointed magistrate within 14 days. A list of justices "specially appointed" may be obtained from the clerk to any petty sessional division, the police, or the clerk to a board of guardians.

If the case be urgent there is a more expeditious method than the above of getting a private patient under treatment into an asylum, and that is through an "urgency order." A relative if possible, if not, some person whose connexion with the patient is stated, and who has seen the patient within two days, may make an order for his detention. This order must be accompanied by one medical certificate. The certifier must have seen the patient within two days of signing the certificate, and must give his reasons for the urgency. The patient must be admitted to the specified asylum within two days of the signing of the order, and the order remains in force for seven days, within which time the ordinary petition, the magistrate's order, and the two medical certificates must be obtained.

Cost of maintenance.—Insanity is the most expensive illness with which any person can be afflicted. Home treatment involves costly nursing; this and the fees for medical attendance may easily amount to ten guineas per week, depending upon the acuteness of the case and the accommodation required. The plan of taking a special house is of necessity a more costly one still, and may amount to more than double that of home treatment, and the method of single care is very often quite as expensive. If the case be quiet and chronic such a person may be kept in "single care" at much less, and there are many so placed at about £100 a year. The registered hospitals and some of the larger licensed houses may take cases also at as low a rate as 25*s*. or 30*s*. per week, but oftener the charge is from two to six guineas, determined by the accommodation required and the nature of the case.

Conclusion.—To use a current phrase, "What do you think of it all now?" One may reply that as the result of a general survey of this question of insanity—a disease which, with the progressive complexity of our civilisation, is undoubtedly on the increase, and a disease which strikes more real terror into the heart of a family than does any other ill to which flesh is heir—it is not too much to state that the study of the laws which regulate the natural dependence and interaction of the various powers and affections of the human mind, demands more attention than it gets. In America the study of psychology is much more common among students of all kinds, even those who pursue purely commercial pursuits, than it is in this country.[3] This study enables us to read through the whole gamut of aspiration and desire, from the most sensuous to the most moral and spiritual of experiences. The study of the human mind has been the aim of the great poets, philosophers, historians, and seers of the world, and to its neglect are due most of the illusions, impostures, and superstitions of our day; evils which bring in their train misunderstandings, injustice, and most of the chronic discontentments of life. Let more encouragement be given to the study of the mind

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[3] Dr. C. S. Myers: The Teaching of Psychology in Universities of the United States. A paper read before the Psychological Society at Cambridge. (Journal of Mental Science, October, 1903.)

in health and disease. We are called upon to treat mental diseases in living men and women. Pedantry about the neuraxon avails us little; the only method is to familiarise ourselves, firstly, with the healthy mind and, secondly, with departures from this, such as are seen in the diversified types presented to us among the inmates of our large asylums, where alone the necessary experience can be obtained, and by this method alone can we hope to afford relief to the saddest affliction which can befall humanity.

Claybury.

ON THE USE OF PURE CARBOLIC ACID IN THE TREATMENT OF SMALL-POX.

BY JAMES T. NEECH, M.D. DURH., D.P.H. VICT.,
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AND

J. F. HODGSON, M.D., CH.B. VICT.,
ASSISTANT MEDICAL OFFICER OF HEALTH OF HALIFAX.

SINCE the publication of "A Note on the Use of Carbolic Acid in the Treatment of Small-pox" by the former of us (J. T. N.) in THE LANCET of Feb. 21st, 1903, p. 518, ample opportunity has been afforded for further testing its efficacy in this disease. Briefly, the following are the results of our extended experience of this remedy. Altogether we have employed this method of treatment in 136 cases. Of this number five died, which gives a death-rate of 3·6 per cent. This compares very favourably with the results obtained in other parts of the country. The epidemic, though not so virulent as some, was, we think, by no means a mild one, as out of the 136 cases 22 were of the confluent type, 12 were semi confluent, and 103 were discrete. Of the latter 15, though discrete, were very severe cases. The patients on the whole were anything but efficiently vaccinated, so that the character of the disease and the modifying effects of vaccination did not materially contribute to this low mortality. The following table shows the number of cases, deaths, and percentage mortality under five and over five years of age.

—	*Unvaccinated.* Cases.	Deaths.	Mortality per cent.	*Vaccinated.* Cases.	Deaths.	Mortality per cent.
Under five years ...	8	3	37·5	—	—	—
Over „ „ ...	27	1	3·7	101	1	0 99
Totals	35	4	11·4	101	1	0·99

The three unvaccinated children who died were all suffering from severe confluent small-pox; one was a baby whose mother was suffering from small-pox when delivered The 27 unvaccinated cases above five years included some very severe ones, but *the only fatal* case was a chronic alcoholic who succumbed to heart failure following bronchopneumonia in the convalescent stage. Amongst the vaccinated the death was in a case of hæmorrhagic small-pox, which is *almost invariably fatal.*

The method adopted was that first mentioned—namely, to apply the pure liquid carbolic acid with a small camel's-hair brush to the vesicles over a certain area of the body each day, commencing with the face and head, until the whole of the vesicles had been touched. These applications were continued until the vesicles showed signs of drying up or of aborting. Some considerable time is required to do this as it should be done, carefully and thoroughly. Care must be taken also to avoid the acid running on to the healthy skin.

Although a careful watch was kept for the appearance of toxic symptoms carboluria was noticed in only two cases. Curiously enough, both belonged to one family, so that idiosyncrasy *might possibly have had something to do with* it, and it is quite possible that the acid may have been more freely applied than is usual or necessary in at least one of these cases. In some cases only one side of the patient was *painted with* carbolic acid and the other side was either left alone or treated with other local applications, such as carbolic acid with camphor, guaiacol in olive oil, or formalin. In all such cases it was plainly seen that carbolic acid gave the *best results. This was, we thought,* the simplest way to find out which drug applied locally gave the best results, especially as types of small-pox vary so in vaccinated persons. The application of the acid caused very slight and transitory pain and *relieved the intense irritation.* The patients never complained or scratched themselves. The effect appeared to be local, the pustules rapidly shrivelled and scabbed, and the further development of the papules and vesicles was either prevented or if not aborted comparatively little discharge resulted. In fact, all the vesicles had formed into scabs in from five to ten days after treatment, according to the severity of the cases, and in from ten to 18 days the scabs had fallen off, except of course those in the palms of the hands and the soles of the feet The ulceration of the skin in the pustular stage was practically prevented, so that dermatitis with cutaneous and subcutaneous œdema was lessened, and the tendency to the formation of scars was not nearly so great. The offensive odour from the eruption was entirely absent and to a certain extent the application kept the patients clean The absorption into the system of septic material from the pustules *is either* prevented altogether or is *only* very slight. This along with the lessening of the process of ulceration abolishes the secondary fever or renders it very mild The temperature generally kept at a low level after the appearance *of the pustular stage and* was *never much above* 102° F. even in confluent attacks in unvaccinated persons, and was normal long before it usually is in untreated cases. Delirium was very infrequent and the pulse was not markedly increased, as is usually the case when the pustular stage is reached. The risk of infection by aerial convection is also, we consider, much lessened, and we can discharge a patient with a greater feeling of safety a week or a fortnight before the usual time, as the treatment cuts short the disease to that extent at least. There was an entire absence of complications, such as multiple abscess, &c. The early removal of the scabs was effected by means of carbolic oil, bread poultices, but best of all by "antiphlogistin," which tended to prevent the formation of small superficial abscesses.

Halifax.

THE ETIOLOGY OF YELLOW FEVER.

BY JAMES B. TOMBLESON, M.B., B.CH. OXON.

SINCE writing the article which has already appeared in these pages[1] I have examined more cases and done other work which throws light on the subject and which I wish to record here. *For the purpose of making this record as short* as possible and at the same time comprehensive I shall divide it into the following heads: (1) a tabulated analysis of the more important points of 25 cases with a few remarks; (2) a record of the finding of the bacillus in infected mosquitoes and in their larvæ; and (3) a few remarks about the method of staining which a more extended experience *has shown to give* the best results, and one or two general statements which may be of interest.

It will be noticed that of the 25 cases in the accompanying table four were diagnosed by Dr. McPherson, port officer at *Salina Cruz; one was diagnosed* by Dr. Stubbs, the American consular agent at Coatzacoalcos. This I mention to show that I [illegible] by myself; more[illegible] my visits by Dr. R[illegible] who has lived here d[illegible] always agreed with my diagnosis in these cases. In every case I have found my bacillus present, without any exception, and from the urine in every case I have cultivated it almost always in pure culture, but in a few cases with an admixture of pus cocci or Finlay's micrococcus tetragenus. In Case 25 and in another which I have not included I found malarial parasites as well, often seeing parasites and bacilli together in the same corpuscle.

It will be seen from the table that I examined the liver

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[1] THE LANCET, August 29th, 1903, p. 594.

TABULATED ANALYSIS OF 25 CASES OF YELLOW FEVER.

Case.	Date.	Nationality.	Highest temperature (Fahrenheit).	Highest amount of albumin.	Facies.	Tongue.	Pains.	Temperature-pulse ratio.	Day of disease when first seen.	Result.
	1903.									
1	Feb. 24th.	British.	108·6°	One sixth.	Typical.	Typical.	Typical history.	104·5°— 69 104·4°— 80	Fifth or sixth.	Death.
2	,, 27th.	,,	103·4°	Large trace.	,,	,,	Typical.	103·4° - 84	First.	Recovery.
3	May 6th.	American.	104·3°	One-sixth.	Fairly typical.	More like malaria.	,,	104·3°— 84 103·6°— 78	Third.	,,
4	,, 9th.	,,	105·5°	One-half (urine suppressed for 24 hours).	Typical.	Flabby red tip.	Typical history.	105·5°— 94 102·6°— 78	Fifth.	,,
5	,, 12th.	Mexican.	104·6°	One-sixth.	Atypical; pale.	Typical.	Typical and in liver.	104·6°—100	First.	,,
6	June 15th	,,	103·6°	One-half.	Atypical; pale.	,,	—	103·6° - 94	Fifth.	Death.
7	,, 18th	Specimen of blood sent from Coatzacoalcos by Dr. Stubbs, passed per rectum by a patient imported from Vera Cruz.								
8	July 11th	American.	105·4°	One-half.	Rather pale.	Typical.	Typical and in chest.	105·4°—100 104·6°— 93	Third.	Recovery.
9	,, 29th	,,	104·6°	Seven-eighths.	Typical.	,,	Typical.	104·6°—102 104·6°— 93	First.	,,
10	August 11th	Specimens (two) of urine from patients at Salina Cruz sent by Dr. McPherson containing respectively two-thirds and three-fourths albumin.								Death (both).
11	,, ,,									
12	,, ,,	American.	104·0°	Solid.	—	—	—	104·0°— 72 102·6°— 64	Sixteenth in relapse.	Death.
13	,, 14th.	Specimens (two) of liver and kidney taken post mortem from Mexicans and sent by Dr. McPherson from Salina Cruz.								
14	,, ,,									
15	,, 20th.	American.	100·4°	Trace.	—	—	Typical history.	100·4°— 58	Sixth.	Recovery.
16	,, 21st.	British.	103·0°	One sixth.	Typical.	Typical.	Typical and in liver.	103·0°— 74 102·6°— 82	Third.	,,
17	,, 22nd.	American.	106·4°	One-fourth.	,,	,,	Typical.	106·4°—112 104·5°— 84	Second.	,,
18	,, 25th.	,,	101·3°	None.	,,	,,	,,	101·3°— 68 100·4°— 52	Fourth to Sixth.	,,
19	,, ,,	,,	104·5°	Trace.	,,	,,	,,	104·5°—104 104·0°— 92	First.	,,
20	,, ,,	,,	102·1°	,,	,,	,,	,,	102·1°— 84	Second.	,,
21	,, ,,	Mexican.	105·2°	One-half.	,,	,,	,,	104·3°—112 105·2°—112	,,	Death.
22	,, 31st.	American.	101·8°	Trace.	,,	,,	,,	101·6°— 64 101·8°— 64	,,	Recovery.
23	,, ,,	,,	99·6°	None.	,,	,,	,,	99·6°— 84 99·8°— 83	First.	,,
24	Sept. 2nd.	,,	103·4°	Large trace.	,,	,,	,,	103·4°— 92 101·6°— 68	Third.	,,
25	,, 3rd.	British.	104·5°	One-sixth.	,,	,,	Malarial.	104·0°—112 102·6°— 94	,,	,,

By *typical facies*, flushed, stupid-looking face, with injected conjunctivæ, is meant. By *typical tongue*, one furred but not very heavily with red edges and tip is meant. By *typical pains*, severe headache (frontal and occipital), severe pain in the back and the loins and in the whole muscular system are meant.

REMARKS.

CASE 1.—Icterus was present when first seen, with black vomit and motions. Bacilli were found in the blood and cultivated from the urine.

CASE 2.—Icterus showed itself in the conjunctivæ on the second day. Bacilli were found in the blood; no cultures were taken.

CASE 3.—Icterus was present in the conjunctivæ on the third day. Bacilli were found in the blood and cultivated from the urine.

CASE 4.—When first seen there was icterus over the whole body. Bacilli were found in the blood and urine. Black vomit occurred once.

CASE 5.—Icterus was present in the conjunctivæ on the third day. Black vomit occurred on the fifth and sixth day. Bacilli were cultivated from the urine; no blood was taken.

CASE 6.—Icterus was present when first seen as was also black vomit. Bacilli were cultivated from the urine; no blood was taken.

CASE 7.—Bacilli were found in, and cultivated from, the specimen.

CASE 8.—When first seen icterus was present and later spread over the whole body. Bacilli were found in the blood and cultivated from the urine.

CASE 9.—Icterus was present over the whole body. Black vomit occurred once. A relapse ensued. Bacilli were found in the blood and cultivated from the urine.

CASES 10 and 11.—Bacilli were found in, and cultivated from, both specimens.

CASE 12.—The patient was only seen in a relapse. Black and red blood was vomited. Icterus was present, especially after death. Bacilli were found in the blood and urine.

CASES 13 and 14.—Bacilli were demonstrated in both tissues from both patients.

CASE 15.—Icterus was present over the whole body. Bacilli were found in the blood and cultivated from the urine.

CASE 16.—Icterus was present in the conjunctivæ on the fourth day and later spread to the whole body. Bacilli were found in the blood and cultivated from the urine.

CASE 17.—Icterus was present in the conjunctivæ on the third day and later spread over the whole body. Black vomit occurred once. Bacilli were found in the blood and cultivated from the urine.

CASE 18.—When first seen icterus was present in the conjunctivæ. Bacilli were found in the blood.

CASE 19.—Icterus was present in the conjunctivæ on the third day and later spread to the whole body. Flaked vomit occurred once. Bacilli were found in the blood.

CASE 20.—Icterus was present in the conjunctivæ. Bacilli were found in the blood.

CASE 21.—Icterus, black vomit, and hiccough were present. The patient died from uræmia. Bacilli were found in the blood and cultivated from the urine.

CASE 22.—Icterus was present in the conjunctivæ on the third day. Bacilli were found in the blood.

CASE 23.—Bacilli were found in the blood.

CASE 24.—Icterus was present in the conjunctivæ and also over the whole body. Three coffee ground motions were passed. Bacilli were present in the blood and urine.

CASE 25.—Icterus was present over the whole body. Bacilli were found in the blood and cultivated from the urine.

and the kidney post mortem in two cases, sent by Dr. McPherson from Salina Cruz, and found the bacilli in all the specimens. In this connexion I think it worthy of notice that among my specimens prepared last year at the London School of Tropical Medicine I found two of yellow fever material; these I dismounted and decolourised, and then re-stained with toluidin blue, and in them demonstrated the presence of the bacilli in large numbers. As a check on my results I examined coincidently many cases of malaria and always failed to find the bacillus except in the two cases mentioned before in which malaria and yellow fever were coexistent.

Work on mosquitoes.—First I fed two mosquitoes on Case 9 in my series, killed them by putting them straight into form-alcohol (formalin 10 per cent. and alcohol 90 per cent.), imbedded them, and cut sections from one; in these the bacilli were so abundant that I at once sent section blocks straight off to London where they are now. Then I prepared a series of six in the same way, showing every stage from 24 hours after the ingestion of the blood to the time when it was completely digested. These were fed on Cases 22 and 24 and in all of them I found the bacillus in every stage of growth and sporulation. In some beautiful specimens I found the bacilli in the proboscis, evidently ready for injection into another individual. I then grew some larvæ in water containing urine from one of my yellow fever patients (I do not know whether or not the parent was infected), and imbedded and cut them, and in these also I found the bacilli in all stages of growth. I then tried to get some infected mosquitoes to breed in clean water in my cage, but they refused to lay eggs, and so this experiment failed.

After this for two or three weeks circumstances prevented me from doing anything further, and then the norther season began, and at the same time the disease disappeared, and so for further work I must wait till next year.

Method of staining.—The best results which I have obtained have been secured by staining with a carbo-toluidin blue prepared as follows. To a 5 per cent. solution of carbolic acid I add enough saturated solution of toluidin blue in absolute alcohol to make the mixture of a deep blue colour; I stain with this for three hours, dry by heat (I always put the slides for ten minutes in the incubator) without any dehydration with alcohol, clear with xylol, and mount. This refers, of course, to sections; in the case of blood slides naturally no dehydration or clearing is needed. The colour fades out of the bacilli very quickly, much sooner than out of the tissues.

Before closing this little notice I should like to call attention to one point in the treatment of the disease. I always make a practice of using large injections of warm water into the large bowel from the beginning of the third day of the disease to the end. I inject two quarts twice daily, taking half an hour or more over the operation, so as not to distress the patient, and have found it always most beneficial; in fact, I believe that if this course were always followed secondary fever would entirely disappear and the disease would lose much of its terrors.

Rincon Antonio, Istmo de Tehuantepec.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

A CASE OF IMPLANTATION OF THE DIVIDED THORACIC DUCT INTO THE INTERNAL JUGULAR VEIN; RECOVERY.

(Under the care of Mr. E. DEANESLY.)

FOR the notes of the case we are indebted to Dr. G. Wright, house surgeon.

A woman, aged 34 years, was admitted into the Wolverhampton and Staffordshire General Hospital on Sept. 24th, 1903, for the removal of tuberculous glands from the left side of the [illegible] ay in the anteri[illegible] jaw and from [illegible] ting and deeply adherent, extended along the carotid sheath for its whole length and also beneath the sterno-mastoid into the posterior triangle. The lowest gland, of the size of a walnut, lay behind the clavicle immediately over the junction of the jugular with the innominate vein. The upper part of the anterior triangle was cleared of glands through an oblique curved incision in the fold of the neck, the jugular vein being exposed and cleaned. A second incision parallel to the first was made over the posterior triangle a short distance above the clavicle and the remaining chain of glands was dissected out. During the removal of the lowest gland a small hole was made in the internal jugular vein close to its junction with the innominate. It was found impossible to close this securely without dividing and ligaturing the jugular vein itself. As an additional precaution the jugular vein was also ligatured again in the anterior triangle where it was already exposed. Copious escape of milky chyle now led to a search for the thoracic duct which was found to be completely divided close to its termination. Owing to the natural curve in the duct, which arches upwards for some distance and then descends to its junction with the great veins, it was easy to free it in an upward direction and to dissect it out for over an inch. The divided end could then be brought up to the internal jugular vein above the ligature on the latter without tension on the duct. As the internal jugular vein had also been ligatured at a higher point in its course, near the corner of the hyoid, it was necessary to demonstrate that the portion of the vein lying between the two ligatures possessed collateral circulation, as it presumably did through the thyroid veins. This fact having been proved by puncturing the vein and noting free hæmorrhage and refilling of the vein the divided end of the thoracic duct was implanted into the punctured opening in the vein by two sutures of the finest silk in such a manner that about one-eighth of an inch of the duct projected within the lumen of the vein. Hæmorrhage during the implantation was controlled by a lightly applied clamp immediately above the punctured opening. The sutures were passed through all the coats of both vein and duct in such a manner as to avoid occluding the opening in the duct. As the latter was of the size of a large goose quill this was satisfactorily accomplished and on removing the clamp from the vein no further hæmorrhage occurred. The wound was [illegible] was inserted.

[illegible] s after the operation, there [illegible] discharge but there was no [illegible] this consisted of chyle or not. It seemed, however, larger in amount than the ordinary wound serum. On the second day the discharge had not saturated the dressing and from that day there was no suspicion whatever of discharge of chyle. The upper wound healed by primary union; healing of the lower wound was slightly delayed by superficial suppuration, but the patient returned home with both wounds completely healed 18 days after the operation. No untoward symptoms of any kind occurred, either during convalescence or subsequently, and the patient remained in good health when seen two months after the operation.

Remarks by Mr. DEANESLY.—I am not aware that the method of dealing with a divided thoracic duct adopted by me in this case has been adopted before though it has some obvious advantages where it can be carried out. The older text-books of surgery considerably exaggerated the seriousness of division of the thoracic duct which in an edition of a well known work dated 1887 is briefly described as a fatal injury. Death was said to occur either from escape of chyle into the mediastinum or from the exhausting effects of the continual escape of chyle through a fistulous opening in the neck. Later experience entirely refutes these statements and it is probable that death in the earlier recorded cases was due to septic infection of the neck and mediastinum and not to the injury of the duct itself. With regard to the possible formation of a chronic fistula and the effects of such a condition on the nutrition of the body, I know of no case recorded in which such a fistula existed for a sufficient length of time uncomplicated by septic wound conditions to arrive at any conclusion. But from modern clinical experience it is improbable that a permanent fistula will ever occur. Treves in his "Surgical Anatomy" states that the thoracic duct has been cut and tied without ill result and Kocher reports the same fact on his own authority in his "Operative

Surgery." Allen and Briggs, in *American Medicine* of Sept. 14th, 1901, report 15 cases of injury of the duct during operation with 14 recoveries. In what proportion of these the duct was completely divided I do not know. I am informed also by Professor Starling that he has invariably failed in attempts to establish a permanent fistula of the thoracic duct in dogs, even when the opposite duct has also been ligatured; indeed, in dogs the collateral circulation in the lymph channels is so free that, according to Professor Starling, simultaneous ligature of both the right and left thoracic ducts in the neck produces only a temporary obstruction and no permanent ill effects. Taking these facts into consideration it is probable that ligature of the divided duct is the simplest procedure in cases of accidental injury. As implantation of the duct into the vein seemed to me, however, at the time a procedure more in accordance with physiological ideas it is perhaps worth recording as an alternative method where practicable.

Medical Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Leukæmia.—Exhibition of Specimens.

A MEETING of this section was held on Dec. 14th, Dr. H. O. EARL, the President, being in the chair.

Dr. T. G MOORHEAD read a preliminary account of some investigations which he had been making into the etiology of Leukæmia. He said that he had prepared a series of extracts from glands obtained post mortem from a case of lymphatic leukæmia and claimed to have produced leukæmic changes in rabbits by the injection of one of these (sterilised) extracts. The changes found consisted in enlargement of the spleen and of several groups of lymph glands and in the red marrow excessive development of nucleated red blood corpuscles. Quantitative and qualitative changes were also observed in the white cells of the blood. Injections of a similar extract prepared from normal human lymph glands did not produce any change in the hæmopoietic tissues of rabbits. The extract from the morbid glands caused a pronounced fall in blood pressure while the similar extract from normal glands had no such effect.—Professor E. J. MCWEENEY asked whether Dr. Moorhead had used glands from myelogenic or lymphatic leukæmia and said that inasmuch as their pathology was different this was a matter of much importance —Professor J. A. SCOTT said that he was so far from thinking that the various forms of leukæmia were different that, on the contrary, he believed that the principle of cellular intoxication might fairly be extended from the lymphatic lesions to other cellular conditions, such as sarcoma or cancer, which were also associated with blood changes.

Dr. W. S. HAUGHTON showed a Rectum, Pelvic Colon, and part of Iliac Colon removed for carcinoma recti by the double method of laparotomy and transacral incision six weeks previously. The patient was going on well. The tumour was a typical adeno-carcinoma of the rectum extending around the lumen of the bowel for more than three inches in length, without infiltration of the perirectal tissues or glands.

Dr. ALFRED R. PARSONS showed specimens removed from a man, aged 20 years, who was admitted to the Royal City of Dublin Hospital on Sept. 23rd suffering from Jacksonian Epilepsy. The patient, who had been previously in good health with the exception of a chronic cough, was suddenly seized with a convulsion and was carried into hospital during the attack. The lower half of the left side of his face and the left arm from the elbow downwards were paralysed. He had, however, no loss of power in his left leg but the reflexes were exaggerated. The paralysis gradually increased till he had complete left hemiplegia with greatly increased deep reflexes. There was bronchiectasis in the lower lobe of the left lung. As there was no ear disease present a diagnosis of intracranial abscess near the Rolandic area secondary to chronic pulmonary suppuration was made and Mr. G. J. Johnston trephined the patient over the arm centre but found no pus. At the necropsy the lower lobe of the left lung was found to consist of numerous bronchiectatic cavities filled with pus and in the brain there was a large abscess filled with greenish pus lying directly underneath the arm centre not more than half an inch from the cortex. The needle used in exploring must have entered the abscess cavity but before doing so had probably become plugged with brain tissue.

Dr. J. T. WIGHAM showed a Cancer of the Breast and Various Internal Organs secondarily affected, with sections. The cancer was of the ordinary type of scirrhus and was well marked, the interest in the case lying in the route by which the disease had spread to the internal organs. Cancer nodules could be discovered in the liver and under the pleura, the pericardium, and the endocardium, and sections showed the growth pushing through the heart fibres between the two last. Similar growths were also found in both ovaries and along the course of the Fallopian tubes, while the peritoneum was quite free and no other cancer masses were discovered below the level of the liver.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 4th, Dr. Seymour Taylor, the President, being in the chair.—Mr. F. G Lloyd read a paper on Appendicitis. In dealing with the treatment of the affection Mr. Lloyd expressed a leaning towards conservatism and stated the conditions calling for surgical interference together with the methods of procedure which he had found most useful.—The discussion on this paper was postponed to a future meeting of the society.—Dr. Alexander Morison read a paper on Boldness in the Treatment of Heart Disease. The cases to which attention was specially directed were those instances of grave cardiac failure occurring in young adults or in those in the prime of life in whom there was no evidence of vascular degeneration and whose reserve force was commensurate with their development. In these tincture of digitalis or the combined tinctures of digitalis and strophanthus were recommended in doses of 15, 20, 25, or 30 minims at intervals of four hours until a definite effect was produced upon the action, force, and capacity of the dilated and failing heart. This might require the continuous administration of the drug until 200 or 300 minims had been taken. Before beginning this method of treatment, however, it was necessary to prepare the patient in certain particulars for the action of the remedy. The surcharged venous system should be relieved in suitable cases by venesection (which Dr. Morison preferred to leeching) to four or ten ounces, the anasarcous limbs drained by Southey's tubes or by incision, and fluid effusion in the chest or abdomen removed as far as possible. With the assistance of good nurses the method might be efficiently carried out in the patient's own home. That there was a certain element of risk in this rapid method of obtaining cardiac control was admitted, but provided that only suitable cases were selected and sufficient skilled supervision and control were exercised this risk was by no means great.—Dr. Lilienstein (Bad Nauheim) expressed agreement with the views of Dr. Morison as they were in accord with his own observation and experience. At the same time he deprecated the use of digitalis and its congeners in cases in which the action of the drug was not called for. A careful consideration of the conditions of the individual case was important in all instances of disorder of the heart, and this held good not only in the matter of medicines but also with reference to physical therapeutics. The use of the carbonic acid bath was an instance in point and harm might easily be done to patients who were not carefully watched. He attached great importance to sparing the heart and was in the habit of interposing after the second, third, or fourth day of bathing a bath-free day. Dr. Lilienstein also referred to the importance of mechanical treatment of heart cases (such as massage and active and passive gymnastics). He agreed with Dr. Morison's remarks as to the value of blood letting in suitable cases.—The President considered that the tendency of modern medicine in the treatment of cardiac failure was summed up in the word "boldness." Probably had those methods of treatment which had been so ably advocated by Dr. Morison been suggested in the immediately preceding generation of practitioners they would have been received with opposition if not with ridicule. But modern clinical experience was altering their views of treatment. In the great majority of cases of heart failure not only was there a want of balance between the two sides or between two cavities of the heart but there were results of this, and so far as he was able to read the phenomena of heart failure congestions of various organs and parts constituted *in great measure the enemy* which had to be attacked. Therefore he resorted to venesection in many instances and to leeching frequently, but trusted more to the former than to the latter method. Nor did h[illegible] which sleep afforded in these case[illegible] *opium or morphia* providing the [illegible]organic disease. There was, however, no "golden rule" in the treatment of such cases and the peculiarities and idiosyncrasies of the individual had to be taken into account as well as the visceral malady *in formulating any line of treatment.*—Mr. R. W. Lloyd, referring to an allusion to the work of the anæsthetist in Dr. Morison's paper, pointed out that there were differences between the methods of the physician and the anæsthetist in the matter of heart control.—Dr. Neville T. Wood agreed with Dr. Morison that in a limited number of cases large doses of digitalis after suitable preparation of the patient would produce results that might be fairly described as startling but in another class of case equally extraordinary results could be obtained by the use of almost infinitesimal doses. He, therefore, preferred to advocate precision rather than boldness in cardiac therapeutics.—Mr. W. P. Mallam *quoted a case of aortic regurgitation accompanied by extreme* cardiac pain and distress in which complete relief followed blood-letting to the extent of eight ounces.—Dr. Morison replied.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—*A meeting of this society was held on Dec. 10th,* when Mr. E. W. Roughton opened a discussion on the Hygiene of the Mouth. In the course of his introductory remarks Mr. Roughton referred to the power of the mouth to produce disease in other parts of the body being due to its acting as a hotbed of bacterial growth. In cases of extensive caries and of well-marked pyorrhœa alveolaris the number of the mouth bacteria was enormously increased. It was also probable that their virulence was enhanced and that the general health of the patient being deteriorated the power of resistance to bacterial invasion was diminished. The functions of the digestive tract were materially influenced by the condition of the mouth. When the latter was clean and well cared for the bacteria of the intestines were almost entirely (about 97 per cent.) derived from food and drink, but in persons with neglected mouths as many as 30 per cent. of the bacteria present *in the fæces must be regarded as derived* from the mouth itself. Not only might the bacteria of the mouth set up fermentation of the stomach contents but they might actually attack the wall of the stomach, producing different forms of gastritis. Evidence seemed to point to the mouth as the source of infection in many obscure cases of blood poisoning, using the term in its widest sense. Malignant endocarditis, infective osteomyelitis, septicæmia, and obscure febrile conditions had all been attributed with good reason to infection from the mouth. The intimate connexion between tonsillitis and acute rheumatism was shown by the frequency with which the former preceded or accompanied an attack of the latter. Chronic joint diseases were often associated with oral sepsis and they were sometimes benefited by improving the condition of the mouth. The mouth was also a *means of transmitting disease from person to person.* Diphtheria bacilli were sometimes found in the healthy mouth and it was common for virulent organisms to remain in the mouth and throat for weeks after a patient had apparently completely recovered from an attack of diphtheria. Operations in unclean mouths were attended with risk to the operator. Many cases of local and general septic infections had occurred in this way. Syphilis had often been transmitted by the saliva of an infected person. The treatment of carious teeth must of necessity be almost entirely in the hands of the dentist but the prevention of caries should come within *the sphere of every medical* man. General hygienic measures, avoidance of excess of carbohydrate food, especially bread and potatoes, and thorough mechanical cleansing of the teeth should be urged more cogently than most medical men were in the habit of doing at present. Children's temporary teeth should not be allowed to fall into a state of neglected decay. Only by periodical inspection could freedom from caries be insured. Acids introduced into the mouth as medicines or with the food had a deleterious effect on the teeth; the mouth should therefore be well rinsed after taking such medicines. The reaction of mouth washes should be neutral or slightly alkaline. In febrile [illegible]ed by the nurse; this [illegible] would hasten his con[illegible]d. In investigating a case of dyspepsia the physician should not omit to examine the mouth and should insist that dental insufficiency or abnormal oral sepsis should be adequately treated. Before performing operations on the mouth or jaws *carious teeth* should be filled *and stumps extracted and the parts made as* aseptic as possible by the use of a suitable antiseptic mouth wash.

LIVERPOOL MEDICAL INSTITUTION.—A meeting of this society was held on Dec. 17th, Mr. Rushton Parker, the President, being in the chair.—Mr. W. Thelwall Thomas exhibited Receptacles for Dressings designed by him to facilitate the carrying out of aseptic surgery in private practice. *The boxes are rectangular, the lid being placed under*neath and let in in such a way that when the box rests on a *flattened surface dust cannot enter; the sides have perforated* "hit and-miss" slides. They fit into a large steam steriliser and each box will hold the necessary dressings, bandages, *sheets of sterilisable waterproof material covered with thick* muslin, and two specially designed gowns. A dark mackintosh cloth case fits over the box.—The President said that the boxes shown were by far the most convenient and suitable ones he had seen.—Dr. A. Gordon *Gullan showed a lad, aged 18 years, suffering from Morbus* Cœruleus. He was able to follow his trade as a watchmaker. There were signs of enlargement of the right heart with obstruction of the pulmonary artery and probably a patent ductus arteriosus.—Dr. Gullan also reported two cases of *Cretinism in youths 20 years of age, one patient being* shown. Both were typical cases. One was improving under thyroid and the other had shown no improvement.—Dr. *Hubert Armstrong referred to the risk of Sudden Death in* Congenital Heart Disease, and mentioned two cases in *his own experience, one a baby and the other a boy,* aged 12 years.—Mr. A. Nimmo Walker showed a woman, aged 49 years, with Double Optic Atrophy and Double Third Nerve Paralysis. There was a history of "inflammation of the bowels" two years previously, with vomiting and headache, and the lesions were probably due to a basal syphilitic meningitis implicating the affected nerves in the interpeduncular space and the chiasma. Mr. Walker said it was a rare case and had only occurred once in 9000 patients seen at St. Paul's Eye and Ear Hospital *in the present year.* Some power was returning under mercurial inunction and iodide of potassium internally.—Mr. George G. Hamilton read a paper on Rapid Paraplegia and reported a case which will be published in full later. In commenting upon the case he thought discussion might usefully turn upon the following conditions: traumatic neurasthenia, meningitis, spinal hæmorrhage, Landry's paralysis, peripheral neuritis, and toxic palsies. In this particular case the post mortem examination revealed a hæmorrhagic myelitis.—Dr. E. E. Glynn had examined the spinal cord and cerebro spinal fluid and had found no evidence of bacterial infection.—Dr. W. B. Warrington said that many cases of so called acute myelitis were really due to softening of the cord following syphilitic arterial disease but the differential diagnosis was difficult. He suggested that a *syphilitic history, the spread of the symptoms from* one limb to the other, with the Brown Séquard features, might help and quoted two cases in which this symptom-complex was present. Primary hæmorrhage into the cord was extremely rare. It was important to recognise a syphilitic origin for its guide to treatment.—Dr. T. R. Glynn, Dr. Nathan Raw, Dr. W. Carter, and Dr. J. Barr spoke and Mr. Hamilton replied.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Dec. 10th, Dr. Heywood Smith, *the President, being in the chair.*—Dr. H. Macnaughton-Jones showed a Modification of Bossi's Instrument for dilating the Cervix much less cumbersome and much easier to work than the original model which, in 1901, he had been the first to use in this country. Since that time many cases of labour had been successfully and expeditiously concluded by the aid of that instrument and he believed that the lacerations which had in some cases followed its use on the continent and in America were to be attributed to want of caution in its application or to too rapid dilatation.—Dr. H. Macnaughton-Jones, jun., said he had used the instrument shown to induce labour at the eighth month in a tertipara with a large fibroid and found it most satisfactory —Dr. Macnaughton-Jones, sen., also showed Various Specimens with the aid of the epidiascope.—Dr. Bedford Fenwick read a paper upon the Treatment of Stenosis of the Cervix, especially in regard to that congenital form found with a conical portio and a pinhole os, and generally associated with dysmenorrhœa and sterility. After division of the cervix on each side for about half its length with scissors his method was to draw the flap formed by the anterior lip together, longitudinally, with temporary sutures and to leave the posterior lip flat and open ; direct union of the surfaces of the wounds was thus prevented, they became covered with mucous membrane so that they did not afterwards adhere, and the patency of the canal was maintained. In 87 cases in which he had practised this operation it had invariably given relief and from subsequent investigation he had reason to believe that in 91 per cent. of these cases the relief had been complete and permanent. Moreover, the method had been equally successful in the hands of others who had adopted it after seeing him apply it at the Hospital for Women, Soho.—In the discussion Dr. C. H. F. Routh and Dr. G. R. Hodgson concurred in recommending the use of a stem pessary instead of operation, and Dr. Macnaughton-Jones and the President in preferring division of the isthmus with Sims's knife followed by dilatation.—Dr. Fenwick briefly replied.

Glasgow Pathological and Clinical Society.—The third meeting of the session of this society took place on Dec. 14th, Professor R Muir, the Vice-President, being in the chair.—Dr. John Anderson showed the organs from a case of supposed Splenic Anæmia.—Professor Muir exhibited a Liver containing very large Carcinomatous Tumours secondary to an adeno-carcinoma of the sigmoid flexure. The patient was only 26 years of age and the disease ran its course in three months ; there was no jaundice. The weight of the liver was 14 pounds.—Dr. J. Barlow showed a specimen of Enteric Intussusception successfully treated by resection of the bowel and read a short account of the case. The *intussusception was very tightly strangled ; it contained* fully 15 inches of intestine.—Mr. R. H. Parry showed (1) a Tumour of the Prostate removed by Freyer's method ; and (2) a large Fæcal Concretion which was lodged in the cæcum and which necessitated excision of the cæcum. The symptoms pointed to malignant disease in the cæcal region but microscopical examination of the specimen showed nothing of this nature. The operation was successful.—Dr. J. Lindsay Steven and Dr. C. Workman described the clinical features of, and showed the heart from, a case of sudden death caused by Embolism of the Main Trunk of the Left Coronary Artery.—Dr. Carstairs C. Douglas communicated a short note on the Ortol Reaction for Milk and demonstrated the test. It enabled a distinction to be made readily between fresh milk and milk which had been pasteurised at too high a temperature. The fresh milk gave a brick-red reaction on the addition of ortol and peroxide of hydrogen, while the sterilised or boiled milk remained colourless. The importance of this in relation to infantile scurvy was discussed.

Æsculapian Society.—A meeting of this society was held on Dec. 18th, Dr. Leslie Durno, the President, being in the chair.—Mr. F. Hewitt Oliver showed a boy, aged 11 years. At the lower end of the left radial diaphysis was a swelling of bony hardness and ridged, neither tender nor painful. The enlargement was of about two radial diameters. There was a slow increase of size from its reappearance six months ago as of a similar but smooth swelling of the proximal phalangeal shaft of the left index. Both of these growths had been removed three and three-quarter years ago. The left forearm was about one inch shorter than its fellow.—Dr. B. G. Morison related a case of a woman whose labour began naturally at the eighth month. The placenta was attached to the margin of the internal os uteri and the child presented transversely. The placenta was separated by the hand under chloroform and forceps were applied to the vertex. The child was born dead and peeling. About half an hour after delivery and soon after removing the hand from over the uterus a moderate-sized clot was passed and the patient nearly collapsed. Saline enemata were given and followed by uterine irrigation with a solution of fluid extract of suprarenal gland (one drachm to the pint). Good uterine contraction immediately followed the irrigation and no more hæmorrhage occurred. Pyrexia began on the evening of delivery and on the third day left basic pneumonia was diagnosed, from which the patient recovered on the fourteenth day.

Bristol Medico-Chirurgical Society.—An ordinary meeting of this society was held in the Medical Library of University College, Bristol, on Dec. 9th, Mr. J. Paul Bush, the President, being in the chair.—Mr. T. J. Tonkin (introduced by Mr. F. Richardson Cross) read a paper on Leprosy in Jamaica, illustrated by lantern slides.—The President, Dr. Fisher, Dr. J. Michell Clarke, Dr. C. Steele, Dr. Cave, and Dr. Alexander joined in the discussion which followed.—Mr. Munro Smith showed a specimen and some lantern slides from a case of Gastro-jejunostomy.—The President, Mr. F. Lace, and Dr. E. W. H. Groves remarked on the case.—Mr. Lace read short notes of a case of Intestinal Obstruction due to a hair ball and showed the specimen.—The President, Dr. Alexander, and Dr. Groves spoke on the case.

Reviews and Notices of Books

Hydrologie. Par HENRI CAUSSE, Chargé du Cours d'Hydrologie à la Faculté de Médecine et de Pharmacie de Lyon. Paris: F. R. de Rudeval. 1903. Pp. v.–317. Price 5 francs.

THERE are already in existence a very large number of books on potable waters, on water analyses, and on mineral waters, and it might *primâ facie* appear that another volume on these subjects was not required. The recent progress made, especially in the fields of bacteriology and in the chemistry of the organisms contained in water, has, however, made it possible that an entirely new book devoted in great part to these aspects of the subject would fill a gap which remained vacant in the literature of the subject. It frequently happens in the case of any science which has undergone rapid development that an entirely new work is best fitted to treat the new situation, whereas in the case of a subject of which we have a more complete and certain basis of knowledge the same book may go on from generation to generation. For instance, Gray's Anatomy survives.

Dr. Causse's work is divided into five parts. The first is an introductory disquisition on potable water and teaches the effects of the soil on its composition, showing how it comes about that the chemical composition of the water varies as a result of its passage through the earth. The second part deals with the methods of chemical analyses and with the interpretation which should be put on the results of the analyses. The third part is devoted to the bacteriology of the subject, including the methods in use for the artificial cultivation on gelatin of the more common of the pathogenic microbes found in water. In the fourth part the author first describes the various effects of different waters on certain reagents which yield results to be estimated by changes produced in their colour, and the interpretation of these changes, and in the second place he treats of the different contaminations which are liable to affect potable water. The fifth division of the book is devoted to a description of mineral waters and to the special methods adopted for their analysis. To the English reader we would specially commend this chapter. The book is well written, clearly illustrated, and provided with a good index.

The Exact Science of Health based upon Life's Great Law. By ROBERT WALTER, M D Vol. I., Principles. London: Kegan Paul, Trench, Trübner, and Co., Limited. Pp. 302. Price 10*s.* 6*d.*

THIS work is said to be "really an argument based on facts." But they are "facts of demonstration rather than of observation." The author feels that he has incurred a grave responsibility in making the claims which he does, but his are "not the vapourings of a novice" but rather the product of nearly 50 years of earnest study which has culminated in the "development and verification" of "Life's Great Law." There is, it would appear, a trinity of fundamental laws, the discovery of each of which in turn has revolutionised the world of science. Gravitation, the author tells us, gave us a trustworthy astronomy, chemical affinity gave us chemistry, while Life's Great Law yields a correspondingly trustworthy vital science. He proceeds to enunciate the great law and the present volume is occupied chiefly in an examination of the exact science of health and the principles upon which the knowledge is founded. A second volume is promised and this is to deal with the practice founded on the principles here stated. A brief foretaste is given of the manner in which the principles are to be applied and those who dislike the dry details of clinical observations and the toilsome investigations of the laboratory may possibly care to study the unfettered *ipse dixits* of the author who gives his views on the treatment of diphtheria and pneumonia with a confidence which may excite admiration. It is, however, unlikely that his teaching will cause amongst English physicians the imitation which is the sincerest form of flattery.

It was formerly the practice amongst the reviewers of novels not to destroy any possible interest there might be in their plots by fully revealing them to the public. We have the like feeling in the case of the author of this work and must therefore refer the curious reader to the book itself for a full enunciation of Life's Great Law which he will readily find set out in bold type. It should, however, in fairness be added that we do not think the secret worth the price asked for the book—and when applied in practice, as suggested by the author, it is subversive of all faith in the most striking developments of modern practice.

LIBRARY TABLE.

The Study of Tropical Diseases in Dutch India.—The second part of the forty-first volume of the *Genees kundige Tijdschrift voor Nederlandsch-Indië* contains a synopsis of the course that is to be followed at the institution for the study of tropical diseases which has been established in Weltevreden, Java. Similar institutions have been organised at various places in Europe but the Dutch medical authorities are of opinion that better opportunities for the attainment of the end in view are to be met with in tropical regions than can possibly be forthcoming within the temperate zone. In the first place the diseases in question can be investigated during their acute stages, and, secondly, their mode of origin can be scrutinised in their own home. There is also scope for original research in the well-known fact that some affections with which European medical men are familiar frequently follow a distinct course under the influence of an eastern sun. The director of the laboratory at Weltevreden is Dr. J. de Haan. Dr. G. Grijns is the sub director and Dr. G. W. Kiewiet de Jonge is the professor of tropical medicine. The duration of a course is three months. The curriculum comprises: (1) clinical lectures on tropical diseases; (2) tropical hygiene, acclimatisation, water, habitations, conservancy, and climatology; and (3) clinical lectures and demonstrations on bacteriology.

Atlas und Grundriss der gesammten Augenheilkunde. (*Atlas with a Short Account of Ophthalmic Diseases*) In Three Volumes. Vol. II., Ophthalmoscopy and Ophthalmoscopic Diagnosis. With 149 Coloured Plates and Seven Uncoloured. By Professor Dr. O. HAAB. Fourth edition. Munich: J. F. Lohmann. 1904. Pp 82. Price 10*s.*—This volume is one of Messrs. Lehmann's hand atlases of which about 40 have been published and which are marvels of cheapness and excellence. They are of convenient size, printed upon good paper, and supply trustworthy illustrations to works on almost every branch of medical knowledge. Thus three volumes are assigned to gynæcology, two to pathology, three to ophthalmology, and others to diseases of the skin, the mouth, the larynx, the ear, the nervous system, the bones, and to the wider subjects of histology and anatomy. Each volume has an essay prefixed to the plates which contains a brief exposition of the subject to which the volumes are devoted. The plates themselves in the present atlas, although not in the highest style of chromolithography, are not coarse, have been carefully selected, and are consequently representative and form collectively a very useful adjunct to any treatise on the diseases of the eye. They would be more useful to English readers if the introduction and the legends of the plates had been translated into English.

Looking Back.

FROM

THE LANCET, SATURDAY, DEC. 24, 1825.

ON THE STRUCTURE AND FUNCTIONS OF THE SPLEEN.

BY SIR A. COOPER

The following is an abstract[1] of Sir A Cooper's opinions on the structure and use of the spleen; which were delivered by him to the anatomical class a few days since, in a lecture upon that viscus

The most curious part of the structure of the spleen, he observed, was in the veins, and here Sir A. exhibited to the class the spleen of an ox and also of a calf, in which the distribution and commencement of the veins were well seen. He compared the internal structure of these preparations with a dried preparation of a turtle's lung, and said, that the similarity was so great, that the lung had been then placed upon the table, by mistake, for a preparation of the spleen. The cells of the spleen Sir Astley remarked were formed by the splenic vein, into which the blood is poured from the minute capillary branches of the splenic artery. In order to illustrate the elasticity of the membrane, or proper capsule of the spleen, Sir Astley introduced a pipe into the splenic vein and then inflated the spleen; it readily admitted of distension, and its size was much increased, but it was immediately emptied by its own elasticity. By means of an injecting syringe, Sir Astley threw water into the veins of a spleen, upon withdrawing the syringe, and holding the viscus in the hand, it was seen to empty itself and resume its original size. The spleen upon which this experiment was shown appeared very small, but it held twenty-four ounces of fluid. "These were my play-things, gentlemen, (said the worthy Baronet, with a good-natured smile,) when I was ill in the country last summer, and I will tell you the result of these investigations, or rather, the conclusion to which I have arrived respecting the use of the spleen; and it is this—*The spleen is an elastic reservoir and manufactory of venous blood.*"

Sir A. said the blood was conveyed into cells formed by the splenic vein, and was there retained until a supply of dark blood is demanded for the liver, when, by the elasticity of the investing membrane of the spleen, its contents are propelled. The blood in the splenic veins becomes additionally charged with carbon and forms dark blood, which is necessary to the formation of bile. Sir A. remarked,
was this,—
its carbon,
uantity. In the spleen of the reptile class, and also in birds, he observed, there were vessels in lieu of cells, and it is only in quadrupeds that the cells can be ascertained.

Sir Astley Cooper next alluded to the hypothesis of Dr. Haighton upon the use of the spleen, which was, that when the stomach was full, it pressed upon the spleen, and thus impeding the circulation through that viscus, the blood was more copiously propelled to the arteries of the stomach, in order that a large quantity of gastric juice might be secreted. Sir A. said if such were the use of the spleen to the stomach, it must also serve for a similar purpose to the pancreas; but he admitted, that it remained for further investigation to prove, what other offices the spleen performed, in addition to that which he conceived to be its principal use.

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[1] A portion only is transcribed.

THE LANCET.

LONDON: SATURDAY, DECEMBER 26, 1903.

THE ANNUS MEDICUS 1903.

MEDICINE AND THERAPEUTICS.

Tuberculosis.

THE subject of tuberculosis, more particularly the pulmonary variety, has attracted considerable attention during the past year. The interest taken in the subject by HIS MAJESTY the KING has doubtless given zest to the efforts which are being made to combat the spread of the disease and to perfect its treatment. The steps which have been taken in connexion with the KING EDWARD VII. Sanatorium are familiar to our readers. In THE LANCET of Jan. 3rd we published in our columns the three prize essays and plans. A site was acquired at Lord's Common, Easebourne, about three miles from Midhurst, and the KING laid the foundation-stone on Nov. 3rd. The site is eminently suited for the purpose. The soil is the lower greensand of the lower cretaceous series which is admirable for surface drainage and for residential purposes. The climate of the district is mild and equable and meteorological observations record a plentiful amount of sunlight. The design of the sanatorium has been determined on the best examples of similar institutions in this country, in Germany, and in Switzerland. The primary object of the sanatorium was to provide for sufferers from pulmonary tuberculosis belonging to a class above the very poor—teachers, governesses, and members of other ill-paid professions; also for clerks, shop attendants, and the like, for whom no provision in sickness of this kind exists. But since the sanatorium was intended to be the best which could be constructed the KING did not think it right that those members of the community who could afford to pay for good accommodation and skilful treatment should be entirely excluded from the benefit of the institution; therefore certain rooms will be set aside for patients who can afford higher fees.

The question of the infectivity of pulmonary tuberculosis has again been brought prominently before the medical profession by various observers. Dr. H. TIMBRELL BULSTRODE, in delivering the Milroy lectures of the Royal College of Physicians of London, pointed out that at the present time there may be said to be two schools of thought with regard to the main channels of infection between man and man, the one school maintaining that the greatest danger is to be attributed to the tubercle bacillus contained in the dried sputum, whilst the other considers that there is more potency for harm in the droplets thrown off by a tuberculous patient during coughing. His remarks were characterised by great moderation, and although admitting that in certain circumstances pulmonary tuberculosis is infectious, he held that the communicability of the disease can only be contrasted, not compared, with that of diseases such as small-pox, typhus fever, and whooping-cough.

The address which was delivered by Professor BEHRING at the recent Congress of German Naturalists and Medical Men also contained much valuable information. He expressed the opinion that the communication of pulmonary tuberculosis to adults by contagion has not yet been demonstrated. His fundamental proposition is that as a general rule tuberculosis has its origin in early infancy and that, contrary to the view of Professor KOCH, the vehicle for the conveyance of this latent infection is milk. According to Professor BEHRING, therefore, the cause of active tuberculosis is not so much exposure to infection as the conditions of life which alter the soil of the individual who is already the bearer of the essential seed. Having regard to the divergency of views expressed by eminent observers the report of the Royal Commission on Tuberculosis, which is now pursuing its investigations, will be awaited with considerable interest.

The Harben lectures were made the occasion by Professor F. HUEPPE for the circumstantiation by means of concrete examples of the theoretical views which he propounded in 1893. The adaptation of cell activities to the changing conditions of environment and the variation of bacterial species in accordance with the circumstances of time and place were illustrated by examples of susceptibility to, and immunity from, tuberculosis and other diseases and by the morphological and metabolic variations of the tubercle bacillus itself in its varying conditions of parasitism in different hosts.

Some interesting observations on tuberculosis of the nervous system were made by Dr. E. F. TREVELYAN in delivering the Bradshaw lecture before the Royal College of Physicians of London. He drew attention to the forms which the tuberculous infection may assume in the nervous system, to the mode of infection of the brain and meninges, to the information which may be obtained by examination of the spinal fluid obtained by puncture, and to the prognosis of tuberculous affections of the nervous system.

Dr. A. MARMOREK, the late head of the staff of the Pasteur Institute at Paris, has announced that he considers that he has been able to isolate the true toxin from cultures of the tubercle bacillus. This toxin he injected into horses and finally obtained a serum containing either the attenuated toxin or an autotoxin secreted by the horse. He tried the toxins on patients suffering from tuberculosis but the cases were too few to allow any definite opinion to be formed as to the therapeutic value of this serum.

Small-pox.

In THE LANCET of August 8th (p. 377) we published a valuable paper by Dr. J E SANDILANDS on the vaccination statistics of the Metropolitan Asylums Board in connexion with the recent exceptional prevalence of small-pox in London. Having for a considerable time occupied the position of assistant medical officer in actual attendance on patients in the hospital ships at Dartford, Dr. SANDILANDS writes with authority concerning the behaviour of small-pox, both in vaccinated and in unvaccinated persons, and he has utilised his opportunities for observation in a way that should carry conviction to unprejudiced minds as to the paramount power of vaccination as a prophylactic. The figures in the Asylums Board reports emphasise the same lesson that has been taught by previous small pox epidemics, which is that the incidence of attack is overwhelmingly greater during childhood than in later years, the mortality at the earlier ages in the recent epidemic having averaged from 20 to 50 per cent. of the cases treated.

The difficulty which small-pox occasionally presents in the matter of diagnosis was well illustrated by an epidemic which occurred in Trinidad. So mild was the type that the disease was considered by the Trinidad Medical Board not to be small-pox but was regarded as "epidemic varioloid varicella." Subsequent investigation by Mr. J. F. E. BRIDGER, however, went far to prove that the malady was a mild form of small-pox.

Typhoid Fever.

The paper communicated to the Royal Society by Dr. ALLAN MACFADYEN marked a decided advance in our knowledge of the cell physiology of the bacillus typhi abdominalis, whilst the full confirmation of the preliminary results obtained by him promises a prophylactic and therapeutic agent in the treatment of typhoid fever which may replace the antityphoid "vaccines" and sera at present in use. Dr. MACFADYEN, writing in conjunction with Professor DEWAR, showed that many species of bacteria could be exposed to the temperature of liquid air for considerable periods of time without destruction or, indeed, loss of vitality. At this temperature, too, bacterial cells are frozen into hard fragile masses which can be successfully triturated *per se* at a temperature which precludes the possibility of autolytic changes and the cell plasma can be subsequently obtained from the disintegrated mass. Proceeding onwards in the investigation the typhoid cell juice was employed in the immunisation of animals, with the result that animals thus treated were found to yield an "anti" serum which was at once actively bactericidal and also antitoxic. Animals inoculated first with the antiserum and subsequently either with lethal doses of living typhoid bacilli or of toxic cell plasma were completely protected. Again, animals were inoculated with lethal doses of living bacilli or of toxin and some time later were injected with curative doses of the antiserum. These animals recovered whilst death resulted in the control animals which were similarly inoculated but were not treated with the serum.

Plague.

An important report was issued during the year by Dr. W. J. R. SIMPSON on the Causes and Continuance of Plague in Hong-Kong. After a consideration of the several factors upon which the spread of the disease depends Dr. SIMPSON recommended to the Government the following measures: (1) notification of plague from China by weekly bulletins from consuls; (2) the inclusion of a special plague organisation in the sanitary administration; (3) a reorganisation of the sanitary department to include medical inspection of shipping and junks and the appointment of a sanitary commissioner for the colony; and (4) the amendment and consideration of the public health ordinances.

We have during the year chronicled regularly in our columns, through the medium of our foreign correspondents, the prevalence and spread of plague in different parts of the world, and a fuller consideration of the subject will be found in this article under the heading Public Health.

Leprosy.

Mr. JONATHAN HUTCHINSON has for many years been the chief upholder of the theory that leprosy is associated with the ingestion of putrid fish. In order to obtain further evidence he made journeys to South Africa and to India and on his return from the latter country delivered an address at the Medical Graduates' College and Polyclinic in which he maintained the views which he has advocated so long. He considers that by his visit to India he has overcome many of the objections which had been raised against his theory. In one particular, however, he has modified it: he acknowledges that the disease may be transmitted by "commensalism"—that is to say, by food which has become infected by the leper's hand.

Sleeping Sickness.

Owing to the energetic steps adopted by the Royal Society in despatching commissioners to Uganda to investigate the causes and means of transmission of sleeping sickness much has been learned in reference to the etiology of this disease. Readers of THE LANCET have been kept fully informed of all the steps in the most interesting pathological story of the year. Dr. A. CASTELLANI was the first observer who described trypanosomes as occurring in the cerebro-spinal fluid of patients suffering from this disease. The commission sent out by the Royal Society consisted of Lieutenant-Colonel D. BRUCE, R.A.M.C., Dr. D. N. NABARRO, and Captain E. D. W. GREIG, I.M.S. The conclusions of their last report are as follow: 1. That sleeping sickness is caused by the entrance into the blood and cerebro-spinal fluid of a species of trypanosome. 2. That this species is probably that discovered by FORDE, and described by DUTTON from the West Coast of Africa, and called by him "trypanosoma Gambiense." 3 That the so-called cases of trypanosoma fever described from the West Coast of Africa may be, and probably are, cases of sleeping sickness in the earliest stages. 4. That monkeys are susceptible to sleeping sickness and show the same symptoms, the disease running the same course, whether the trypanosomes injected are derived from cases of so-called trypanosoma fever or from the cerebro-spinal fluid of cases of sleeping sickness. 5. That dogs and rats are partially susceptible but that guinea-pigs, donkeys, oxen, goats, and sheep up to the present have shown themselves absolutely refractory. 6 That the trypanosomes are transmitted from the sick to the healthy by a species of tsetse fly (glossina palpalis) and by it alone. 7. That the distribution of sleeping sickness and that of the glossina palpalis correspond. 8. That sleeping sickness is, in short, a *human* tsetse-fly disease.

Lead Poisoning.

During the year a report was issued by the medical department of the Local Government Board which gives details of a prolonged research undertaken by Dr. A. C. HOUSTON on the power which certain moorland waters possess of dissolving lead. The object of the research was to determine the causes of the acquisition by water of this "plumbo-solvent" ability and to ascertain the extent to which the large moorland gathering grounds of Lancashire and Yorkshire are liable to furnish water capable of exercising the objectionable property of acting upon domestic lead service pipes. The results obtained by the research are, briefly, that a water which is capable of dissolving lead is acid and its acidity is ultimately to be referred to drainage from peaty soil; that the formation of acid takes place within the peat itself and results from the action of specific bacteria which when isolated possess the power of rendering by their growth a sterile neutral decoction made solely from peat both acid and possessed of "plumbo-solvency." Fortunately there seems to be no difficulty in safeguarding a population supplied wholly or partly from moorland sources from risk of receiving water capable of dissolving lead.

Cancer.

Ever since the KING publicly expressed his desire that the deplorable increase of cancer prevailing throughout his dominions should receive the earnest attention of the medical profession with a view, if possible, to the discovery of means for its prevention, the subject has engaged a large share of public notice. During the past year a considerable amount of research work has been accomplished but the results are as yet too uncertain to bear the weight of authority.

In a paper published in the first volume of the *Archives of the Middlesex Hospital* by Mr. C. R. C. LYSTER, the medical officer in charge of the electrical department of that hospital, information is given which seems to promise hope for the future. In speaking of the effect which the x rays have upon cancerous growths he says that a very large number of cases have been relieved of pain and that in a certain number the growth has undergone a definite retrogression. Of all the new growths the rodent ulcers are by far the most satisfactory to treat. The cases that have been under treatment have varied from those exhibiting small recent spots to the most extensive and old standing lesions. They have all shown a great tendency to improve; the more recent ulcers have quickly healed, leaving a healthy scar and there had been no recurrence up to the time of publishing the report. In cases of rodent ulcers of long standing and with considerable loss of tissue the tendency to heal has been remarkable but after a time recurrence is not unusual and this seems to be more difficult to deal with than is the original ulcer. Of other growths experience so far seems to show that the best results are obtained in cases of mammary carcinoma, especially in the recurrent forms. In a favourable instance the main effects of treatment are relief of pain, healing of ulceration, and a shrinking or disappearance of the growth. Sarcomata are not so amenable to treatment as are carcinomata. The cases which are apparently the least benefited are the epitheliomata, or, as they are now called, the squamous carcinomata, and this is more especially the case after secondary infection of the lymphatic glands has occurred. Mr. LYSTER very wisely uses the word "retrogression" in preference to the word "cure," for, as he says, in the present state of knowledge the utmost that can be said is that the disease is "arrested." With regard to the use of high-frequency currents in malignant disease, it is believed that the good results claimed for this therapeutic measure are due more to the tonic action of the rays than to any direct action on the growth itself. Cases of rodent ulcer and epithelioma were submitted to the action of radium and also to pitch-blende, the application of the latter substance being of particular interest as it is far more easy to obtain than radium; the results of the treatment have not yet been published.

In THE LANCET of Nov. 14th, p. 1374, we published a full report of the address on Dr. OTTO SCHMIDT'S Specific Treatment of Cancer which was delivered by Dr. H. JOSSÉ JOHNSON before the Abernethian Society of St. Bartholomew's Hospital. Dr. SCHMIDT claims to have isolated the parasite of cancer in pure culture and also to have discovered a new serum for the treatment of the disease. As we stated at the time, until fuller information is afforded we are not able to express any definite opinion on the subject.

A very suggestive paper on the resemblances exhibited between the cells of malignant growths in man and those of normal reproductive tissue was read before the Royal Society on Dec. 10th by Professor J. B. FARMER, F.R.S., Mr. J. E. S. MOORE, F.L.S., and Mr. C. E. WALKER. The paper, an exhaustive abstract of which is published in this issue of THE LANCET, was the result of joint work, each observer approaching the problems from an independent standpoint. The possible bearings of this important piece of original research cannot yet be estimated, but the Cancer Research Committee has the matter under its notice.

The annual report of the Cancer Research Committee for the year shows good work to have been done. We published in our columns a very interesting paper on the quantitative and qualitative relations of toxin and antitoxin by Dr. E. F. BASHFORD, general superintendent of the Cancer Research Fund, which sufficiently showed that the committee has in its executive officer a sound and able pathologist.

The Influence of Brain Power on History.

Sir NORMAN LOCKYER, in delivering the Presidential Address before the British Association for the Advancement of Science at Southport, pointed out that the nation at present suffers from the absence of a powerful, continuous, reasoned expression of scientific opinion and urged that the English should be armed as other nations are with efficient universities and facilities for research to "uphold the flag of Britain in the domain of learning and discovery." He also urged that in addition to our many existing councils another is required to secure that the benefits which a proper coördination of scientific effort in the nation's interest can bring shall no longer be neglected.

Lectures of the Year.

We published in full in THE LANCET as usual the official lectures delivered before the Royal College of Physicians of London. The Lumleian lectures were delivered by Dr. T. R. GLYNN who chose as his subject, Infective Endocarditis mainly in its Clinical Aspects. He dealt with the matter in a very comprehensive manner, laying some stress on its etiology. He pointed out that the disease is commoner in males than in females; that it is prone to attack the debilitated, the intemperate, and the cachectic; that it follows anæmia, parturition, Bright's disease, pneumonia, and rheumatism; and that it is very frequently associated with antecedent sclerotic changes in the endocardium. In the great majority of his cases the mode of entrance of the pathogenic organisms could not be ascertained. Dr. A. S. F. GRUNBAUM delivered the Goulstonian lectures, selecting as his theme, Theories of Immunity and their Clinical Application. He gave an account of what is known concerning antitoxins, hæmolysins, and cytotoxins, and drew attention to actions, other than antitoxic and bactericidal, of curative sera. The Croonian lectures were in the hands of Dr. C. E. BEEVOR, the subject being Muscular Movements and their Representation in the Central Nervous System. This subject is naturally an involved one but the lecturer treated it in a most able and complete manner. As already stated, the Milroy lectures were given by Dr. BULSTRODE on the Causes, Prevalence, and Control of Pulmonary Tuberculosis and the Bradshaw lecture by Dr. TREVELYAN on Some Observations on Tuberculosis of the Nervous System.

SURGERY.

Aseptic Surgery.

The tendency to the replacement of antiseptic by aseptic surgery still continues but in many instances zeal has far outstripped knowledge and many without an adequate bacteriological training have adopted so called "aseptic" methods, with the result that primary union occurs more rarely than should be the case. A judicious blending of the two methods is the most useful, practically sterilisation by heat of the instruments and dressings replacing the former sterilisation by antiseptics and as far as possible the contact of antiseptics with the wound being avoided. As Mr. W. WATSON CHEYNE has pointed out, there appears to be at present a disposition to discard buried sutures as it seems to be thought that it is very difficult to guarantee the aseptic character of a silk suture, though this is rather an indictment of the mode in which the aseptic method is carried out. Mr. A WEBB JONES urged that it was perfectly possible to employ the aseptic method even in such a place as Wady Halfa, where he had been performing operations for 15 months, but he agreed that in circumstances such as are met with there dressings permeated with antiseptics would have an advantage over those merely sterilised.

Film Dressing for Wounds.

Mr. PEYTON T. B. BEALE has devised a new form of film dressing. It consists of thin films of a cellulose derivative, called velvril; these are transparent, tough, elastic, and impermeable. When the operation has been completed a piece of sterilised velvril is cut, large enough to cover the wound and one inch beyond; this is placed over the wound after the wound and the skin around it have been painted with a solution of velvril in acetone. A pad of wool and a bandage complete the dressing. The transparent film enables the wound to be examined from time to time and if left to itself it peels off in 10 or 12 days, though it can readily be removed earlier if necessary. This dressing promises to be useful.

Operation for Perforation in Enteric Fever.

As in other recent years, the surgery of the abdomen has received more attention than perhaps rightly belongs to it, but at present this branch of surgery is advancing rapidly and therefore attracts much notice. The number of instances in which the abdomen has been opened with success for perforation in enteric fever is steadily increasing and several other cases of this operation have been recorded during the year. Mr. A. A. Bowlby, who already had had a successful case of this nature, has recorded a second in which also the patient recovered. As Mr. Bowlby pointed out, in both of his cases the perforation occurred late in the disease when the fever was practically over and the general condition of the patient was fairly good, but in most cases perforation, should it take place, occurs earlier and the prognosis is therefore graver. Dr. H. W. G. Mackenzie has recorded two cases of recovery after operation for enteric perforation; they were under his care and that of Mr. W. H. Battle.

Intussusception.

It is becoming generally recognised that acute intussusception in nearly all cases requires immediate operation. Should it be limited to the large bowel it may be possible to remove the invagination by inflation or injection and this treatment certainly deserves a trial, but if the bowel be involved above the ileo-cæcal valve a laparotomy is imperatively necessary. Mr. Hugh M. Rigby has recorded the notes of seven cases of acute intussusception which were admitted within a period of nine days into the surgical wards of the London Hospital. The period of nine days started on Dec. 26th and it is not unlikely that the injudicious and excessive feeding associated with Christmas may be responsible in great part at least for the occurrence of the condition. One case was moribund when seen and was not submitted to surgical treatment, dying shortly after admission. Of the remaining six cases one required an enterectomy and died but the other five cases recovered after laparotomy.

Dr. Llewellyn A. Morgan has published the notes of a case of acute ileo-colic intussusception in a child one year and eight months old. Laparotomy was performed but death ensued within 40 hours of the onset. A point of interest was discovered post mortem, some tuberculous ulceration of the bowel being found in the intussuscepted portion. Dr. J. E. Webb has recorded an interesting case of intussusception on which he operated with success although the operation had to be done in a small cottage and with the light only of a lamp and a candle. The successful result in this case is to be attributed to the early correct diagnosis and to the energy and skill owing to which the operation was performed within six hours of the onset of the symptoms, although 15 miles had to be driven in the severest weather before the proceedings could be carried out.

Retroperitoneal Herniæ.

Herniæ into the peritoneal fossæ have been described from time to time, but the profuse nomenclature has done something to retard the general recognition of the chief varieties of these "retroperitoneal" herniæ. Dr. C. T. Andrew discovered in a subject in a dissecting room a hernia in the fossa duodeno-jejunalis, the contents comprising the whole of the small intestine with the exception of the lower six inches of the ileum. There was no evidence of any strangulation. Mr. B. G. A. Moynihan, from the description given, was inclined to think that the hernia was in the fossa of Landzest, forming what is called a "left duodenal hernia."

Dr. Priestley Leech has described a case of left duodenal hernia which had become strangulated. The patient was a man, 26 years of age, and on the night after a hearty supper he began to vomit and had complete obstipation. There was a history of two similar but milder attacks. Laparotomy was performed and the retroperitoneal hernia was discovered. About three feet of bowel were readily withdrawn from the pouch and the abdomen was closed. The patient recovered.

Volvulus of the Sigmoid Flexure.

Mr. H. W. Allingham and Dr. E. Chittenden Bridges have recorded a case of chronic volvulus of the sigmoid flexure in a man, 54 years of age. He had been subject for 30 years to attacks of constipation recurring at intervals of from four to six weeks, lasting five or six days, and accompanied by much pain in the lower half of the abdomen. The attack commenced with abdominal pain and marked constipation though flatus passed; vomiting had occurred. Castor oil produced several motions and much pain. The symptoms gradually grew worse and an operation was performed. When the abdomen was opened the sigmoid flexure was found much distended and attached by many adhesions to the mesocolon so that the sigmoid was twisted on itself. The adhesions were broken down, the volvulus was reduced, and the sigmoid flexure was attached by two sutures to the abdominal wall to prevent a recurrence of the volvulus. The patient recovered and no return of the symptoms occurred although when the account was written 12 months had elapsed since the operation.

Mr. G. J. Arnold has reported a case of some interest. A medical man, 63 years of age, had had two attacks of acute intestinal obstruction arising from volvulus of the sigmoid flexure and on each occasion a laparotomy had been performed and the volvulus had been reduced, and at the second operation some measures were said to have been taken to prevent a recurrence. A third attack of abdominal pain occurred with nausea but no vomiting. The patient himself wished for an immediate operation and Mr. Arnold opened the abdomen and found in addition to a few adhesions along the line of the former incision an enormously dilated descending colon. This distension was due to a constriction of the sigmoid flexure by a piece of small intestine adherent to the abdominal wall and it was found that several feet of small intestine had passed through the mesosigmoid. Recovery was rapid and complete.

Intestinal Obstruction.

Mr. T. Crisp English has recorded three cases of acute intestinal obstruction which were in St. George's Hospital under the care of Mr. Clinton T. Dent. In one case the cause was a thick band of peritoneal adhesion which produced a sharp kink of a piece of small intestine; recovery ensued. In the second case numerous adhesions in the left iliac fossa had bound down the bowel. The division of these relieved the obstruction but the patient did not rally from the operation. In the third case an omental band in the right iliac fossa constricted a coil of intestine. The chief point advanced by Mr. English is the value of irrigating the intestines during the operation with normal saline solution at a temperature of 108° F. This, he urges, diminishes the distension of the intestines, lessens shock, prevents subsequent adhesions, and, by increasing the secretion from the kidneys, assists in the elimination of toxic products. He also insists on the importance of systematically washing out the stomach in cases of intestinal obstruction both before and after the operation. Both these procedures are of great value and deserve more extended employment.

Surgery of the Gall-bladder.

The surgery of the gall-bladder has now reached a position of great importance, for it is recognised that cholelithiasis, apart from its own immediate evils, is frequently the precursor of malignant disease of the gall-bladder. Dr. C. A. S. Ridout records a case under the care of Dr. G. Stokes Hatton in which 449 gall-stones were removed from the gall-bladder. They averaged about the size of a large pea. The gall-bladder was drained and the patient's after-progress was satisfactory.

Dr. John H. Gibbon has published a case of gangrenous cholecystitis. The patient was a woman, aged 52 years, with a history of indigestion, nausea, and vomiting. Her attack began with pain in the left hypochondrium and vomiting; her temperature was 102°. When the abdomen was opened three days after the inception of the illness the gall-bladder was found to be distended and its fundus of a dark-purple colour. The gall-bladder was incised and the wall was found to be gangrenous in its whole thickness. Cholecystectomy was performed and an uneventful recovery followed.

Mr. FREDERIC S. EVE has published three cases of cholecystectomy. In the first case the gall-bladder contained purulent fluid and was at first drained. Later, to cure the biliary fistula which remained, the gall-bladder was excised. In the second case the gall-bladder was distended and contained many stones but the fluid was sterile; cholecystectomy was performed. In the third case there was a little pus in the gall-bladder and the mucous membrane was ulcerated. The gall-bladder was removed. In all three cases rapid recovery took place. Mr. EVE considers that the gall-bladder is a structure which can be dispensed with without inconvenience and therefore he thinks that in the future cholecystectomy will be more often performed instead of drainage in cases in which the gall-bladder is thickened and contracted.

Dr. H. A. LEDIARD has described a case of perforation of the gall-bladder occurring in a woman, aged 47 years. Many calculi were present and were removed and then the opening into the gall-bladder was closed by invaginating the edges and stitching with Lembert sutures, as was suggested by Mr. G. H. MAKINS. The operation was completely successful.

Mr. LEONARD A. BIDWELL has published notes of four cases of empyema of the gall-bladder, in all of which he employed drainage. Of the four cases three patients recovered and one died.

Hypertrophy of the Prostate.

The treatment of hypertrophy of the prostate when it leads to difficulty of micturition has excited much attention and given rise to no small amount of discussion. On the whole it may be said that most of those surgeons who have devoted special attention to this department prefer to enucleate the prostate and the results which have up to the present been obtained fully justify this opinion. Mr. P. J. FREYER'S statistics give a total mortality of less than 10 per cent., even when all deaths after the operation are included, though some of the fatal cases might not unreasonably be removed from the deaths. Dr. W. PRIOR PURVIS has reported a case in which he enucleated a mass from the prostate weighing six and a half ounces. The best treatment for this condition was discussed at the Swansea meeting of the British Medical Association and it was also a subject of discussion at a meeting of the Harveian Society where the debate was opened by a paper by Mr. C. W. MANSELL MOULLIN who entered somewhat fully into the whole question. There is no doubt that the more modern methods of treatment of hypertrophied prostate are superseding habitual catheterism which is full of septic dangers for the patient with enlarged prostate. The temporary favour which was accorded to vasectomy and castration for prostatic hypertrophy has been followed by almost complete neglect.

Aneurysm.

Traumatic aneurysms of large arteries are not common but two cases of this condition have been recorded in THE LANCET during the year. Dr. ALAN H. MUIR narrates a case under the care of Mr. W. F. BROOK of traumatic aneurysm of the gluteal artery resulting from a fall on the buttock. The internal iliac artery was compressed digitally through an opening made in the abdominal wall. Then the sac of the gluteal aneurysm was opened by an incision six inches long in the line of the gluteal artery, the blood clot was turned out, and the artery was tied. The fissured fracture of the hip-bone which had wounded the vessel was seen. Complete recovery followed. Dr. J. CROPPER has described a case of traumatic femoral aneurysm which was under his care. It arose from a punctured wound inflicted four months before. The vessel was tied above and below the sac which was excised. The vein was wounded during the operation and the hæmorrhage was controlled by firm packing. The patient soon recovered.

The introduction of wire into the interior of an aneurysm is now rarely employed. Mr. D'ARCY POWER and Mr. G. H. COLT have published a case in which this was done. The aneurysm was situated on the abdominal aorta and was exposed by an incision over it and 80 inches of silver wire were introduced into the aneurysm and the opening was closed by a few Lembert sutures. The patient died 50 hours after the operation. At the necropsy a loop of wire was found projecting into the aorta. The instrument devised for the introduction of the wire is ingenious and is likely to be used in future whenever this operation seems to be indicated.

OBSTETRICS AND GYNÆCOLOGY.

The Anatomy of the Pregnant Uterus

During the past year two valuable contributions have been made to our knowledge of the anatomy of the pregnant uterus. J. CLARENCE WEBSTER has published a paper on the cadaver of a woman who died in the sixth month of pregnancy which he studied by means of frozen sections. The specimen is principally of interest in showing the extent to which the uterus may be displaced upwards by the distended bladder. The highest point of the fundus uteri is opposite the first lumbar vertebra, while at full term the normal level of the fundus is the disc between the first and second lumbar vertebræ.

The second case, published jointly by PINARD, SEGOND, and COUVELAIRE, is that of a patient delivered by Cæsarean section at full term whose uterus was bound down by peritoneal adhesions on its posterior and left lateral surface to the posterior wall of the pelvis and of the abdomen and to the intestines. After the delivery of the child the uterus was removed by hysterectomy. This interesting specimen demonstrates the fact that the fixation by adhesions of practically the whole of the posterior surface of the uterus is not incompatible with the development of pregnancy to full term. As a result of the presence of the adhesions the anterior wall of the uterus had developed to a very marked extent while the posterior wall remained almost entirely undeveloped. At the same time the lower uterine segment had undergone marked over-distension over an area on the left side corresponding to the position of the fœtal head. The case affords an interesting anatomical proof of the manner in which the so called incomplete retroflexion described by ROBERT BARNES in cases of incarceration of the retroverted gravid uterus may occur.

The Nutrition of the Mother and its Relation to the Size of the Child.

The view of PROCHOWNICK that it is possible to influence the size of the child by modification of the mother's diet is confirmed to a considerable extent by the observations of NOEL PATON in the case of guinea-pigs. By regulating the food of the mothers he was able to show that the weight of young per gramme of mother could be definitely altered. The average weight per litter in the underfed animals was no less than 28 per cent. below the weight per litter in normal well-fed animals. Physiologically the point of interest in these experiments is the demonstration of the limitations in the extent to which the tissues of the mother can be utilised for the construction of the embryo.

Ectopic Gestation.

Extra-uterine gestation has been the subject of numerous publications during the past year. Our knowledge of the changes that occur in the wall of the pregnant tube and also of the manner in which rupture of the tube is produced is much more complete than it was. The anatomy of the pregnant tube was fully considered in a paper published by J. R. ANDREWS, and the whole question formed one of the subjects of discussion at the meeting of the German Gynæcological Society in June of this year.

It is becoming more and more evident that the ovum in cases of tubal pregnancy is imbedded beneath the mucous membrane of the tube and is not simply attached to its surface. The free pole of the ovum, that is to say, the part projecting towards the lumen of the tube, is covered by a true decidua reflexa, or by organised clot, or by some of the folds of the mucous membrane representing such a decidua. The development of the tubal decidua is a constant condition, although the amount of its development varies considerably in different cases. In cases of tubal rupture the wall of the tube gives way, while in cases of early tubal abortion the covering of the free pole of the ovum becomes torn through. The part played by the epithelium of the villi in causing the destruction of the muscular tissue of the wall of the tube is not yet completely determined but no doubt it plays an important part. The occurrence of a primary abdominal gestation cannot yet be said to have been demonstrated beyond doubt but the existence of ovarian gestation is now accepted by all observers. With regard to the question of treatment in accordance with the conservative tendency of recent gynæcological surgery, it is becoming more and more the custom with many obstetricians to adopt expectant treatment in the case of a limited peritubal hæmatocele due to tubal abortion and to operate in practically all other cases of this kind, while the abdominal route is more generally applicable and more often employed than the vaginal.

A work of much interest has been published by F. VON WINCKEL on the deformities of the fœtus in cases of ectopic gestation. He draws the conclusion that maldevelopments of the fœtus are much more common than is usually believed and occur in some 50 per cent. of the cases. He thinks that the contractions of the fœtal sac, which are often well marked, play an important part in producing these deformities and diseases of the ectopically developed fœtus. It is interesting to notice that such deformities often disappear spontaneously if the fœtus continues to live.

Deciduoma Malignum

Two of the meetings of the Obstetrical Society of London were devoted to a discussion upon this most important disease. The subject was introduced by TEACHER of Glasgow who in an exhaustive and interesting paper dealt very fully with the whole matter. In connexion with the paper a large number of pathological specimens and microscopical sections were shown. The most interesting problem yet unsolved in connexion with this disease is its relationship to the tumours of apparently the same nature met with in the male.

TEACHER came to the following conclusions:—1. That the so-called deciduoma malignum is a tumour arising in connexion with a pregnancy and originating from the epithelium of the chorionic villi (or its forerunner, the trophoblast) which is of fœtal ectoblastic origin. The malignant hydatidiform moles may be regarded as a variety of chorion epithelioma. 2. That the chorion epitheliomata and malignant hydatidiform moles form a quite characteristic group of tumours clinically and pathologically and that they should be classified neither as sarcomata nor as carcinomata but as a distinct class *sui generis*. The most appropriate name is chorion epithelioma malignum. 3. That, in addition to the common tumours developing from a pregnancy, there are tumours containing precisely similar structures which are not connected with a pregnancy and which may occur in other parts of the body than the uterus and in either sex. The most probable explanation of these is that they are teratomata originating from some structure which has the morphological value of an included matured and fertilised ovum, and the chorion epitheliomatous tissues represent the actual trophoblast (chorionic epithelium) of the included ovum.

Tuberculous Disease of the Genital Tract

The importance of tuberculosis in the etiology of diseases of the genital tract is becoming more and more evident. This subject was discussed at the International Congress of Obstetrics at Rome last year and was also considered at the meeting of the British Medical Association at Swansea this summer. Papers were read and specimens were demonstrated by TARGETT, KYNOCH and ARNOLD LEA.

In the diagnosis of the condition TARGETT laid stress upon the freedom from pain, the frequency of dysmenorrhœa, and the absence of repeated attacks of peritonitis such as patients with the more common forms of pyosalpinx usually suffer from. The old view that amenorrhœa is usually present can no longer be held, as further experience has shown that the menstrual function is often not at all disturbed. The microscopical examination of the scrapings from the uterus is of little value in making a diagnosis as tuberculous endometritis is of very rare occurrence. As TARGETT pointed out, the tuberculous pyosalpinx has characters which often enable it to be recognised—viz., the persistence of the fimbriated extremity, the absence of adhesions on the serous surface, and the comparative thinness of the sac wall. Its contents are usually sterile and the uterine end of the tube alone exhibits the characteristic structure of tuberculous salpingitis.

X Rays and Violet Light Rays in the Treatment of Cancer

Evidence is accumulating as to the value of these light rays in the treatment of rodent ulcers and of true carcinomata. A considerable number of cases have now been recorded by CLEAVES, GRUBBE and others in which very marked benefit apparently has followed the use of the violet and x rays in cases of inoperable cancer of the uterus. It is to be hoped that we may soon have before us the results of a sufficient number of cases to enable us to form a definite conclusion as to the value of this method of treatment. The possible effects of the emanations from radium upon similar cases is a problem for the future to decide.

Pregnancy complicated with Uterine Fibroids

A discussion was opened by AMAND ROUTH at the meeting of the British Medical Association on the Management of Pregnancy complicated with Uterine Fibroids. He thought that expectant treatment was indicated in all cases unless there were urgent symptoms. Owing to spontaneous elevation of pelvic fibroids during the last few weeks or days of pregnancy threatened obstruction to labour did not, as a rule, persist. Sepsis with secondary infection of the fibroid was a serious danger in the puerperium. Induction of abortion should be abandoned. If urgent pressure symptoms supervened myomectomy was the ideal operation for subserous growths, failing that hysterectomy. After the child was viable reposition might be tried, leaving radical measures for a later date. A cervical fibroid might be enucleated from the vagina as an alternative to panhysterectomy. In all other cases of fibroids obstructing labour as a first step the child must be delivered by Cæsarean section followed by myomectomy, supravaginal hysterectomy with retroperitoneal treatment of the stump, or panhysterectomy. If during childbed fibroids became infected a prompt extirpation of the uterus might save the patient's life.

The Treatment of Prolapse of the Uterus

An important discussion upon this very common condition was held at the Congress of the German Gynæcological Society in Würzburg in June. It cannot be said that our knowledge was much increased by the contributions read. The difference of opinion was most marked in regard to the etiology of prolapse of the uterus. Is it to be regarded as a purely local affection or is it merely the result of general debility of the patient, and can prophylactic measures directed towards the correction of such errors in the general health prevent its occurrence? MARTIN thought that they could and laid much stress upon the importance of the patient's general condition, of physiological involution in childbed and at the climacteric, and of the disturbed nutrition that occurred in severe diseases, conditions in all of which there was extensive wasting of connective tissues and in which prophylactic measures were likely to be of much assistance. With the improvement of the general condition the local affection would improve also and bad cases would become much less common. Some of the other speakers dissented from this view and held that prolapse of the uterus was entirely a local condition and had no relationship at all to the general health. The infrequency of this distressing complaint amongst better-class patients seems to show that the importance of prophylaxis can hardly be overestimated and that the condition can be, and is, preventable except in a small number of cases in which infantilism, congenital backward displacements of the uterus, and imperfect development of the perineum play an important part in the production of the displacement. There was a general consensus of opinion that one or other of the forms of fixation of the uterus was indicated when operative treatment was required but that supplementary vaginal operations were always necessary. The results as to cure from all the various operations were about the same, while total extirpation of the uterus gave no better results than any other operation.

Obituary.

The list of deaths amongst obstetric physicians has been exceptionally heavy this year and includes such well-known names as MAX SÄNGER, HENRI VARNIER, GAILLARD THOMAS, WILLIAM PLAYFAIR, and JOSEPH GRIFFITHS SWAYNE.

OPHTHALMOLOGY.

The numerous points of contact that ophthalmology has with all other departments of medicine insure a full attendance at the meetings of the various ophthalmological societies in this and other countries and occasion the exhibition of numerous cases and the reading of many papers that awake interest, give rise to discussion, and lead to fuller and more exact knowledge of the different forms of disease that they illustrate. But this wealth and diversity of material render it difficult in a brief record of progress to do more than to allude to the chief events of the year, to indicate the principal topics that have attracted attention, and to mention a few of the more striking cases that have been seen and described. The Ophthalmological Society of the United Kingdom has elected as its president Mr. JOHN TWEEDY who also occupies the high position of President of the Royal College of Surgeons of England, an unprecedented combination of honours.

Congresses.

The meeting of the Egyptian Medical Congress was held at the close of last year at Cairo and the vexed questions of the nature, origin, and treatment of trachoma, which is there an endemic disease, were dealt with. It is said that partly as a result of this congress Sir ERNEST CASSEL was induced to place the sum of $200,000 at the disposal of the Khedive to institute a peripatetic ophthalmic dispensary with the object of relieving the appalling amount of remediable disease in Egypt. It is to be hoped that some permanent good may result from this kind gift if only by showing the people how much benefit may be effected by cleanliness and the adoption of very simple antiseptic measures. The President of the Ophthalmological Section of the British Medical Association at Swansea was Mr. HENRY E. JULER. Interesting papers were read by Mr. E. NETTLESHIP on Ocular Changes in Renal Disease; by Mr. G. HARTRIDGE and by Mr. CLAUD A. WORTH on Squint; and one on the Mechanism of Accommodation in Man by Dr. K. A. GROSSMANN. A new department of ophthalmology has been founded in the University of Oxford and Mr. ROBERT W. DOYNE has been elected as first reader. The post, which Mr. DOYNE is thoroughly qualified to fill, will, in conjunction with the ophthalmic hospital, afford many practitioners in and around Oxford the opportunity of keeping up, and extending, their knowledge of ophthalmic disease.

Uniformity of Notation.

The multiplication of journals devoted to ophthalmology, in which isolated cases are often reported in great detail, has led several observers to urge the necessity for greater uniformity being practised in such reports. Thus Dr. KNAPP of New York accepts and recommends the notation of the meridians of the eye originally proposed by Dr. HARLAN, in which the numbering commences at the nasal end of the horizontal meridian, runs to 90°, which is the vertical meridian, and then outwards to the opposite or temporal end of the horizontal meridian which is 180°. The general adoption of this notation by refractionists would prevent much confusion. Mr. LUCIEN HOWE points out that more uniformity is required in the numbering and in the use of prisms and suggests not only that the prisms should be ground with greater accuracy than is practised at present, but that the application of prisms to test the power of adduction and abduction, or the dynamic conditions of the eyes, should be conducted in the same manner, and, lastly, that the terms "latent" convergence and divergence should be replaced by those of esophoria, exophoria, and the like now generally used in America. Dr. CHARLES H WILLIAMS insists on the great importance for the safety of the public of more uniformity in the examination of the vision, colour sense, and hearing of all those employed on railways. A very interesting series of recommendations of the Section on Ophthalmology of the American Medical Association has been published and it would be well if all railway officials in the United Kingdom were examined on the lines that are laid down in this report, a condensed account of which will be found in the recently published Transactions of the American Ophthalmological Society for 1902.

Roentgen Rays.

The use of the Roentgen or x rays has become common in the treatment of various diseases of the eyes and the adjoining region, but especially in cases of epithelioma. Some very striking instances of the improvement effected in this affection have been placed on record (with illustrations) by Dr. W. SWEET of Philadelphia. The loss of the cilia and of the hairs of the eyebrows that has been observed in more than one instance suggests the advisability of protecting all but the diseased part with sheets of lead when this method of treatment is practised. The tube employed by Dr. SWEET was of low vacuum and was placed from six to ten inches distant from the part; the exposures lasted from five to ten minutes and the number of sittings varied from ten to 30 or more.

Affections of the Cornea.

The treatment of conical cornea has been the subject of discussion. Mr. A. STANFORD MORTON adopts the method proposed originally by Mr. HIGGENS of excising an elliptical portion from the apex of the cone and has had many successful cases. Others, as Dr. J. TATHAM THOMPSON and Dr. KARL GROSSMANN, prefer the application of the actual cautery to the apex, a plan originally proposed by Dr. ANDREWS and subsequently recommended and adopted by Mr. CANT and Dr. WILLIAMS and brought prominently into notice by Sir ANDERSON CRITCHETT. This plan either with or better still without subsequent perforation of the cornea with a needle seems to be the least dangerous. Dr. A. DARIER has brought forward a case of interstitial keratitis in which subconjunctival injections of tuberculin produced dangerous reaction. Mr. SYDNEY STEPHENSON has adduced statistics to show that from about 2 to 10 per cent. of all cases of interstitial keratitis are due to acquired syphilis and that the corneal affection occurs on the average about 11 years after the primary infection.

Glaucoma.

The propriety of recommending the operation of iridectomy in cases of chronic glaucoma, where vision is continuously or intermittingly failing, is the cause of much heart-searching on the part of the expert, because in most cases, founded probably on general impressions, it is believed that improvement rarely follows. Dr. CHARLES BULL of New York has done good service in tracing the results of iridectomy in chronic glaucoma and draws the conclusion that the earlier the diagnosis is arrived at and the operation performed the greater the success, and that as a rule those cases do best in which both eyes have been operated on simultaneously. The effect of resection of the superior cervical ganglion of the sympathetic has been observed by Dr. JOHN WEEKS of New York. He considers that in all forms of glaucoma, except the hæmorrhagic, iridectomy should first be practised. This may be supplemented by anterior sclerotomy in eyes still retaining vision and by posterior sclerotomy in those in which vision is lost. If these proceedings fail sympathectomy may be resorted to. In *simple glaucoma* he finds that good results are obtained in about 60 per cent. of the cases. Section of the anterior ciliary arteries before they penetrate the sclerotic has been found serviceable in cases of glaucoma by Dr. H. B. CHANDLER, and still another method of treating the chronic forms of this serious disease has been proposed and practised by Major H. HERBERT, I.M.S., which consists in the formation of a subconjunctival fistula, either by producing a subconjunctival prolapse of the iris or by infolding the conjunctiva. This plan was carried out in 130 cases, in all to which, except 18, a small iridectomy was previously performed. The results appear to have been satisfactory.

Cataract.

Major HERBERT, I.M.S., has given in a small volume the details of cataract operations as practised with such astonishing success in India. He prefers the combined operation, that is, he performs iridectomy under as far as possible aseptic conditions, the cornea being rendered insensitive with cocaine, but he also operates without iridectomy. *Out of 1172 operations in 26 months he had* only 93 poor results or complete failures. Major F. SMITH has very recently advocated the plan of extraction without opening the capsule and gives favourable statistics of this mode of operating in his hands.

An interesting article by Major F. P. MAYNARD, I.M.S., of the Medical College Hospital, Calcutta, in the *Ophthalmic Review* contains an account of the after results of 63 operations for depression of the lens performed by Indian "cataract prickers." Such records are rare. These show that about 46 per cent. of the cases operated on retained good vision after an average interval of nearly five years. Considering the rough instruments at the disposal of the operators and the want of attention in the after-treatment the results are more favourable than might be expected.

A special form of posterior cortical cataract has been described by Dr. W. ROBINSON as of frequent occurrence in bottle finishers in which occupation the workman is much exposed to the heat and the glare of furnaces.

Therapeutic Measures

The marked influence that adrenalin exerts on the blood-vessels and upon the blood pressure, constricting the former and increasing the latter, has naturally suggested its employment in various conditions of the eye in which the effects might be expected to prove beneficial. Thus, Dr. A. YVERT, Dr. WESSELY, Dr. KONIGSTEIN, Dr. MARQUES, Dr. A. DARIER, whose death has so recently occurred, and many others speak in high terms of its value when applied to the congested conjunctiva in a perfectly sterilised solution of 1 part in solution in 1000 parts of water. The local anæmia it occasions can be augmented with cocaine and the combination of the two remedies appears to be of great service in acute catarrhal affections, in rheumatic conjunctivitis, and in gouty congestion of the conjunctiva. Adrenalin is also useful in iritis and by its depressor action on the blood pressure in cases of glaucoma whether subacute or intermittent, and in cases of embolism of the retinal artery. It appears to be contra-indicated in such operations as iridectomy and cataract where the globe is opened, both Dr. DARIER and Mr. STEPHENSON having noticed intra-ocular hæmorrhage of a serious character. It has been injected subconjunctivally but *it must not be forgotten that it is a very dangerous poison*, and it is right to add that Mr. A. F. MACCALLAN and others have reported several cases of glaucoma in which the use of adrenalin caused increase of tension.

Subconjunctival injections of solutions of corrosive sublimate have been warmly recommended by Dr. DARIER whose treatise on Ocular Therapeutics has been translated by Mr. SYDNEY STEPHENSON. Dr. DARIER claims for this method a superiority to every other in cases of corneal ulcer, hypopyon-iritis, and inflammatory troubles in the uveal region; in retrobulbar neuritis and in various choroidal and retinal affections. He also advocates massage of the globe which, though anciently practised, is now seldom adopted. *The use of the sublimate in subconjunctival injection* has also been found very serviceable by Dr. C. S. BULL in orbital cellulitis, whilst Dr. VALOIS of Moulins reports two cases of *sympathetic ophthalmitis in which repeated injections of a* 1 per cent. solution of mercury cyanide into the orbit of the enucleated eye were followed by marked improvement, the vision of the sympathising eye returning to normal. The injections are productive of much pain, but granting the infectious nature of sympathetic ophthalmitis the local use of mercury in this manner is rational.

Amongst the many new remedies that have been tried with variable success may be mentioned dionine which in 5 per cent. solution in water acts as a mydriatic, effecting great dilatation of the pupil; as an analgesic, without anæsthetic action, relieving the deep-seated pain of iritis and glaucoma; and as a lymphagogue, dilating the blood-vessels and causing an increased flow of lymph through all the deeper-seated tissues, thus improving the nutrition of the cells and removing pathological products. Other remedies are largin, acting similarly to dionine; asaprol, a preparation of naphthol, employed with success by M. GALEZOWSKI in arthritic and rheumatic affections; acoin, which is both an anæsthetic and an analgesic; ichtargan, a combination of ichthyol and silver, which in 3 per cent. solutions advantageously replaces silver nitrate; protargol, in conjunctival affections; and hetol, the cinnamate of sodium, which in 1 per cent. solutions provokes marked phagocytosis, a condition favourable to the absorption of exudations and toxins. Many advantages over nitrate of silver are claimed by various writers for protargol, a combination of protein and silver, but considerable differences of opinion have been expressed in regard to its properties. Lastly, yohimbin is stated by Dr. H. SALOMONSOHN to possess a powerful and persistent anæsthetic effect in 1 per cent. solution and to act rapidly.

The Eyesight of Board School Children.

The testing of the eyesight of the children of the poor has been on several occasions brought under the notice of the School Board for London. It is estimated that about 600,000 children are being taught in the schools and the eight specialists who were appointed last year to inquire into the condition of their vision reported that about 10 per cent. of the children suffered from bad vision throughout the whole of their school life, whilst from 1½ to 3 per cent. had very bad vision, increasing progressively as they passed on to the higher standards. The impairment is in many cases due to errors of refraction remediable by means of appropriate glasses. The mode of dealing with these cases has not been as yet satisfactorily determined. The School Board authorities entirely disclaim any attempt to treat such defective children by medical examination and the prescription of spectacles. The children or their parents are told that their vision is imperfect and they must seek medical advice if they are to make any progress in their work at school. Application to the nearest hospital is, of course, the next step, but it is found that in practice the parents are unable or unwilling to lose a day's work, and if they do attend a hospital they are too poor to obtain the glasses, or too ignorant to insist upon the child persistently wearing them. Moreover, the out-patient room of the nearest general hospital is not always adapted for the treatment of refraction cases. The alternative is for the child to be taken to one or other of the half-dozen hospitals which have ophthalmic surgeons attached to them or to one of the ophthalmic hospitals. Again the question of time comes in but here the objection is raised by the surgeons. When 50 or 60 School Board cases present themselves in one morning, each, for the credit of the hospital, requiring prolonged examination and careful adaptation of glasses, the staff finds itself unable to cope with the numbers applying for relief and refuses to see more than a limited number. The only way out of the difficulty seems to be that the School Board should appoint a salaried officer whose time and attention should be devoted entirely to refraction cases.

Literature.

A new monthly journal entitled the *Ophthalmoscope*, conducted by Mr. SYDNEY STEPHENSON, assisted by Mr. C. DEVEREUX MARSHALL, has appeared. Amongst the more important works that have been published may be mentioned a "Treatise on the Diseases of the Eye, Ear, Nose, and Throat," by Dr. W. C. POSEY and Dr. JONATHAN WRIGHT and various authors; "Physiological Optics," by Dr. W. T. PORTER; "Practical Handbook of the Diseases of the Eye," by Dr. CHALMERS WATSON; "Refraction of the Eye and the Anomalies of the Ocular Muscles," by Mr. E. KENNETH CAMPBELL; "On Squint," by Mr. CLAUD A. WORTH; "The Pathology of the Eye," by Professor R. GREEF; "Pathologische Histologie des Auges," by Dr. SIGISMUND GINSBERG. New editions have appeared of "Ophthalmic Practice," by Mr. C. HIGGENS; "Refraction of the Eye," by Mr. GUSTAVUS HARTRIDGE; "Refraction of the Eye," by Mr. ERNEST CLARKE; "Ophthalmological Prisms," by Dr. ERNEST E. MADDOX; and "Atlas der Ophthalmoscopie," by Professor Dr. O. HAAB.

FORENSIC MEDICINE.

Actions by, or Against, Medical Men.

Since our last annual *résumé* several cases of high importance in which medical men have figured in courts of justice, both civil and criminal, have been recorded in our columns. At the Margate January quarter sessions WILLIAM HERBERT RAY was convicted of unlawful assault upon a girl and sentenced to six months' hard labour. We felt it to be our duty to challenge the equity of the verdict on the grounds that there was practically no corroboration of the testimony of the chief witness and to point out how serious are the risks incidental to medical practice. ROBERT FAWCITT GRANGER, a medical man, and his wife were charged at the Plymouth police-court with having grossly neglected their three children. They were found guilty and sent to prison for two months in the second division. It was proved in evidence that drink had been the cause of the downfall of the prisoners. The General Medical Council took a lenient view of Mr. GRANGER'S offence and have allowed him an opportunity of retrieving his position, he, on his side, promising abstention from alcohol. Professor J. W. BYERS of Belfast had the misfortune to meet a claim for damages for breach of promise of marriage made against him by a nurse. He was subjected to the meanest forms of persecution at the hands of the plaintiff and as showing the baseless nature of the action she did not put in an appearance when the case came on for trial at the Belfast city assizes. In proof of the high esteem in which Professor BYERS was held both as regards his personal and professional character he received a testimonial from a wide circle of fellow practitioners and citizens upon his triumphant vindication of his innocence. In Scotland, before the Lord Justice Clerk, Dr. JOHN CUNNINGHAM was sued for damages, laid at £1000, by the widow of a man named GILLIES who had died whilst under the influence of chloroform administered for the performance of a minor operation. The grounds of claim were that the deceased had been given the anæsthetic against his will and whilst in an unprepared state to inhale it, having partaken of a hearty tea No other medical man was present. Many practitioners of the highest repute gave evidence in refutation of the allegations and the jury returned a verdict for the defendant.

Antivivisection Tactics.

In the case BAYLISS *v.* COLERIDGE, heard recently in the King's Bench Division of the High Court before the Lord Chief Justice, £2000 were awarded as damages for libel. At a public meeting held by the National Antivivisection Society the defendant accused Mr. BAYLISS, assistant professor of physiology at University College, of having performed an operation on a dog without the animal having been properly anæsthetised, which meant that Mr. BAYLISS had rendered himself liable to a charge of misdemeanour for having contravened the terms of his licence granted by the Home Office. The defendant for the purposes of his speech had adopted a statement communicated to him by two ladies, members of a foreign antivivisection society, who had attended the physiological demonstration in question. The usual defence was pleaded: that in so far as the libel consisted of facts it was true and that it was published without malice and in the public interest. The "facts" were not substantiated in court.

The General Practitioner and Post-mortem Examinations.

The London County Council, desirous for the public benefit of assisting coroners in the discharge of their official duties, passed a recommendation that in cases of special difficulty the services of a medical man specially versed in pathological knowledge should be available. One coroner in particular adopted the suggestion to a greater extent than was intended by the Council, in that he called to his aid a gentleman nominated by the Council in a large number of ordinary post-mortem examinations to the exclusion of other medical men having more intimate knowledge of the cases to be inquired into. This was felt to be a real grievance by the great bulk of general practitioners who naturally considered themselves slighted, besides being deprived of customary fees. We felt bound to espouse their cause, firstly, on account of the questionable legality of the procedure and, secondly, because in our opinion the vast majority of medical practitioners are fully qualified to conduct necropsies in cases where no particular difficulty is likely to arise. It is with pleasure that we record the fact that the cause of the friction has considerably abated. *Apropos* of the subject under consideration we published a very able paper by Dr. H. H. LITTLEJOHN, though we could not subscribe to his chief contention that post-mortem examinations made for the purpose of judicial inquiries should be intrusted solely or mainly to expert pathologists.

Legal Cases of Medical Interest.

An unusual number of appalling crimes inquiries into which were largely based upon medical evidence have been perpetrated during the year. That which aroused the greatest public interest was investigated at the Chelmsford assizes before Mr. Justice LAWRENCE. An ex soldier named DOUGAL was charged with having murdered a lady named HOLLAND by shooting her in the head with a revolver. After having ingratiated himself in her favour to the extent that he persuaded her to live with him as his wife he took her life, presumably for the purpose of possessing himself of her property. He buried her body in a ditch and for four years lived within sight of the place of sepulture, to all appearance unmoved by remorse. To obtain her money he resorted to the most barefaced forgery which for a long time was unsuspected. His career, one long history of cruelty, lust, and crime, terminated on the scaffold. The trial disclosed an admirable instance of constructive identification. At the first the difficulties appeared likely to be unsurmountable, but in the end conviction was secured by evidence that left no loophole for the prisoner's escape. In this case, as in that of the late Miss S. F. HICKMAN, it was shown that the kidney of the deceased woman had resisted the agents of disintegration to a greater extent than the uterus. To Miss HICKMAN's death we need make no further reference, the facts having been so recently chronicled in our columns.

The practice of baby farming received a remarkable illustration and a powerful check when two women named SACH and WALTERS respectively expiated their guilt by the death penalty. The former culprit kept a "bogus maternity home" into which she admitted single women for confinement. This so far might have been an innocent calling, but it was in reality only the means for obtaining large sums of money for the ostensible purpose of getting the newly born children adopted by people of wealth and position. WALTERS was employed by SACH to murder the children and to dispose of their bodies.

To the list of notorious poisoners must be added the name of KLOSOWSKI, alias GEORGE CHAPMAN. After a four days' trial at the Old Bailey this criminal was condemned to death on March 19th. The original charge related only to the murder of a young woman named MAUD MARSH, but during the investigations into this case it was shown that KLOSOWSKI had done to death two other women by the same means—viz., antimonial poisoning. One had been certified as having died from obstruction of the bowels and the other from tuberculosis. The medical man who attended MAUD MARSH had also ministered to one of the other women during her fatal illness. The symptoms were much the same in the two cases—gastro intestinal irritation and progressive asthenia. It is noteworthy that not only was the family medical attendant baffled in his attempt to establish the cause of MAUD MARSH's illness but that at Guy's Hospital, where she was an in-patient, she was thought to be suffering from peritonitis. KLOSOWSKI was proved to have purchased a large quantity of tartar emetic some years before. The simulation of natural disease by the effects of antimony poisoning has on many previous occasions led to mistaken diagnosis. The bodies of KLOSOWSKI'S first two victims were remarkably preserved from decomposition, although one had been buried for a period of years. The motive for the crime in each instance seems to have been, in the words of the Solicitor-General, "cruel, pitiless lust."

In an action brought by a married woman who had sustained a severe nervous shock by seeing a house collapse in which she believed her children to be Mr. Justice BIGHAM held that the plaintiff was entitled to damages, although there was no physical impact of anything that injured her; he further held that she was so entitled in respect of injury through fear for her own safety but not in respect of injury caused by her fear for the safety of her children. In cases of this kind the result must necessarily depend largely upon medical evidence.

Among convictions of persons using titles or descriptions implying registration under the Medical Acts was that of LOUIS LAMB BAILLES, formerly a registered medical practitioner but removed from the Register after a conviction for felony. The defendant was employed by a person or persons known as the Dr. McLaughlin Company in connexion with the sale of "electric belts," and was charged in two summonses with using the description "Dr." implying registration and also with using that of "M.B.," of which his university had deprived him.

Several instances occurred during the year of the neglect of parents to secure medical aid for their children when suffering from illness or injury, some of which were followed by prosecutions under the Cruelty to Children Act, 1894. The majority of these cases were due to the religious beliefs entertained by the parents At an inquest at Manchester, however, it was proved that a parent whose child ultimately died from broncho-pneumonia had failed to call in a medical man and had instead, on the recommendation of his neighbours, had recourse to a quack medicine sold under the name of JACKSON'S Febrifuge. This was described in advertisements as capable of curing about 30 specified diseases and evidence was given that thousands of gallons of it were sold in the year. The coroner described the traffic in it as a "common swindle" and a verdict of death from natural causes was returned. In two instances persons influenced by religious fanaticism allowed their children to suffer from broken bones which they professed to heal by prayer and faith; in one of these a fine of £20 was imposed and in the other the father was sent to prison for a month.

Les Morts Bizarres.

Fewer deaths than usual from chloroform narcosis have been recorded We trust that future years will see a further reduction of this class of fatality from misadventure.

Two deaths from electric shock occurred at a public bath. The victims succumbed owing to a leakage from a charged conductor passing through their bodies. We pointed out that 200 volts would probably produce little effect if contact was made when the hands were dry and the feet were shod, whereas even six or eight volts would start tetanus in muscle of an individual immersed in water. As a precaution against the repetition of the above-mentioned disaster we advised that no electric-light fittings should be placed so that they could be reached by a person in a bath.

Two instances of fatal poisoning by carbon monoxide have been published in our columns. The late Mr. QUINTIN HOGG fell a victim at the Polytechnic to the effects of the products of incomplete combustion from a gas heater. Two children lost their lives owing to an escape from a defective gas pendant. In the manufacture of coal gas the proportion of carbon monoxide seems to be on the increase, the deficiency of illuminating power being supplied by the addition of an "enricher." In consequence of this excess of carbon monoxide a leakage of coal gas, barely recognisable by the smell, is distinctly dangerous to health. LAMIE in 1891 showed that carbon monoxide could be obtained from the desanguinated brains of dogs killed by the gas. That carbon monoxide is readily taken up by nerve tissue has been further proved by Croizet of Paris who has shown that after the acute symptoms of poisoning by the gas have passed away secondary manifestations may appear in the form of peripheral neuritis and trophic lesions.

The fact that certain fungi—e.g., penicillium glaucum—are capable of assimilating arsenic and giving off arsenical fumes has directed attention to another means by which the poison may be distributed from wall paper and other fabrics and also that fungi may be utilised for toxicological purposes in the detection of arsenic. M. E. APERT has published in the Transactions of the Société Médicale des Hôpitaux cases of Plumbism in Pearl Setters. The metal gained access to the system through the workers licking their fingers carrying lead-laden paste.

Dr. F. J. WALDO held an inquest on the body of a man who had died from acute poisoning by tannin. The deceased had fallen into a pit of tanning liquor; death resulted three and a half hours later from violent diarrhœa and vomiting. A similar case was recorded in Germany 40 years ago. It would seem that tannin is an irritant poison when taken in large doses.

A somewhat singular death from colchicine occurred in France. A man, aged 43 years, the subject of nephritis and gout, was ordered a capsule containing a quarter of a milligramme of colchicine and 20 grammes of salicylate of methyl eight times a day. To cut short an attack he took 12 capsules within the space of an hour. He vomited mucus tinged with black blood, passed blood in the motions and urine, and had muscular tremors which were exaggerated by excitement. The muscles became tender. Ecchymotic spots appeared on the limbs. The urine at the time of death—ten days after the ingestion of the poison—contained colchicine. The usual symptoms of colchicine poisoning—headache, abdominal [illegible], abundant vomiting, and diarrhœa—were absent.

Farmer v. Glyn-Jones: Stamp Duty on Medicines.

In this case a retail druggist had purchased from a manufacturer ammoniated tincture of quinine and had sold it with the label "Ammoniated Tincture of Quinine B.P. A well-known and highly recommended remedy for Influenza and Colds. Dose—1 teaspoonful in water every four hours until relieved. GLYN & Co., chemists, 15A, East India-road, E." It was contended on behalf of the Board of Inland Revenue that the preparation thus offered for sale required a stamp under the Medicine Stamp Duty Acts. It was decided by the Divisional Court that no stamp was required, the court holding that "a retail druggist who purchases a preparation of medicinal drugs from the manufacturers or from other persons and himself attaches to the bottles in which he retails it a label recommending it as a remedy for specified human ailments is not the 'owner, proprietor, original or first vendor' thereof within the meaning of 52 Geo. III., c. 150, and that if the preparation at the time that he so purchased it was exempt from stamp duty the fact of the retailer attaching the said label will not deprive it of the exemption." In this case it was held that a stamp was not required. As a result, however, of the discussion of the law in this and in other recent cases the Board of Inland Revenue has expressed its intention to press for the use of stamps in many instances where the duty has hitherto not been levied. According to one of the intimations thus given stamps will be required not only where admitted nostrums or secret remedies are sold and where the medicine is recommended in plain terms for the cure of a disease but also where any compounded medicine is labeled with the name of an ailment or of an organ of the body so as to suggest its use, as, for example, "cough mixture," "liver pill," except in the case of such compounded medicines being sold by qualified druggists either with a statement of the formula of the prescription naming the quantity of each ingredient or where the medicine has been compounded in accordance with a formula in the British Pharmacopœia or other well-known book of reference with a statement to that effect upon the label. The effect of any step such as that indicated on the part of the Board of Inland Revenue would be felt principally by those traders who deal in medicinal compounds without qualification to do so and by such druggists as carry on a somewhat similar trade. It may be anticipated that future prosecutions will render the law still clearer.

Death Certification without Inspection of the Body.

In more than one instance attention was called to the danger of fraud being promoted and assisted by medical men giving death certificates without actual knowledge of the fact of death. It is not necessary that a medical man should see the dead body of his patient before certifying, but he is empowered by the form of certificate issued to him to qualify his statement that death has taken place by the words, "as I am informed." Where by a mistake or by an intentional mis-statement a medical practitioner is induced to believe that a patient likely to die is dead a death certificate given by him may be used for the purpose of defrauding a life assurance office.

Cremation and the Detection of Crime.

The practice of cremation in relation to a possible impunity that might be enjoyed by murderers has loomed large on the medical horizon. The growing practice of destruction of bodies by heat had intensified the public misgivings. Although much could be said in its favour it was feared that the evidence of crime might be abolished and the interests of justice defeated. A further objection was that an innocent person suspected or accused of criminal poisoning would be unable to establish his innocence. In discussing the regulations to govern cremation framed by the special committee appointed to report on the question, we felt justified in supporting the procedure recommended. It has been demonstrated that arsenic can be detected in the ashes and bones of cremated bodies. During the process of combustion alkaline salts are formed which combine with the arsenic and fix it as arsenite or arseniate.

Lunacy and the Law.

As the result of a paper read by Sir WILLIAM GOWERS at the general meeting of the Medico-Psychological Association held at the County Asylum, Mickleover, Derby, on Feb. 12th, a discussion took place in the medical press and also in lay newspapers as to the provisions of the existing law with regard to the certification and detention of persons of unsound mind. It was suggested that such change was desirable as would enable patients who are on the verge of mental derangement, or who need temporary care only, to be detained and treated in institutions suited to their requirements without their being submitted to the same forms of certification as more seriously and more permanently deranged persons.

The Fees of Medical Witnesses.

A departmental committee, appointed to consider the question of allowances from public funds to prosecutors in criminal cases, made its report. It had heard evidence from persons representing various classes interested, and had considered among other matters the fees allowed to medical witnesses. The suggestions with regard to these contained in the report did not go quite so far as those made by the medical witnesses before the committee. They tend, however, to increase the fees payable to witnesses at assizes and at quarter sessions, as well as to introduce uniformity into the practice in respect of payment for medical evidence before magistrates at petty sessions.

The Medical Officer of the Ballachulish Slate Quarries.

A medical man, by a contract under which he was to attend the workmen at a slate quarry, bound himself to accept a month's notice from his employers (the directors of a joint-stock company) and to give up any other appointments which he might then hold in the neighbourhood and any private practice there. Having received notice to terminate his employment from the directors of the company he had an action brought against him by them to prevent his continuance in his private practice in the district and in the appointments which he had obtained in the neighbourhood. This he resisted, maintaining that his dismissal was so given that the other conditions he had entered into were not binding upon him. It was held in a court of law that he was bound by them and he subsequently failed upon appeal. The attitude of the men employed in the quarry, who warmly espoused the side of the medical man, no less than the inherent fairness of the medical man's claims, seemed likely from the first to bring about his re-instatement and we were glad to record in a recent number this happy issue. The case is of importance to medical practitioners who on undertaking appointments should closely study the conditions imposed and the contingencies which may arise under them.

Burroughs, Wellcome, and Co. v. Thompson and Capper.

Messrs. BURROUGHS, WELLCOME, and Co., the well-known firm of wholesale druggists, obtained in this action, which was heard in the Chancery Divison before Mr. Justice BYRNE, an injunction against the defendants to restrain them from passing off goods not of the manufacture of Messrs. BURROUGHS, WELLCOME, and Co as the goods of those manufacturers under the name of "tabloid" or "tabloids." These two words had been registered as trade marks by the plaintiff firm under the Patents, Designs, and Trade-marks Act of 1883 as "fancy words not in common use" and the defendants, by way of counter-attack, applied to have them removed from the Register of Trade-marks as not answering this description. The judge held that "tabloid" and "tabloids" were at the date of registration fancy words not in common use within the meaning of the Act and refused to grant the order asked for with regard to them. A large amount of evidence was given by medical witnesses and others showing that the words in question were regarded as the trade-marks of the plaintiffs and that their use was known to refer to the goods of the plaintiffs to the exclusion of those of other manufacturers.

DENTAL SURGERY.

Papers and other Communications.

During the present year Dr. W. MILLER of Berlin has published in the *Dental Cosmos* an interesting and valuable series of papers on Immunity in the Human Mouth. The results obtained justify him in concluding that the protective powers present in the human mouth are not to be accounted for by any antiseptic action on the part of the saliva but rather by the phenomenon of phagocytosis, by the struggle for existence, and probably by certain forces residing in the soft tissues which have not yet been investigated. In some researches on the comparative susceptibility of different teeth to caries Dr. MILLER has established the fact that there is a great difference in the rapidity with which different dentines are softened by acids and that this difference bears a certain relation to the density of the dentine and to the percentage of the calcium salts which it contains. Mr. W. ARBUTHNOT LANE, in a communication to the Odontological Society of Great Britain, drew attention to some of the mechanical factors which determine the development of the bones of the face. Many of his views are open to criticism by the dental surgeon but his paper has done good service by directing the attention of the latter to the constant association of various deformations of the teeth and jaws with imperfect performance of the functions of the naso-pharynx. In a paper on Electrotherapy Mr. C. A. CLARKE has described a tube for the x rays which can be used in the mouth. Attention has been drawn to the importance of asepsis in dental practice by Mr. W. GUY who pleads that more attention should be given to this essential of surgical practice at the dental hospitals. In connexion with chronic periodontitis Mr. J. G. TURNER has drawn attention to the occasional presence of thickening of the alveolar process over the region of the roots of the affected teeth, the appearance simulating exostosis. A case in which the mandible was fractured during the attempted removal of a third molar was recorded by Mr. J. H. BADCOCK. Several papers have been read before the various dental societies on somnoform and ethyl chloride and the general consensus of opinion of dental practitioners is that both agents under certain conditions possess distinct advantages over nitrous oxide or nitrous oxide and oxygen combined, the length and character of the anæsthesia and the ease of administration rendering these anæsthetics especially useful with children.

Operative Dentistry.

There have been numerous contributions dealing with the technique of the treatment of teeth by fillings and crowns; indeed, this aspect of dentistry seems to attract far more attention from the dental practitioner than do such important problems as the nature and cause of dental diseases. The use of gold as a filling is rapidly being displaced by amalgam. Since the publication of Dr. W. BLACK'S papers on Amalgams a great improvement has taken place in the preparation of the filings used to make such fillings and it is now possible to make amalgam fillings which will retain their shape. An advance, too, which is deserving of praise has been made by certain manufacturers who publish with the various fillings supplied the exact composition. In order that the best results may be obtained with amalgam it is necessary that the amount of mercury should bear some definite ratio to the amount of filings. Some difficulty has so far been experienced in carrying this out owing to the lack of simple and correct apparatus. This difficulty seems to have been overcome by Mr. W. J. MAY and in a paper read before the Odontological Society of Great Britain he has described and figured an ingenious apparatus for measuring mercury and a somewhat similar one for weighing the filings. Advance has been made in the methods of preparing porcelain inlays and crowns.

New Books.

Of new books Mr. A. HOPEWELL-SMITH'S on "The Histology and Patho-Histology of the Teeth" is perhaps the most important and is a valuable contribution to the subjects with which it deals. A useful little work entitled "Studies in Comparative Odontology" has been written by Mr. A. S. UNDERWOOD. Two books published in America are also worthy of notice, one by Mr. I. BROOMELL on the "Anatomy and Histology of the Mouth and Teeth" and the other by Mr. J. S. MARSHALL on "Injuries and Diseases of the Face, Mouth, and Jaws."

Obituary.

The obituary of the year includes Mr. J. C. WOODBURN of Glasgow who was for some time examiner in dental surgery at the Faculty of Physicians and Surgeons, Glasgow; Mr. HERBERT CANTON, R.N., who was for three years instructor in dental surgery at Haslar Hospital; Mr. PETER CROMBIE, one of the first to practise dentistry in Aberdeen; Mr. DANIEL CORBETT, jun., of Dublin, one of the promoters of the Dental Hospital of Ireland; and Mr. R. H. WOODHOUSE, for many years a member of the staff of the Royal Dental

Hospital, Leicester-square, and a man who was held in high esteem by his fellow practitioners.

ANATOMY AND PHYSIOLOGY.

The star of physiology is at the present moment undoubtedly in the ascendant. The violent diatribes of the antivivisectionists have defeated their own object by leading many unbiased and intelligent persons to inquire into the aims and uses of physiological research, with the result that they have satisfied themselves that the experimental physiologist is not necessarily cruel and hard of heart as his maligners have represented him to be and that although pain may be, and doubtless is, on rare occasions inflicted upon animals, it is no more than the surgeon is often called upon to give to his patients in the practice of his profession, whilst its object is in all instances, either directly or indirectly, to alleviate the suffering of man and with him of the animal kingdom in general. With the wider and more discriminative recognition of the objects of physiology by the public we find that laboratories intended for the prosecution of this as well as other departments of biology have been formed, or are in course of erection, in all the great cities of the empire, often fully equipped and at great expense. In those which are already established a large body of trained observers, employing very different methods of research, are unremittingly engaged in the endeavour to penetrate and to comprehend those secrets of nature appertaining to life which have so long resisted interpretation. The seed is germinating. The fair flower is still to come.

Digestion.

Amongst the most practical and interesting investigations that have been made during the past year are those upon digestion by Professor J. P. PAWLOW, the director of the physiological department of the Institute for Experimental Medicine in St. Petersburg. He, with his assistants, has been occupied with this subject for several years, but the general conclusions at which he has arrived have only lately been published in a small volume, well translated into English by Dr. W. H. THOMPSON, with the title of "The Work of the Digestive Glands." Professor PAWLOW'S experiments were chiefly made upon dogs, in some of which œsophagotomy was practised, so that the food given and swallowed could be removed before its entry into the stomach. In others by an ingenious operation a diverticulum or pouch of the stomach was formed which being shut off from the main cavity permitted examination of the pure secretion without any contamination of it with the products of digestion. In others, again, a pancreatic fistula was made, not by inserting a cannula into the duct, but by attaching to the skin of the abdomen the portion of mucous membrane on which the duct opens. The results obtained show that the gastric, pancreatic, and other secretions poured into the alimentary canal are by no means of uniform composition but that they vary both as to quantity and quality with the nature of the food, that they are adapted to the separately and successively occurring phases of the elaboration of the substances ingested, and that they are affected to a remarkable and unsuspected extent by psychic influences, so that he feels justified in saying that the appetite, excited by the senses of sight and smell, is the first and mightiest stimulus of the secretory nerves of the stomach, inducing it to secrete large quantities of the strongest fluid, as may be well seen in the make-believe or sham feeding experiments. In the case of the pancreas it appears that the gland responds, as it were, to the different kinds of food by variations in the proportions of the several enzymes that are ordinarily present, the largest proportion of proteid ferment being present in the juice secreted on a meat diet, of the amylolytic ferment on a bread diet, and of the fat-splitting enzyme or ferment on a milk diet. Professor PAWLOW has hence been led to attribute to the terminal fibres of the vagus a specific sensitiveness to the stimulus of each kind of food. Lastly, he considers that the intestinal juice, or succus entericus, contains a ferment to which he has given the name of "enterokinase" and which possesses the remarkable property of augmenting the activity of the pancreatic ferments and especially of the proteolytic ferment. It acts, therefore, as a ferment of ferments. Researches of a somewhat similar character have been undertaken by Mr. W. M. BAYLISS and Dr. E. H. STARLING who state as the result of their experiments that the secretion of pancreatic juice when acid is introduced into the duodenum is not due to reflex action but is consequent on the formation of a substance which they have named "secretin" by the cells of the intestinal mucous membrane. This substance is immediately absorbed into the blood-vessels and is carried by the blood to the pancreas where it acts as a specific stimulus to the gland cells. The presence of secretin in the venous blood returning from a loop of intestine into which acid had been introduced has been demonstrated by Professor WERTHEIMER.

Digestion in Plants.

But even Professor PAWLOW'S researches do not exceed in interest the results of the researches of Professor SYDNEY VINES, the President of the Linnean Society, upon the enzymes produced by plants. That certain plants are capable of capturing small insects has long been known, but it was reserved for DARWIN to demonstrate how this is accomplished by means of a secretion; how this secretion, in the case of the sundew, possesses a digestive power for albumin; and how, further, the ferment or enzyme of the sundew family is closely analogous to, or identical with, the pepsin of animals. Subsequent observers showed that the secretion of the pitcher plant and the juices of other plants like those of the papaw and pineapple had digestive powers, but some doubts having been cast on these statements Professor VINES was led to reinvestigate the subject and has arrived at the remarkable conclusion that proteases or proteid-digesting enzymes or ferments are to be found not only in a few insectivorous plants but in many plants and in many parts of plants, as in fruits, seeds, stems, leaves, tubers, and roots. The function of these proteases is to break up and to render soluble and diffusible the organic nitrogenous substances which the nutritive processes have built up and which are stored in their tissues. If plants thus commonly produce a protease in their interior it is not surprising that it should be exuded or secreted and discharged from the surface of the leaves in some particular instances, as for example, in the insectivorous plants. In passing, Professor VINES notices the great importance of such enzymes in promoting the digestion of the large quantities of vegetable substances consumed by ruminants and other herbivorous animals which thus ingest with the nutriment the means of digesting it. Professor VINES points out that the several proteases of the gastric juice, pancreatic fluid, and of the juices of plants differ not in kind but only in degree. They form, as he has expressed it, a series in which trypsin, active alike in peptonisation and in proteolysis, occupies a central position, having, on the one hand, pepsin with its active peptonisation and slight proteolysis and, on the other, erepsin or enterokinase with its active proteolysis and slight peptonisation.

Dietetics.

Some very interesting dietetic studies have been published by the United States Board of Agriculture, having special reference to the Chinese in New York. The Chinese are here shown to have a more varied and more liberal diet than the Europeans, and equally nutritive, fully supplying the wants of the economy during hard work and being at the same time very cheap. In the United States, as well as in this country, the extravagance of the poor arising from ignorance is accountable for much of the distress which they experience. Mr. ATWATER and Mr. WOODS, who studied the dietaries of many families living in the worst slums of New York, instance the case of the family of a mechanic who had received much help from the Association for the Improvement of the Poor and yet it was found that in his case the expenditure upon food was nearly twice that per head in the *family* of a well to do professional man, hardly anything being left over from the wages earned for fuel, lights clothing and the many other requirements of a family In fact all evidence goes to show that the poor should be educated in the principles of economy, and particularly in one department of it—cookery

The Action of Muscle

The Croonian lectures of the Royal College of Physicians of London were intrusted to Dr O E BELVOR who described the various methods of determining the action of muscles as the anatomical electrical, and physiological, and pointed out the fallacies and difficulties of each and discussed at considerable length and with much ability the particular muscles effecting the different movements of the several joints, together with the interesting subject of the action of antagonistic muscles Finally he gave the results of his own experiments made in conjunction with Sir VICTOR HORSLEY, in which every two square millimetres of the excitable portion of the cortex of the brain in the monkey were examined to determine the cortical representation of the several groups of muscles

K MUNCH has set forth an old view of the structure of muscle that the appearance of transverse striation is due to the closely compressed spiral arrangement of the anisotropous substance which *is best seen in the muscles of the* Myniops variolosus In accordance with this he maintains that the fibre does not contract but that the current of force circulating *in the disc spiral shortens the fibre*

The Minute Anatomy of the Spinal Cord

Professor C S SHERRINGTON, F R S, and Dr E E LASLETT have endeavoured to trace the origin and the course of the fibres composing the dorsal spino cerebellar tract They have shown that one of the laws of reflex action formulated by PFLUGER which is to the effect that reflex irradiation in the spinal cord spreads anteriorly or upwards does not hold good at least in the cat and the dog as well as probably in other mammals *and they supply evidence* that each spinal segment possesses many neurons with backward running axons which connect it with all the segments behind it

S VON SCHUMACHER finds that the nervus depressor is present in all mammals In man it is represented by the cardiac branch of the superior laryngeal nerve and the superior cardiac branches of the vagus The depressor terminates in all mammals in the wall of the aorta The nervi accelerantes terminate in the ventricles and auricles the left heart always having the larger supply The branches to the ventricles arise from the middle cervical ganglion and from the succeeding ganglia as far as to the sixth dorsal ganglion

Dr W E DIXON and Dr T G BRODIE have demonstrated that the vagi contain both broncho constrictor and broncho dilator fibres, each vagus supplying the lung of its own side only The sympathetic does not contain either dilator or constrictor fibres

Histology

The application of special methods of preparation of nerve cells and of blood corpuscles and of high powers of the microscope has revealed new features in these objects Thus Dr VLADISLAV RUZICKA of Prague describes a delicate network traversing the interior of the red blood corpuscles of the frog and Dr FRED MEVES of Kiel depicts annular markings in the red corpuscles of the embryo chick. A Russian microscopist Madame RACHEL PEWSNER NEUFELD has described in considerable detail and has *illustrated by* careful drawings a system of intracellular lymphatic canals in the ganglion cells of the spinal cord in mammals and Dr EMIL HOLMGREN of Stockholm describes intracellular branching cords in the spinal nerve cells of lophius piscatorius which stain intensely black with iron hæmatoxylin

Researches on Development

One of the most interesting results of recent researches by many observers whose statements have been collected by Mr THOMAS BRUCE and recorded in the *Quarterly Journal of Microscopical Science* is that the nucleus of the ovum in animals of different classes may be excited to activity by various physical agents and that the mitotic division of the nucleus which ordinarily results from fertilisation by the spermatic fluid can be effected by increase of osmotic pressure, by agitation, by elevation or by depression of temperature by exposure to hydrochloric acid in sea water and subsequent restoration to pure sea water and lastly by continuous exposure to a solution of certain specific chemical substances such as chloride of potassium and chloride of calcium In some instances development has proceeded to completion *so that true artificial parthenogenesis occurs*

Dr W H GASKELL has continued his researches into the origin of vertebrates which have led him to conclude that *this division of the animal kingdom arose from the group of* protostraca in common with the crustacea and arachnida and in particular from members of the protostraca in which *the arthropod characters had already become well developed* and were in fact nearer the trilobites than the polychæte worms The nearest living representative of the most *primitive* arthropod type is the remarkable animal named Peripatus

Sir MICHAEL FOSTER, finding probably that it was impossible to discharge efficiently the duties of professor in the School of Physiology at Cambridge, which he created and has developed with such remarkable success, and those which devolve upon him as the representative in Parliament of the University of London has resigned the professorship and also the secretaryship of the Royal Society His successor in the chair of physiology is Professor JOHN N LANGLEY who has long acted as a most capable assistant to Sir MICHAEL FOSTER in the maintenance of the high repute of the School of Physiology and is well known as an original worker and an admirable instructor Sir ARCHIBALD GEIKIE has been appointed in Sir MICHAEL FOSTER'S place as secretary of the Royal Society

Obituary

Several distinguished physiologists have passed away, amongst whom may be mentioned Professor IMMANUEL MUNK of Berlin who died at the early age of 51 years and whose researches on the absorption of fat in the intestines the general metabolism of the body and on physiological chemistry are well known He was a distinguished teacher Professor SIGMUND FUCHS professor in the Hochschule fur Boden Cultur or Agricultural College in Vienna, has died at the still earlier age of 44 years By the deaths of these two professors the *Centralblatt fur Physiologie* has the misfortune to lose both its editors in the course of a few weeks Professor LANDOIS whose work on physiology ran through so many editions in Germany and was translated into English by Professor W STIRLING, died at the close of 1902

Morphologists have to mourn the loss of two distinguished members of their body CARL GEGENBAUR of Heidelberg, who died at the age of 77 years, was a most energetic worker and original thinker as well as a voluminous writer and will long be remembered by his researches on the development and homologies of the vertebrata and upon histogenesis. JULIUS VICTOR CARUS who lived to the age of 80 years, was for a time the conservator of the University of Oxford Museum and took part in the *Challenger* expedition

Bibliography.

Numerous works of interest have been published, amongst which may be mentioned the following: Sir MICHAEL FOSTER, "Lectures on the History of Physiology during the Sixteenth, Seventeenth, and Eighteenth Centuries"; Dr. NOEL PATON, "Essentials of Human Physiology"; Mr. J. BLAND-SUTTON, "Ligaments, their Nature and Morphology"; Professor GOETTE, "Lehrbuch der Zoologie"; Dr. OTTO VON FÜRTH, "Vergleichende Chemische Physiologie der Niederen Thiere"; Dr. KARL SCHNEIDER, "Lehrbuch der Vergleichenden Histologie der Thiere"; Professor MAX VERWORN, "Die Biogenhypothese"; and Dr. JOHANNES SOBATTA, "Atlas and Epitome of Human Histology and Microscopic Anatomy."

ANÆSTHETICS.

The general features of the year's work may be summarised as the introduction of methods of greater precision for the administration of chloroform, some not unimportant advances in our knowledge of the action of that anæsthetic upon the organism, a widespread adoption of ethyl chloride and mixtures containing that body, and, finally, further contributions to our knowledge of local analgesia and the subarachnoid injection methods.

Medico-Legal and General.

More than one paper has appeared during the year as well as many scattered references, especially in the medical press of the United States of America, dealing with the status of the anæsthetist. England for many years has been exceptional in training medical men especially for the work of anæsthetists and now compels students to obtain special training in that branch of practice. Scotland also possesses specialists and the want expressed in the American medical press has, we gather, been met by the appointment of anæsthetists to the leading hospitals. In the columns of THE LANCET extended notice was taken of some disagreement between the controlling authorities and the staff of anæsthetists at a London hospital and the result certainly strengthened the position of the staff, while we believe it was beneficial to the best interests of the hospital in question.

The question of the status of the anæsthetist was introduced by a letter in our correspondence columns and in commenting upon it we pointed out that the trend of professional feeling, as well as that of the public, was towards a more adequate appreciation of the services rendered by the anæsthetist. On the other hand, such appreciation carried, we thought, an increased obligation that the anæsthetist should recognise his own limitations and the heavier responsibilities of the surgeon. A discussion upon this question has recently appeared in our columns.

A case of much interest was reported in THE LANCET of April 25th, p. 1183, in which the wife of a man who died under chloroform sued the medical man for damages. The verdict was for the defendant. Much expert evidence was adduced and much discussion followed. That the profession must be prepared for more frequent charges in connexion with anæsthetisation seems probable and the anæsthetist must in such an event be able to show that he possessed reasonable skill and took all proper precautions to achieve a successful issue. In another case[1] no verdict was given as the jury disagreed and a new trial was obtained upon a technical point.

Chloroform.

Almost from the first introduction of this anæsthetic the doctrine of its safety being dependent upon its dilution began to be appreciated. The methods, and their name is legion, which promised a dosimetric system of giving chloroform have all lacked some essential. In the most recent attempt Mr. A. VERNON HARCOURT[2] provides an apparatus which not only regulates the dilution of chloroform in percentages but gives a maximum of about 2·5 per cent. and supplies an index by which the anæsthetist can at once see the *strength* of the vapour inhaled but can at will increase or decrease it. As the inhaler depends upon the aspiration of the patient during inspiration the actual quantity of anæsthetic taken is decided by the depth and rapidity of the respiration. The amount, however, is quite subsidiary to the dilution, so that we are in harmony with those observers who, having tested this inhaler, speak well of it.[3] Dr. A. D. WALLER[4] describes and claims as a valuable means of giving exact percentages the mechanical chloroform inhaler suggested by Dr. DUBOIS of Lyons. With this instrument the objection, if objection it be, to which we refer above is removed, but in its place is the more elaborate complication of the mechanism of Dr. DUBOIS'S instrument. This is a drawback even in hospital work and still greater in private practice. It is a matter for congratulation that the rational view of the action of chloroform—that it acts in direct proportion to the dose given (i.e., its dilution) to the patient—has so far gained ground that efforts have been made to invent apparatus capable of controlling the dilution. It remains as a question yet to be determined what percentage vapour is a safe one. In the elaborate report[5] presented by the committee appointed by the British Medical Association we find evidence that from 2 to 3 per cent. is regarded as safe—a lower estimate than that previously given by SNOW and CLOVER In this report appears a research by Professor SHERRINGTON and Miss SOWTON upon the effect of various dilutions of chloroform upon the isolated mammalian heart. Their experiments appear to suggest that chloroform in certain strength has a direct toxic effect upon the heart muscle, but that long-continued action, so far from superinducing an effect from cumulation, establishes a species of toleration. In moderate doses also chloroform passes directly away from the heart muscle, when the perfusing fluid possesses a lower chloroform tension, a fact which suggests the questions—Can this drug poison the muscle without entering into chemical combination with its substance? Does it act as an antikatalysator on the ferment processes at the root of the normal functional activity of the contractile tissue of the heart? Dr. F. W. TUNNICLIFFE and Dr. O. ROSENHEIM,[6] also adopting LOCKE'S method of isolating the mammalian heart, presented interesting conclusions in a communication to the Physiological Society. Comparing their experience with that of POHL they found that practically the same quantities of the drug produced similar results in narcotised animals (POHL) and in the isolated mammalian heart and that a very narrow margin existed between the quantity of chloroform just borne in narcosis and that which stopped the heart. In their experiments with ether Dr. TUNNICLIFFE and Dr. ROSENHEIM were unable to produce any serious effects upon the heart with even as great a strength as 1 in 500. Professor E. A. SCHÄFER and Dr. H. J. SCHARLIEB have contributed a research to the same society dealing with the action of chloroform upon the heart and bloodvessels. They believe that their experiments show that it is the action of chloroform upon the inhibitory mechanism of the heart which produces syncope and that the result of perfusion of chloroform is to induce contraction and not dilatation of the vessels. That chloroform is an active protoplasm poison is now fully recognised and when an insufficient dilution occurs it seems more than probable that this toxic action comes into operation. Whether, however, long-protracted inhalation of chloroform will produce this result is unproven. Dr. Leonard G. Guthrie's very thoughtful paper,[7] in which he returns to the subject of fatty changes occurring, as he believes, in the liver after, and as a result of, the administration of chloroform, appears to support such a view especially when taken together with preceding reports supplied by Berend, Schenk, Fränkel, Bastanielli, Roth, Thiem, Fischer, Heintz, Cohn, Ballin, and others. That changes of a somewhat similar nature have occurred in the epithelium of the kidney tubules is well authenticated. An additional effect of both chloroform and ether was pointed out by Turck and in an editorial review of his work in the *Therapeutic Gazette* for June it is suggested that by depressing the vaso-motor centres the heat of the body is lowered and it is further indicated that the action of chloroform and ether upon the tissues may promote the formation of toxins causing destruction of the blood corpuscles. We are not at present prepared to accept this hypothesis and the kindred one that in a similar manner chloroform lessens the power of resistance of the tissues to bacterial invasion. The anæsthetic, if proved to have a causal result to these pathological changes, may be only the agent in so far as it depresses the general vitality of the tissues. The papers of Dr. S Crile[8] and Dr. J. Blumfeld[9] on the effects of anæsthetics in producing shock are of value Dr. Crile's careful study seems to indicate that surgical shock is the expression of exhaustion of the vaso motor centre, while collapse is due to suspension of the function of the cardiac and of the vaso-motor mechanism. That chloroform, and in large quantities even ether, may cause or increase such suspension of function appears rather to make us pause before accepting the current view that these anæsthetics protect the nervous system in proportion to the depth of the narcosis. The treatment of collapse under anæsthetics has been dealt with by Dr. Sawkins[10] in a useful paper. Morphine, by depressing the respiratory centre, is usually dangerous as a preliminary to chloroform. Strychnine, regarded by many writers (Dr. Sawkins, Dr. Vance, and others) as the most valuable drug in preventing and alleviating the symptoms of collapse, is by Dr. Crile considered useless in therapeutic and dangerous in larger doses. Much has been written upon the value of adrenalin in this connexion. Dr. Mankowski, who was the first, we believe, to point out its value as a vaso-motor stimulant, has been corroborated during the year by Dr. Crile, Dr. Vance, and others. As it is rapidly oxidised in the tissues adrenalin must be given repeatedly in small doses. Large doses are liable to stimulate the vagal inhibitory mechanism and may thus introduce a fresh peril into the situation. Dr. Vance's excellent paper[11] deals with all the reputed methods of drug treatment for anæsthetic collapse. In spite of the case recorded[12] in which bimanual compression of the heart resuscitated the patient after complete cardiac cessation, the work of Dr. Boureau and Dr. Gallet shows that both from the clinical and experimental side Prus's method offers us little promise of use in such cases. The importance of prompt and prolonged use of artificial respiration in failure of the medullary centres during collapse is exemplified in the reports given[13] where recovery took place after one and a half hours, and[14] in which last case recovery took place after one and a half hours, even when no sign of life appeared until 55 minutes after the occurrence of collapse.

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[1] New York Medical Journal, Feb. 21st, 1903.

[2] THE LANCET, March 21st, 1903, p. 800.

[3] See Special Report issued by the British Medical Association, Brit. Med. Jour., July 18th, 1903.

[4] THE LANCET, Nov. 28th, 1903, p. 1481.

[5] Report of Special Chloroform Committee, 1892-95, Brit. Med. Jour., July 18th, 1903. The committee consisted of Dr. Barr, Dr. Dudley Buxton, Professor Dunstan, F.R.S., Mr. Vernon Harcourt, F.R.S., Sir Victor Horsley, F.R.S., Dr. MacCardie, Professor Sherrington, F.R.S., and Professor Waller, F.R.S.

[6] Journal of Physiology, vol. xxix., No. 3.

Papers dealing with the preparation and management of the patient have appeared by Professor Witzel of Bonn who advocates lavage in post-anæsthetic vomiting, Dr. J. G. Clark,[15] and Dr. S. J. Kopetzky, whose experience is against the occurrence of post-ether pneumonia. A writer in *La Presse Médicale*, Sept. 16th, 1903, has drawn attention to the dangers associated with the Trendelenburg position during anæsthesia as tending to heart failure in the obese, to lung congestion and damage to atheromatous vessels. The research of Dixon and Brodie[16] deserves notice. They find that both chloroform and ether cause a slight dilatation of the pulmonary bronchi. Dr. D. H. Lingle's paper[17] in which he states that oxygen, a gas which has been proved to be so valuable in perflation of the lungs of persons in anæsthetic collapse, is capable of maintaining rhythmic beats in a strip of turtle's heart for a very long time, indeed, until the muscle disintegrates, appears to show that oxygen even if not a direct antagonist to chloroform vapour at least is capable of supporting its power of carrying on its function. We can only refer to Dr. Evelt's paper[18] which gives his method and to a practical communication on chloroform anæsthesia by Professor E. Martin[19]

Ether.

Many of the papers cited above deal with this anæsthetic as well as with chloroform, but Hofmann[20] devotes some space to the "initial anæsthesia of ether." The existence and use of this transient condition were pointed out years ago but possibly have been forgotten by many and may be useful for brief operations. In a paper by Dr. G. Morton[21] will be found a careful study of the phenomena of ether narcosis and a thoughtful study of the pupillary variations occurring under that anæsthetic. The important subject, the Body Metabolism under Ether, is treated by Dr. H. J. Pechell[22] but the conclusions arrived at are probably only tentative, as the factors of the problem are many, and the effects of one can hardly be accepted as determining results unless possibly coincidental variations due to diet, shock, and other causes are fully accounted for; indeed, Captain J. C. B. Statham, R.A.M.C.,[23] called the work of Dr Pechell in question on this account. In a contemporary[24] a curious and, we believe, unique accident is reported. Upon turning on the electric light near an ether inhaler the ether ignited, burning the patient's face.

Chloride of Ethyl and Bromide of Ethyl and their Mixtures.

Perhaps more work has been done during the past year upon these bodies than upon any other branch of anæsthetics. The papers of Dr W. J McCardie,[25] Dr. C. G. Cumston,[26] Dr Lotheisson,[27] and Dr. T. D. Luke[28] give excellent accounts of the work which has been done as well as the experience of the respective writers upon chloride of ethyl Dr. Burnet[29] advises its use as a preliminary to chloroform. Dr. Ware[30] gave his experience of 1000 cases and places the death-rate at 1 in 15,000, although other writers form an even more favourable estimate. He regards the anæsthetic as satisfactory in 95 per cent of cases. Certainly the causation of the deaths recorded by Soulier, Kocher, Slitz, and Bossart, with perhaps the exception of the first named, cannot without more evidence be assigned to the method employed. In the columns of THE LANCET also have appeared papers by Dr. T. EASTHAM (April 18th, p. 1091) on Bichloride of Methyl Ethylene ("Narcotile"), by Mr. W. FOSTER CROSS (April 25th, p. 1168), by Mr. R. H. JOCELYN SWAN (June 13th, p. 1677), by Mr. VERNON KNOWLES (August 1st, p. 323), and a letter by Mr. W. B. SECRETAN (August 15th, p. 496), on the mixture of methyl chloride with the bromide and chloride of ethyl, the so-called "somnoform" Several papers have appeared in this country—notably Dr. W. R. HUGGARD'S paper in THE LANCET of Sept. 12th, p. 745—and abroad in which chloride and bromide of ethyl are advocated as preliminary to ether and the consensus of opinion appears to be in favour of the plan. Mr. SYDNEY COLE has worked out with some care the physiological actions of somnoform and bromide of ethyl (a brief note of his research will be found in the Proceedings of the Physiological Society, May 16th). Both Professor VON WINCKEL[31] and Dr. BURCKHARDT[32] have tried SCHLEICH'S suggested mixture of ethyl chloride, chloroform, and ether but have returned to the use of chloroform as a more satisfactory anæsthetic. The general view of chloride of ethyl is in its favour for short operations. The views entertained by various writers differ as to after-effects and the best means of giving the drug, some referring to it as being free from all unpleasant sequelæ, others giving vomiting and headache as frequent results. We must clearly wait for further experience before deciding upon the merits of the body as a rival to nitrous oxide gas; we also require further trustworthy work upon the physiological side.

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[15] Therapeutical Gazette, May, 1903.

Local Anæsthesia.

Dr STRUTHERS[33] (Leith) has during the year employed OBERST'S method of local analgesia with success, limiting its use to minor operations on the digits. It should be remembered that although OBERST employed cocaine the β-eucaine may be substituted. This method is one closely resembling that of CORNING: the circulation is stopped and the anæsthetic is injected into the tissues but not into the nerve sheaths, as practised by SCHLEICH. The obvious objection to this method when it is desired to render analgesic areas the circulation of which cannot be checked is met in Mr. A. E. BARKER'S method,[34] in which the region is made ischæmic by the employment of adrenalin. He adopts a solution made as follows: β eucaine, 0·2 gramme; sodium chloride, 0·8 gramme in 100 cubic centimetres of boiled sterilised water; and 0·001 gramme of adrenalin chloride. This gives 1 in 500 eucaine and 1 in 100,000 adrenalin chloride. After 20 minutes the area into which the solution is injected becomes blanched and analgesic and is said to remain insensitive for two hours. Mr. BARKER has performed such operations as BASSINI'S for radical cure of hernia, the relief of varicose veins, and so on, and in the majority of cases without discomfort to the patient.

Subarachnoid Cocainisation.

Dr. ERNEST G. MARK has contributed a useful paper on the Present State of Spinal Subarachnoid Cocainisation.[35] He has collected 2000 European cases with six deaths, recorded by TUFFIER, GORLAD, JONNESCO, DUMONT, JULLIARD, and HEUMBERG (each one death), the last-named being due to the puncture of the spinal veins in the cauda equina. Dr. MARK, who is an enthusiast for the method, doubts whether all the deaths reported were in fact due to cocaine intoxication. In America one death occurred in MORTON'S practice but Dr. MARK doubts whether it was due to cocaine GUMPECHT reports 17 deaths following upon lumbar puncture for diagnostic purposes from the practices of QUINCKE, FURBRINGER, LENHARTZ, LICHTHEISEN, KRONIG, BULL, and GUMPECHT himself. MORTON regards these as due to shock, that is, to disturbance of the vital centres owing to the withdrawal of spinal fluid. In response to inquiries Dr. MARK finds many surgeons still use the method. He expresses a personal inclination in favour of tropacocaine instead of cocaine, eucaine or β-eucaine being unsuitable for spinal injection. ZOZLOWSKI'S method, the aim of which is to obviate the irritant action of the cocaine in water solution by employing tropacocaine in lieu of cocaine and dissolving it in cerebro spinal fluid freshly removed from the subarachnoid space, has been adopted with satisfactory results by GUINARD[36] and appears an advance in the method of subarachnoid cocainisation—a method which most observers seem to regard as a somewhat hazardous procedure and one only justified in the most exceptional cases. The plan advocated by BLOS and originated by SCHNEIDEREIN of injecting morphine with scopolamine has upon fairly extensive trial been found wanting. SCHICKLBERGER[37] has made some careful observations upon this method. It consists in injections of one centigramme of morphine and 1·2 milligrammes of scopolamine hydrochlorate four, two, and one and a half hours before the operation. Even in sleep so much restlessness was present as to interfere with the surgeon. BLOS admits that a preliminary trial in each case is necessary and WILD[38] has met with grave symptoms. In one case the patient's life was for a time threatened, while in the large proportion of his cases he had finally to resort to ether to obtain a sufficient restful narcosis for surgical procedure.

In conclusion we may note that the year has produced much that is valuable and has advanced our knowledge of both the theory and the practice of anæsthesia.

THE MIRROR OF HOSPITAL PRACTICE.

Among the numerous cases appearing in the Mirror of Hospital Practice there have been many of exceptional interest.

Post-operative Dilatation of the Stomach.

Post-operative dilatation of the stomach in any marked extent is decidedly rare though it is not improbable that some slight degree of this condition is of fairly common occurrence when an operation wound becomes infected. The presence of gastric dilatation may account for the benefit which results from washing out the stomach in some cases in which distension and vomiting occur after operations on the abdomen. An example of very marked dilatation of the stomach and intestines occurred at St. Thomas's Hospital in a patient under the care of Dr. C. R. BOX and Mr. W. H. BATTLE The patient, a woman, was admitted for the removal of a large ovarian tumour. A few days after the operation an abscess developed in the left iliac region, superficial to the aponeurosis of the external oblique. The abdomen became greatly distended and the gastric dilatation was so great that it reached down to the level of the iliac crests. By gastric lavage, hypodermic injections of strychnine, positional treatment, and the application of electricity she gradually improved, though many adverse symptoms appeared. There can be no doubt that the rapid and extreme dilatation of the stomach was due to the infection of the wound and was brought about by the action of toxins. Another somewhat similar case was reported from the Kent County Asylum where the patient was under the care of Dr. F. W. STEWART. A man, 55 years of age, suffering from epilepsy, developed an acute ischio-rectal abscess; this was opened and scraped and for ten days all went well. Then he complained of severe abdominal pain and the abdomen began to enlarge and in spite of treatment he died two days later. At the necropsy it was found that the stomach would hold 10½ pints, the walls being very thin and pale. In this case it is probable that the acute dilatation of the stomach was etiologically connected with the microbic infection of the perineum.

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[31] Munchener Medicinische Wochenschrift, Jan. 6th.

[32] *Centralblatt fur Gynäkologie, April 4th.*

[33] Medical Press, Sept. 9th, 1903.

[34] THE LANCET, July 25th, 1903, p. 203.

[35] New York Medical Journal and Philadelphia Medical Journal, Oct. 31st, 1903.

[36] Therapeutic Gazette, April, 1903.

[37] Wiener Klinische Wochenschrift, Dec. 18th.

[38] Berliner Klinische Wochenschrift, March 2nd, 1903

Chylous Ascites.

An example of the very rare condition chylous ascites was admitted into the Manchester Union Hospital under the care of Mr. ARTHUR H. BURGESS. In all 27 pints of a milky fluid were removed from the peritoneal cavity. The patient died and at the necropsy a carcinoma was found, starting in the head of the pancreas and involving the commencement of the thoracic duct and a small portion of the wall of the inferior vena cava

Strangulated Hernia in association with Hæmorrhagic Pancreatitis.

The association of a strangulated hernia and acute hæmorrhagic pancreatitis must be very rare. Such a case was under the care of Mr. W. H. BROWN in the Leeds Infirmary. The patient was a man, 60 years of age, who was admitted for severe pain in the lower part of the abdomen with vomiting and constipation. On the right side was an irreducible inguinal hernia and this was operated on, the bowel being found deeply congested but not gangrenous. The intestine was returned but the patient died 24 hours later, the vomiting persisting to the end. At the post-mortem examination the head of the pancreas was seen to be very dark in colour and friable and on its upper surface was a greyish slough. In the lesser sac was a large quantity of curdy fluid resembling pus and the foramen of Winslow was closed.

Ulcerative Colitis.

Ulcerative colitis, not dysenteric in origin, is certainly rare and therefore a case in the Great Northern Central Hospital under the care of Dr. H. W. SYERS is of interest. The patient was a married woman, 29 years of age, who about a month before admission began to suffer from troublesome diarrhœa accompanied by loss of flesh and strength. The diarrhœa continued in the hospital and about three weeks after admission she was suddenly attacked with a great increase of abdominal pain, perforation having occurred. She died a week later. At the necropsy the large intestine was found to be extensively ulcerated and in the ascending colon was a perforation.

"Trifid" Stomach.

The hour-glass stomach is now known to be by no means so great a rarity as was at one time imagined, but a stomach with a double constriction, a "trifid" stomach, is certainly extremely rare. The first example of this condition seems to have been described by Mr. A. W. MAYO ROBSON and the second was under the care of Mr. B. G. A. MOYNIHAN in Leeds General Infirmary. The patient was a woman, 27 years of age, who nine years previously had apparently suffered from a gastric ulcer with pain after food and vomiting. Similar attacks had occurred at intervals and she suffered constantly from "indigestion." A diagnosis of hour-glass stomach was made and when the abdomen was opened it was found that two constrictions of the stomach were present. Gastro-gastrostomy was performed between the first and second sacs, the second pouch was united to the jejunum by a posterior gastro-enterostomy, and the constriction between the second and the third pouches was digitally dilated. The patient's recovery was without incident.

Ectopic Gestation.

It is very rare to meet with a twin pregnancy in which one fœtus is in the uterine cavity while the other is ectopically situated. An instance of this rare association has been under the care of Dr. JOHN H. GALTON in the Norwood Cottage Hospital. Rupture of the ectopic gestation apparently occurred about the fourteenth week. A laparotomy was performed and the ectopic fœtus was removed with much blood clot. The patient died six days after the operation.

Dr. D. LLOYD ROBERTS had a case in St. Mary's Hospital, Manchester, in which ectopic gestation occurred. By abdominal section the ruptured right tube was removed with the ovary and the fœtus. Attached to the left tube was found a small firm tumour about one and a quarter inches long; this was taken away and on examination it was discovered to contain bone, cartilage, and some substance apparently epithelial. The mass was probably a dermoid cyst.

Purulent Pneumococcic Arthritis in Children.

The pneumococcus is now known to be responsible for many conditions other than lobar pneumonia, and an important series of five cases has been published in THE LANCET. These all occurred at the East London Hospital for Children and in each of them there was a purulent arthritis due to the action of the pneumococcus. In four of the cases the patients were infants and Mr. L. S. DUDGEON and Dr. W. P. S. BRANSON, who report the cases, maintain that the infective arthritis of infants is practically always pneumococcic in origin. Three out of the five patients died but the average mortality is probably less than this. In one of the cases the heart's blood contained the pneumococcus at the necropsy, and therefore it may be said that the child died from pneumococcic septicæmia.

Toothplate in the Œsophagus.

The removal of a toothplate impacted in the œsophagus is often a matter of great difficulty. Mr. W. G. SPENCER had a patient in Westminster Hospital who had persisted in wearing a broken denture. During a meal it passed into the œsophagus and there became fixed. The plate could be grasped by forceps but could not be removed. The œsophagus was opened a short distance below the cricoid cartilage and the plate was easily extracted. The wound had almost healed when the patient left the hospital three weeks after the operation.

CHEMISTRY.

Radium.

The study of radio-activity has this year passed from a seeming importance to a very real importance which, indeed, it is difficult to estimate. Chemists who have been pursuing this line of study for years have been looked upon as merely men who were groping very much in the dark but who occasionally brought to light a phenomenon pleasing to the eye and, at most, curious. The past year, however, has witnessed perhaps the most wonderful revelation that has ever been made in chemical science. It was triumph enough to discover what lay at the root of the property of radio-activity of certain minerals, but that an element would ultimately be isolated which was not only powerfully radio-active but which maintained itself constantly at a temperature above that of its environment exceeded the wildest speculation. The discovery of radium, in fact, has brought us to a very critical period in the history of scientific thought. The discovery has attracted the students of one and all branches of science, for its remarkable properties have a widespread concern. What branch of science is not concerned with a discovery, such as this, which is calculated to throw light on the origin, constitution, and destiny of matter? Time was when the atom was regarded as the smallest conceivable particle of matter. Now we know that the atom is in itself a tiny cosmos swarming with electrified particles travelling freely with immense speed in all directions, and these particles—electrons—may either manifest themselves as matter or force. We thus come back to the conception of a primordial material, sometimes force, sometimes matter, a material which perhaps is common to, and is the root substance of all the many varied forms of elementary matter known to us. The discovery of radium would thus appear to have broken down the theory so long and so tenaciously held of the immutability of the forms of matter. Already in the disappearance of the emanations from radium helium has been seen to take their place, a transformation apparently directly from a manifestation of energy into matter. All things are unstable and in a state of change: it is only a matter of time. We know of the great tendency of complex substances in the organic world to break down into simpler substances, but until the discovery of radium we had little proof that similar changes were going on in the inorganic world—a decay represented by the gradual resolution of elements of higher atomic weight into elements of a lower atomic weight. We thus gain some insight into the meaning of the distribution of rare elements and of those that are of common occurrence. It is strange that the old alchemists conceived the idea of converting metals of low atomic weight into metals of high atomic weight, thus reversing the natural tendency of the noble metals to depreciate into the baser. No wonder that the study of radioactivity which has led to the discovery of radium has excited an eager expectation amongst scientific men as to the possibility of some of the great truths and mysteries of nature being soon laid bare. Full of theoretical interest as the discovery of radium is, its remarkable property of radio activity has already met with practical application in the treatment of disease, but its real value in this regard, as in the treatment of cancer and lupus, cannot yet be determined. The radio-emanations are undoubtedly powerful to produce chemical change but it remains to be seen whether they will be effective in checking the advance of a morbid process or of destroying, or of restoring to a healthy state, diseased tissue Of the year 1903 it may be said that it was in that period that chemistry achieved one of its greatest triumphs.

Low Temperature and Biological Problems.

As with the abstruse search after radio-active bodies, so with the study of excessively low temperatures. What could be the utility of gaining low temperatures except from a purely theoretical point of view? Yet what appeared at first sight to be a study confined to mere theoretical considerations has already proved to be a source of light in biological problems and to add materially to our knowledge of the nature of disease. Thus by the application of low temperatures a mechanical trituration of every variety of cell *per se* has been accomplished and the fresh cell plasma has been obtained for the purpose of experiment. In this way moulds, yeasts, and bacteria have been reduced to a brittle state, have been crushed, and their respective cell juices have been obtained for examination. In this way the typhoid organism has been crushed and within itself has been found a toxin. We have thus to distinguish between the toxin within the cell and a toxin which is extracellular. This line of investigation is obviously calculated to help considerably in gaining an insight into the nature of disease and in discovering means by which disease may be checked or prevented.

Inorganic Ferments.

Even the distinction between an organised and an unorganised body threatens to be broken down, for a remarkable analogy has been shown to exist between the action of enzymes and of metals in the colloidal state, and so much so as to have given rise to the description of the latter as inorganic ferments. The question has actually been asked, "Are the metals living entities?" the answer to which must obviously turn on the other question, 'What is life?" If the metals platinum, gold, silver, cadmium, and iridium are reduced to such a fine state of division that they remain suspended in water in the form of a solution, that is of a colloidal solution, they bring about changes when in contact with other substances which closely resemble the changes due to the action of an enzyme. Thus platinum will oxidise alcohol to acetic acid and iridium will decompose calcium formate into calcium carbonate, carbon dioxide, and hydrogen in the same way as do certain organisms. Again, colloidal solutions of the metals will invert cane sugar and also will decompose peroxide of hydrogen after the manner of the enzymes in the blood. Most remarkable of all is that this action of metals in colloidal solution is retarded by the presence of strong poisons, such as corrosive sublimate, or sulphuretted hydrogen, or of antiseptics such as iodine. As regards the explanation of this action we are at present limited to saying that finely divided metals in the colloidal state present enormously developed surfaces and that the same condition exists in the enzyme. It is said to be catalytic action, but what is catalysis?

Food Synthesis.

The food of man is, after all, but a product of synthesis the secret of which is in nature's keeping. We know perfectly well what are the elements of food but we cannot build them up to make the concrete form—that is the function of the plant and of the animal. The synthesis of food, however, is not such a remote possibility as may be imagined, for already certain food substances have been successfully built up from their elements, but it must be admitted by laborious and expensive methods which are of interest only so far theoretically and not practically. Electricity will probably prove to be a powerful synthetic agent in the future. It has already been stated that given carbon, hydrogen, and oxygen in the simple association existing in carbonic acid gas and water the current under certain conditions will bring about a rearrangement of the elements until at length carbohydrates are obtained. This achievement, however, leaves out the question of building up nitrogenous and fatty material in a similar way. The air may ultimately prove to be a profitable source of nitrogen and already by means of electricity nitrate has been prepared from it with which to fertilise the soil for plant life. It would be a strange solution of the food problem if it should prove that all that is necessary for building up all classes of reparative materials is an abundant supply of chalk, air, and water.

THE NAVAL AND MILITARY MEDICAL SERVICES.

Exceptional Features of the late War.

Considering how much the events and changes brought about in 1903 in the army and navy have been attributable to, or influenced by, the late war in South Africa, it may be well before the subject is relegated to things of the past to recapitulate a few points connected with that campaign which well deserve to be borne in mind. The war was unique, the conditions being new, quite exceptional, and such as may, and probably will, never occur again. The scene of warfare was 6000 or 7000 miles distant from this country and the force in South Africa was about four times that which had been contemplated. The medical service which, after the Egyptian war, had been greatly reduced, was only organised for 70,000 and found itself required to meet the needs of over 200,000, and the forces in South Africa were widely dispersed and separated by long distances in a difficult country where enteric fever may be said to be endemic.

Mortality Statistics of the late War.

An exhaustive paper on the Mortality Experience of the Imperial Forces during the War in South Africa—October, 1899, to May, 1902—communicated to the Institute of Actuaries by Messrs. F. SCHOOLING, F.I.A., and E. A. RUSHER, F.I.A., has been lately published. From this we learn that the annual death-rate in the late campaign was 38 7 per 1000, as compared with 50 per 1000 the average of a number of campaigns and 70 per 1000 in the American civil war. The deaths from disease were double the number of those from wounds. In the American civil war, from 1861 to 1865, the death-rate from disease was four times that from wounds. The publication of the official narrative of the medical, surgical, and sanitary history of the war in South Africa, which is understood to be in preparation, is awaited with much interest.

1903 an Eventful Year.

The year 1903 has been full of events having a wide and important bearing upon all that concerns the defence of the empire and it has quite recently witnessed the publication of one of the most important State documents that has ever appeared in this country—namely, the Report of the Royal Commission on the Preparations for the War in South Africa, further reference to which will be made. The changes which have taken place in our public medical services it must be remembered might, but for that war, have never been undertaken at all. Their consideration would, in all probability, have been deferred on political grounds to some more fitting opportunity, to be carried out only under the pressure of some disaster or other. A glance through the pages of THE LANCET for 1903 will show that an unusually large number of questions have arisen during the past year which have a more or less direct bearing upon the maintenance of the numerical strength, health, and efficiency of our Imperial forces. The fact of the empire having just passed through a war of a magnitude such as it has not experienced for about half a century gave ample cause for reflection and we may invite attention to the thoughtful and instructive introductory address delivered by Dr. V. WARREN LOW at St. Mary's Hospital on Oct. 1st on the Relationship of the Military Medical Service to the Civil Profession.[1] The subject with which our readers are primarily and more immediately interested, however, is as to the changes which have been effected in the public medical services. As the events in South Africa were the origin and cause of these changes it was only to be expected that a beginning would be made with the Army Medical Service.

The Royal Army Medical Corps.

Following the report of Mr. BRODRICK'S War Office committee the Royal Warrant of March, 1902, for that service was published together with some new regulations which were but supplementary and complementary of that warrant. During 1903 a great deal has taken place to give effect to the reorganisation and the reforms that had been recommended and adopted, with a result which seems so far eminently satisfactory, if we may judge from the largely increased number of medical candidates who have been attracted to the service. We consequently see no reason for altering or modifying the good opinion which we expressed regarding the warrant. We said at the time of its appearance that, speaking generally, it was based upon sound lines and principles, that it introduced many new features which were urgently required, and that, taken as a whole, we thought the War Minister, the medical service, and the profession generally were to be congratulated on its appearance. We may refer our readers to the article[2] setting forth, for the information of intending candidates, the advantages introduced by the Royal Warrant. There are still several matters connected with the army, army hygiene, and the hospital service in time of war, as well as with the improvement and modernisation of many of our existing station hospitals, that need to be carefully and practically considered with a view to medical and sanitary efficiency. But as regards the Royal Army Medical Corps, what it now appears to want is rather systematic and progressive development on existing lines than any further revolutionary or organic changes. The door has been opened to professional merit and the medical officer is the master of his fate in a way and to an extent that has never before been the case. The establishment of an Army Medical College in London we regard as a very important step if for no other reason than that, in addition to the special information they are acquiring inside that institution, it places army medical officers in a position to avail themselves of all that is going on in the medical and scientific world outside it, and as an indication of the fresh spirit which has been infused into the department we may point to the issue, in realisation of a hope of many years, of the *Journal of the Royal Army Medical Corps* in July last.

The New Naval Medical Service Regulations.

Although it was but natural that in the circumstances the remodelling and improvement of the Army Medical Service should stand first in chronological order it necessarily involved that corresponding changes would have to be made in the medical service of the Royal Navy. New regulations were accordingly issued for that service and formed the subject of a leading article in THE LANCET of April 26th, 1902, p. 1193, and of some subsequent articles. In 1903 we were enabled to indicate in our Students' Number that such changes were imminent in the regulations for the Naval Medical Service as would, in our opinion, considerably improve the position of the naval medical officers. The latest regulations, in which are embodied the provisions of the Order in Council of March 24th, 1902, and August 11th, 1903, were published in THE LANCET of Sept. 12th last (*vide* pp. 774–776). This official document is of a long and elaborate description which requires to be read *in extenso* by those who intend to throw in their lot with that branch of the public service; but we may say that, speaking generally, the new regulations are regarded as satisfactory and that as far as was possible where so many differences exist between the naval and military medical services very much the same measures have been applied to both.

Indian Medical Service.

At the time of the publication of the Students' Number of THE LANCET in September last no fresh warrant for the Indian Medical Service had made its appearance, although it was, of course, well known that one had long been under contemplation and consideration at the India Office and that it might be expected to be issued shortly. That the Indian Medical Service was at the time labouring under several disadvantages and that its medical officers had some just grievances which called for notice and redress we could not doubt, and we entered into and discussed the nature of these, calling attention at the same time to a report issued by the Royal Naval and Medical Committee of the British Medical Association (*vide* THE LANCET, Sept 5th, p. 727); the Indian Medical Service has, as our readers know, always been held in high repute and esteem by the profession at large.

A memorandum showing the alterations to be effected in the conditions of the service was forwarded to us from the India Office and appeared in THE LANCET of Oct 3rd last (*vide* p 973). This was followed by the publication of a new Royal Warrant for the Indian Medical Service in the *London Gazette* of Dec. 4th embodying these alterations (*vide* THE LANCET, Dec. 12th, 1903, p. 1682). That it improves the pay and position of medical officers and largely remedies some of the evils we had referred to may well be admitted, but we are still somewhat doubtful whether sufficient has been done to restore completely the confidence of the medical profession.

The reader's attention may be directed to the address recently delivered to the students of the Royal College of

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[1] THE LANCET, Oct. 10th, 1903, p. 997.
[2] THE LANCET, May 23rd, 1903, p. 1469.

Surgeons in Ireland by Sir Lambert H. Ormsby, President of the College, published in The Lancet of Nov. 21st (p. 1413) for much useful information regarding the naval and military medical services and the present and prospective advantages which, in Sir Lambert Ormsby's opinion, these respectively hold out as a career in comparison with other sources of professional employment.

The Report of the Royal Commission on the late War.

In August and September last[3] the findings of the Royal Commissioners upon the preparations for the war in South Africa came under review together with the highly interesting and instructive minutes of evidence accompanying their report. Although the Commissioners stated that as the care and treatment of the sick and wounded in the South African campaign had been already reported upon by the Hospitals Commission of 1900 they saw no good reason for reopening that general question they nevertheless took much evidence and instituted a good deal of inquiry into these matters and into the *personnel* and equipment, organisation, and training of the Royal Army Medical Corps as well as into the army hospital system and that of army sanitation in the field. The report and minutes of evidence have a very wide and important bearing and form a mine of highly valuable and instructive information. We should hesitate to express anything so obviously true as that the first essential element in war is preparedness if every line in these official volumes did not show that this fact had apparently been altogether lost sight of in the late war. As to the skill of the army surgeons and the quality of the equipment the views expressed by the witnesses were somewhat divergent, but it is satisfactory to note that the testimony as to the personal zeal and devotion of the medical officers was unanimous. As regards the professional training of medical officers the fundamental difficulty is to make that training so far as possible of a practical character and to keep it at the proper standard throughout the medical officers' service career. Actual experience in the application of medical and surgical methods has a value of its own compared with which other things are of relatively little importance to the individual or to the State. If there is one subject more than another that requires to be put on a satisfactory basis it is army sanitation in the field and the sooner the requisite organisation for doing this is considered and settled the better. We are bound to hear a good deal more about the report of this Royal Commission when Parliament opens.

The Typhoid Fever of Armies.

As might have been expected, the etiology, causes, and prevention of typhoid fever in armies have continued to be the subject of keen investigation during 1903. A large mass of evidence as to the cause and spread of this fever in armies was published by the Government of the United States in a report on the epidemics which devastated the volunteer camps of the United States army in 1898. This was followed by the report embodying the results of the work of Lieutenant-Colonel R. H. Firth, R.A.M.C., and Major W. H. Horrocks, R.A.M.C., in the Netley laboratory. Taking the two together they afford a striking confirmation of one another—of the results drawn from real service life corroborating those of recent laboratory and bacteriological inquiries. Owing to the outbreak of enteric fever on board the reformatory ship *Cornwall* having been attributed to infected blankets from South Africa[4] the subject of the spread of this fever had also acquired a new and practical interest. Dr. H. E. Leigh Canney's scheme for securing a pure water-supply is well known and this, as well as the results of Professor Koch's recent investigations into the channels of typhoid infection in the endemically infected villages along the western frontier of Germany, have been set forth in leading articles in The Lancet of Sept. 19th (p. 831) and 26th (p. 893). It will be remembered that some time ago—in August, 1900—a commission was appointed by the Secretary of State for War consisting of Colonel J. Lane Notter, R.A.M.C., late professor of military hygiene at Netley, Lieutenant-Colonel D. Bruce, R.A.M.C., and Dr. W. J. R. Simpson to investigate the circumstances connected with the occurrence of dysentery and enteric fever in the South African campaign. There was a good deal of delay in the presentation of their report to Parliament but it was published in August, 1903, and an article upon it appeared in this journal at the time.[5] The report of this commission is a valuable one. It is based upon the results of personal inspections and inquiries made by the different members in the course of their journeys of inspection at the seat of war. The commissioners were not, however, unanimous in their report and recommendations, Colonel Notter expressing his dissent on many points.

With regard to this subject of the spread of infectious disease in armies on service our readers will probably be of the same opinion as ourselves—viz., that it is essential there should be for the future a thorough organisation of an army sanitary service to meet the needs of war.

Alleged Degeneration in the National Physique.

It will be remembered that the impeachment of the national health started by Major-General Sir F. Maurice's article that appeared in the *Contemporary Review* in 1902 was followed by a memorandum from the Director-General of the Army Medical Service on the physical unfitness of men offering themselves for enlistment in the army. This memorandum was referred by the Government to the Royal College of Physicians of London and the Royal College of Surgeons of England and elicited replies from those bodies. In other directions also investigations were made, as by the Royal Commission on Physical Training (Scotland), and are still being carried on. Sir William Taylor, Director-General of the Army Medical Service, Major-General Sir F. Maurice, and Major-General H. C. Borrett quite recently gave evidence before the Committee on Physical Deterioration at one of its late meetings at the offices of the Privy Council, Whitehall. The reader will find the question frequently referred to and discussed in our pages. So far as army recruits are concerned it may be safely said that a very great deal depends upon sufficient food, healthy environment, and suitable clothing combined with early and judicious physical training. The army being recruited from the people the remarks upon the alleged physical deterioration of the working classes made under the heading of Public Health have a direct military bearing.

Sleeping Sickness.

Our remarks would be very incomplete if we concluded them without some reference to the recent scientific labours of Lieutenant-Colonel D. Bruce, R.A.M.C., Dr. D. N. Nabarro, and Captain E. D. W. Greig, I.M.S., F.R.S., in regard to this disease and to its being caused by the entrance into the blood and cerebro-spinal fluid of a species of trypanosoma parasite, as set forth in the "further report" of the Sleeping Sickness Commission recently published by the Royal Society and to which we refer in another column.

We may well close this section of our annual summary by congratulating Brevet Colonel Bruce on his well-earned promotion in recognition of his distinguished scientific services in connexion with his discoveries regarding the causes of Malta fever and of sleeping sickness.

PUBLIC HEALTH.

Although the year 1903 will not stand out in the history of public health as having been associated with any signal discoveries as regards European diseases it will nevertheless be marked chronologically as one in which material advances have been made in certain directions and in which subjects of very far-reaching importance have come into prominence. Taking a broad view of our subject matter it will, we think, be conceded by all epidemiologists that the most startling theme of discussion from a public health standpoint has been that which has had concern with the alleged deterioration of our national physique, a subject which has filled many pages of our leading monthly reviews and which has led to the appointment of yet another committee.

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[3] Vide The Lancet, August 29th, p. 624, and Sept. 26th, p. 901.

[4] The Lancet, May 30th, 1903, p. 1532.

[5] Vide The Lancet, August 29th, p. 625.

Physical Deterioration of the Working Classes

The alleged physical deterioration of the working classes amounts to an impeachment of preventive medicine of a somewhat serious character. If it were true that notwithstanding the better housing of the people, the limitation of the hours of labour, the improved conditions under which factory and other work in carried on, the greater purity of the water which the people drink, of the food which they consume, and of the soil upon which they live, physical degeneration was proceeding apace, the whole policy of our public health administration and of our social conditions generally would need to be committed to the melting pot of searching criticism Fortunately, however, the grounds upon which the allegation is based are not such as to call for an investigation of so radical a nature, and it would appear to be not improbable that erroneous inferences have been drawn from the fact that a large proportion of the men who present themselves for enrolment in the army are from one cause or another unfitted to undertake the necessary duties and that many of those who are actually enlisted are unable, after two or three years, to meet the physical demands which are made upon their strength. It is, of course, conceivable that, in consequence of improvident marriages contracted among the "unfit," of the abstention from child-bearing on the part of the "fit," and of the increasing urban conditions under which the people live, physical decay is commencing and, as was insisted upon in the last Huxley lecture, there is need for more control and selection in the matter of reproduction. But this multiplication of the so-called "unfit" has gone on in all generations and it is going on to day among every nation of the world. If the principles and practices of the stock-breeder and pigeon-fancier are to enter into human affairs we must endeavour to discover some means by which the reproduction of the Mongolian, the Hindoo, and the negro may be checked while that of the European may be encouraged.

In so far, however, as this country is concerned it appears that the most probable explanation of the alleged deterioration of the working classes is based upon a misconception of the facts and that, on the contrary, what we are witnessing may be merely one of the effects of the improved well-being of the people and of the greater attractions offered to the worker by civil employment If this be so the recruiting sergeant is really carrying on his work in a lower social stratum in which, by the force of circumstances, the proportion of the unfit is greater than was the case when he was appealing largely to a relatively better class. It is, too, conceivable that, although the fact is not recognised, a somewhat higher standard as regards fitness may now quite unconsciously be set and that, perhaps, more stress than formerly is being laid upon defective teeth, imperfect vision, and the like.

The circumstances which give us pause are reports such as that upon "Poverty: a Study of Town Life," by Mr. B. S. Rowntree, and that by Mr. Charles Booth upon the "Life and Labour of the People of London." It is, however, very difficult to reconcile the alleged deterioration of the masses with the statistical testimony, afforded by the life tables of our large cities, as to the increased expectation of life at nearly all ages, although we quite recognise that increased longevity does not necessarily imply increased vigour It is obviously possible by adopting certain artificial conditions of living and by protecting the people against the forces which hitherto thinned their ranks to rear up a people who might at once succumb were the pristine conditions as regards environment to be reverted to. To take plants from the rigour of the outside elements and to place them in a well-regulated conservatory is not an act calculated to improve the natural vigour of the stock. But it might be contended by visionaries that our life tables hold out some hope that we may by our public health measures be approaching that "physiological old age and normal death," the advent of which Metchnikoff describes so eloquently in his remarkable work on "The Nature of Man" If that time ever arrives death will have no terrors, because man will then have evolved what Metchnikoff terms "the instinct of death," which he will embrace as eagerly as in youth he accepts the instincts of love and reproduction.

Some of these considerations will perhaps be dealt with by the committee above referred to, although it is hardly likely to inquire into what may be termed the evolutionary aspects of the problem. There is certainly need, however, that a wider view should be taken of public health than has hitherto been the case and we are interested to see that some medical officers of health are beginning to appreciate this point. We find some, for instance, speculating upon the disasters likely to accrue from the limitation of reproduction on the part of those whose types are well worthy of being perpetuated, while others are drawing attention to the effect of alcoholism in the direction of promoting tuberculosis. Some, too, are evidently anxious to re-awaken a crusade against venereal disease. But reflections such as these bring us to the second question which has bulked largely in medical and lay literature during the past year.

Pulmonary Tuberculosis.

The subject of pulmonary tuberculosis seems by virtue of its excessive incidence upon the poor and unfit to follow naturally upon the foregoing remarks. In the first number of The Lancet for 1903 we were able to publish the prize essays in connexion with the King's Sanatorium and in our later issues we have had the satisfaction of recording the laying of the foundation-stone by His Majesty. This institution, which is being raised amid almost ideal surroundings, cannot fail to prove a lasting boon to those tuberculous subjects who occupy a station of life above that of the poor but who cannot afford the charges demanded at those private institutions at which their more fortunate fellow sufferers are able to give themselves every opportunity of continuing their labours. In the spring of the year the Milroy lectures upon Pulmonary Tuberculosis were delivered by Dr. H Timbrell Bulstrode before the Royal College of Physicians of London and these, which we published subsequently in our columns, should aid in steadying public and professional opinion upon some of the problems involved in dealing with this widespread malady. The lectures dealt largely with the epidemiological aspects of the problem and they showed how markedly the disease is declining in this and many other countries in consequence, apparently, of general hygienic measures and the improved social conditions of the people. They furnished, too, abundant evidence showing that the communicability of the disease is but slight and that to rank it *quâ* infection with the acute exanthemata is, as we have for a long time held, an altogether distorted view to take of the situation.

The Royal Commission which is considering the relation of bovine to human tuberculosis has not yet reported but during the year numerous experiments have been conducted in this country and elsewhere which tend to show that the results obtained by KOCH and SCHUTZ are not constant accompaniments of experiments of this nature. Human tuberculosis is obviously transmissible to bovines in certain circumstances and it remains for the Royal Commission to tell us with what facility, if at all, bovine tuberculosis is transmissible to the human adult or infant. But in the meantime there has come over from Germany a pronouncement from BEHRING which is almost as startling as was that made in 1901 by KOCH and which is, moreover, its almost direct antithesis. BEHRING and his pupils have performed a series of experiments which they claim tend to show that the intestinal tract of young animals and, inferentially, of infants is of such permeability as to allow organisms to pass through with far greater facility than is the case with adults, and, briefly stated, BEHRING's thesis is to the effect that the bacillus of tuberculosis is acquired during infancy and that the disease remains potential until the environment or circumstances of the host enable the parasite to multiply and to produce the active disease known as tuberculosis. In support of his thesis BEHRING refers to the widespread presence of tuberculosis as evidenced by post-mortem examinations, and more especially does he lay stress upon the figures published by NAEGELI who claims to have found signs of tuberculosis in the bodies of all persons over 30 years of age. BEHRING also apparently draws attention to the alleged fact that no fewer than 68 per cent. of the men of an Austrian regiment who were inoculated with tuberculin reacted thereto. In BEHRING's view the communicability of pulmonary tuberculosis from person to person has not been satisfactorily demonstrated and he would presumably explain instances of alleged infection by the thesis that persons thought to have been infected were living in circumstances which rendered them susceptible to the parasites which they had harboured since their early infancy. BEHRING has also been endeavouring to discover a method of preventive inoculation against tuberculosis in order that sanatoriums and other direct measures may not in future be required. In Paris we hear of Dr. MARMOREK resigning his post at the Pasteur Institute in order the more fully to pursue his investigations relating to what he regards as the true toxin of the tubercle bacillus. From the antitoxin which he procured from a horse treated with this toxin Dr. MARMOREK hopes to be able to establish a serum treatment of tuberculosis. The latest news from Paris is not, however, by any means encouraging.

As regards other preventive measures taken during 1903 we may add that the voluntary notification of pulmonary tuberculosis has been adopted by additional sanitary authorities and that Sheffield has, under a local Act, succeeded in obtaining powers from Parliament to render it compulsorily notifiable. It is, however, important to point out that this disease is not added to those comprised in the Notification Act and that the subjects of pulmonary tuberculosis are expressly exempted from the disabilities imposed upon those suffering from the acute exanthemata. It is this difference of treatment for which we have already contended in our columns. Much progress has been made in the erection of public sanatoriums. Cumberland is erecting an institution near Keswick; the three counties of Gloucestershire, Somersetshire, and Wiltshire are providing a similar institution at Winsley near Bath, while Devonshire, with Cornwall, has secured a building at Brent. In a recent issue we drew attention to a new departure as regards district councils and sanatoriums, and in a leading article in THE LANCET of Nov. 21st, p. 1444, we discussed the proposal to convert one of the Metropolitan Asylums Board fever hospitals into a sanatorium. The Board has decided that a step of this nature would form such a far-reaching departure that it must ask for an expression of opinion on the part of the Local Government Board. Mr. LONG will doubtless go very thoroughly into the question.

The Control of Midwives.

The reduction of the mortality both of mothers and infants which is consequent upon complications of childbirth is a matter which clearly comes within the province of preventive medicine; therefore any progress made in the administration of the Midwives Act of 1902, which came into force on April 1st of the year under review, is, assuming always that the Act is a good one, a matter for congratulation.

Up to the present, however, attention has been directed mainly to the formation of the Central Midwives Board and to the framing of rules by such Board. The local supervising authorities have not been idle and there are indications that the county councils and county borough councils throughout the country are seriously setting to work to make the best they can of the measure. It would seem that there is practically unanimous agreement among county councils not to delegate their powers to the local district councils, and in cases where a county medical officer of health has been appointed administration by a committee of the county council would appear to offer the best chances of success, at any rate in the first instance. But in counties where there is no such medical officer of health questions may arise of appointing a medical officer *ad hoc* or of delegating the powers to local authorities with expert advice at their disposal.

The measures which are now being taken for the control of midwives may, we trust, in the future be also turned to good account in the direction of lessening what is perhaps the most serious blot upon all our preventive measures and that is the persistence of infantile diarrhœa. It is to be hoped that as there rises up a better educated class of midwives they will be able to introduce into the homes and habits of the poor better notions of that elementary cleanliness which is so inextricably bound up with the health of infants. And in this matter of the improved well-being of children the question of

Physical Training and the Teaching of Hygiene in Schools

calls for comment. This subject has received considerable notice both in the medical and the lay press during 1903 and we are glad also to note that an increasing number of medical officers of health refer to the subject in their annual reports. All will, we feel sure, agree with the report of the Royal Commission on Physical Training (Scotland) that "the education cannot be based on sound principles which neglects the training and development of the bodily powers."

In our view the teaching of elementary hygiene in our public schools, the periodical examination of the children, and a well-organised system of physical drill carried out, not in dusty schoolrooms but either outside or in special buildings, will tend to promote national physical fitness, the decline of pulmonary tuberculosis, and the improved well-being of the people to a greater extent than any special legislation directed against tuberculosis is likely to effect. In this direction the School Board for London under its medical officer's guidance is setting an example which, if expanded and followed, will merit the lasting gratitude of future generations. County councils throughout the country have now an excellent opportunity of manifesting their appreciation of the confidence which the nation has shown in them in intrusting them with the education, mental and physical, of her children.

The Control of our Foods and Drinks.

It is a matter of regret to all those interested in the better control of our food supply as regards purity and wholesomeness that the recommendations made by the Food Preservatives Committee as to the material expansion of our present machinery for controlling the preparation and preservation of foods have not yet been acted upon. A considerable time has now elapsed since the report was issued and, so far as we are aware, nothing but approval has been expressed with regard to the recommendations which it contained. But there is hope that the year 1904 will see progress in this direction. We have recently drawn attention in our columns to the exhaustive report of the Royal Commission on Arsenical Poisoning and, as our readers will have observed, the recommendations made by that Commission are very much on the same lines as those made by the Food Preservatives Committee. This being so Mr. LONG should have no difficulty whatever in framing a measure which in principle would embody the recommendations of both these bodies. The report on arsenical poisoning again accentuates the pressing need which obtains at the present time for more supervision over the processes of manufacture of food and drink. Neither the chemist nor the bacteriologist can tell us for certain of the unwholesome conditions under which certain processes are carried on, or of the, at present, largely unknown ingredients which are used in the preparation of some of our foods. The report on the purity of aerated water which was made in 1903 to the London County Council by its senior assistant medical officer of health is an opportune illustration of the dangers which obtain in the preparation of foods and drinks not subject to proper control. To ask for a demonstration of injury when the risks are so patent is in no sense preventive medicine and although in the matter of the elimination of arsenic much good work has already been voluntarily effected any appearance of slackness or want of initiation on the part of our law makers is likely to create a very erroneous conception of the true state of affairs.

The Treatment and Disposal of Sewage

The Royal Commission which is considering this subject has during 1903 issued its third report which dealt with trade effluent and the formation of a new central authority, but at present the recommendations of the Commission have not been given legislative effect. It is, we believe, probable that the Commission will shortly issue another report dealing with the steps which should be taken to put an end, so far as practicable, to the risks which at present attend the consumption of certain shell-fish, and possibly Mr. LONG is awaiting the advent of this fourth report in order to embody its recommendations in his Bill

Small pox and Vaccination.

The lesson of 1903 is such an old and oft-repeated one that reiteration of it approaches boredom but in certain particulars the year has left its records upon epidemiology. The anomalous form of small pox which appeared recently in Trinidad has now manifested itself in this country and instances of it have been seen at Cambridge and elsewhere. These "sports" of nature, if such they can be termed, teach us several things. In the first place they show us that a disease may at times present itself in such an anomalous garb as to render diagnosis extremely difficult even by experts, and in this sense the importance of the general protection of the population by vaccination and revaccination is accentuated. But such anomalous cases also point to the desirability of always treating suspicious cases as if they were small-pox and of seeing multiple cases of the prevailing ailment before venturing to deny that the disease in question may not in the end prove to be the dreaded malady. If a sufficient number of cases are seen diagnosis would present fewer difficulties.

Another year has passed and Parliament has again evaded consideration of the vaccination problem. Despite the efforts of the Imperial Vaccination League and of other bodies, and notwithstanding the greater eloquence of the presence of small pox in our midst, there is a hesitancy on the part of the legislature to face the needs of the situation and to introduce a Bill providing for general revaccination. The term "compulsion" would seem to make the modern legislator turn pale with fear and when the subject of vaccination arises in the House of Commons many of those who are ostensibly upholders of vaccination are either absent or mute. An excellent illustration of this aphasic condition was afforded in the House of Commons when Mr. CHAPLIN was introducing the present Vaccination Act. But in these days the term "compulsion" as applied to vaccination is surely a misnomer and there should be no difficulty in passing a measure which proposed to place general revaccination upon the same basis, *quâ* compulsion, as primary vaccination. But be this as it may, it devolves upon the recording angel of 1903 to write down the fact that in place of the bread of revaccination Mr. LONG has given us the stone of an inquiry into the cost of applying the present very imperfect measure.

EXOTIC AND TROPICAL DISEASES

The harvest of our knowledge with respect to tropical and other exotic diseases has been an abundant one for many years past and the record of 1903 has well maintained the average.

The International Sanitary Conference which held its inaugural meeting in Paris on Oct. 10th terminated its labours on Dec 3rd by signing the new International Convention and although certain of the smaller Powers abstained at that date from giving their formal adherence to the document it is very satisfactory to note that the Convention has already been signed by eight more Powers than has been the case with any other previous Convention. Generally speaking, the measure has to be regarded as a sort of consolidation and amendment act into which there has been introduced certain provisions and modifications justified and rendered necessary by the advance of our knowledge as to the epidemiology of plague and cholera. The two most important new departures consist, firstly, in the reduction of the period of detention of infected vessels from 12 to seven days, a concession which will be hailed with satisfaction by every shipping company and all travellers; and, secondly, the application, as regards plague, of destructive measures to rats. The destruction of these vermin in infected vessels is to be carried out as rapidly as possible before or after the cargo is unloaded and no damage to merchandise on the ship is to result from the process. This will rather tax both the ingenuity and the present resources of some of our port sanitary authorities, more especially the smaller ones. Throughout the whole Convention there breathes a very liberal spirit and much is left to the discretion of sanitary authorities. We in England have long since ceased to lose our heads when a case of exotic disease arrives at one of our ports and it is gratifying to notice that the same spirit is gradually pervading other countries. The crux of the future is to procure the intelligent coöperation of Turkey, of Eastern countries generally, and of our own colonies.

Plague

The spread of cancer and the pathology of sleeping sickness are both topics of the first interest to the sanitarian, but we have already discussed these topics, as also leprosy, under another heading. A brief allusion has been made, too, to the prevalence of plague, but this is a matter on which more may be said.

We hoped to have been able at the end of 1903 to record a diminution in the amount of plague distributed throughout the world but unhappily we are unable to do so, for in India the malady has raged more severely than in any previous year. The total cases and deaths from plague in India during 1902 were respectively 765,172 and 575 469; the figures for the period up to mid-November, 1903, reached the enormous total of upwards of a million cases and 743,000 deaths. In China the chief maritime towns have continued to suffer as well as the adjacent districts but owing to the absence of proper records it is impossible to form any approximate estimate of the extent to which the disease has spread in the Chinese empire. We know, however, that Hong-Kong, Canton, Amoy, Foochow, Shanghai, Peitang, Tientsin, Inkoü, and Newchwang have all had their local epidemics. From Hong-Kong, where alone it has been possible to get trustworthy reports, we hear that the annual epidemic has been more virulent than that of last year, notwithstanding the efforts made by the local authorities to prevent its spread. Japan with its many ports has also suffered, chiefly from imported infection, Tokio, Nagasaki, and Yokohama all yielding cases. Formosa, too, has suffered but not so much as in 1902 In the Philippines, especially in Manila, plague again made its appearance but the epidemic was of smaller proportions than in the previous year. In the Straits Settlements, Siam, French Indo-China, and New Caledonia plague has shown itself, though the outbreaks have not been of any great dimensions. In Australia plague has cropped up in various localities, as, for example, at Fremantle and Perth in Western Australia and at Brisbane, Rockhampton, Bundaberg, and Townsville in Queensland. In Sydney (New South Wales) a plague epidemic almost entirely confined to rats and mice developed in the summer. A German ship from the River Plate also arrived at Sydney in August with a large number of plague-infected rats but no extension of the infection from rat to man appears to have taken place. In the Hawaiian Islands, chiefly at Honolulu, scattered cases of plague were reported during the year. Plague has continued to occur in isolated cases at San Francisco, where up to November some 17 cases, all fatal, had been bacteriologically confirmed. The fact that only fatal cases were heard of excites some suspicion that possibly the Chinese population in San Francisco were concealing the milder cases and only allowing the evidently fatal cases to come under the observation of the sanitary authority when it was no longer possible to conceal them. From San Francisco the infection was carried by ship to Mazatlan in Mexico and from this place it extended to Ensenada and other Mexican localities. Gradually the infection was conveyed southwards to Peru, where Callao, Pisco, Mollendo, Pascamayo, and Lima yielded cases. Chile also was invaded, Iquique, Valparaiso, Pisagua, Talcahuano, and some outlying villages in the vicinity of Concepcion becoming infected by plague. Brazil, it may be remembered, was first invaded by plague in 1899 and since then has had plague outbreaks in each year. During the early months of 1903 the disease was epidemic in Rio de Janeiro with some severity and later Rio Grande do Sul was also invaded. Towards the end of the year plague was again reported to have become epidemic in Rio de Janeiro and to have also broken out at Para in Northern Brazil. No cases of plague appear to have been recognised during 1903 in Argentina, Paraguay, or Uruguay.

In South Africa plague lingers but seemingly without making much progress In Cape Colony cases of plague occurred during 1903 in isolated groups or single cases at Port Elizabeth, where rats were also infected, but there was no real epidemic. Cases, occurring also in scattered fashion, were reported at King William's Town, Graaf Reinet, East London, Grahamstown, Burghersdorp, Queenstown, and Knysna. Plague, affecting rats and mice only and also in some instances cats, was observed in the Cathcart district, at Stockerstrom, and at Riversdale. At Table Bay five cases of plague occurred on board a ship which had come from Bombay and had called at certain East African ports. In Natal plague broke out in December, 1902, and became to some extent epidemic in certain parts of the town of Durban during the spring and summer months. The infection was carried later to Maritzburg and to some outlying places in the districts of Eshowe and Inanda. The epidemic died down in the summer and no cases were reported in Durban after August. During July there were observed in the Transvaal at Johannesburg some very suspicious cases of illness with buboes, but on bacteriological authority the disease was declared to be due to a pneumococcic infection. Some suspected cases of plague were reported in Mozambique early in the year. For the fifth year in succession Mauritius suffered from a plague epidemic which was of greater severity than that of 1902.

In Algeria some suspected cases of plague occurred at Blida in September but no report on the cases has, so far as is known, been made public. In Egypt plague seems to have smouldered but never became epidemic. Only 125 cases were reported from Alexandria in a population of over 300,000. Some 33 cases were referred to Port Said and 27 to Damietta. Small groups of cases were also reported in certain of the Egyptian provinces. There was no outbreak of plague in the Mahomedan Holy Land during 1903. Some cases occurred in Assyr in Arabia which is regarded as a plague endemic area. In the Bahrein group of islands in the Persian Gulf a sharp outbreak occurred, the disease proving fatal, it is said, to upwards of 1000 of the inhabitants. Statements have also been published that plague was epidemic during the spring of 1902 in the Persian district of Hawizeh.

Notwithstanding the widespread diffusion of plague throughout the world Europe almost entirely escaped the infection. A small outbreak, however, occurred at Marseilles in September among the workers in a paper factory, the disease having been originated, it is stated, by the handling of infected rags. The precise number of attacks and deaths has not been definitely made known but it is asserted by some that at least 15 persons were attacked and that at least six of them died. Fortunately the infection was quickly subdued and no extension took place in Marseilles or from that city to any other locality. A small outbreak, comprising two cases, occurred at Berlin in June, the first person attacked being a young Austrian medical man who had been making plague cultures in the laboratory of the Berlin Infectious Diseases Institute and who had accidentally inoculated himself. He communicated the disease to one of the attendants who waited upon him during his fatal illness. A small outbreak occurred at Rhodes, comprising three cases on board a sailing vessel from Alexandria in September. There were some scattered groups of cases of plague at certain places in Syria and Asia Minor but no epidemics followed.

No known case of plague occurred in the British Islands during 1903, either indigenous or imported. Only one inland case of suspected plague was heard of during 1903 but bacteriological investigation at once disproved the diagnosis of plague. A few ships having on board single cases of illness that were thought to be possibly of the nature of plague came under the notice of port sanitary authorities during 1903 but in not a single instance was the ailment found to be plague when investigated bacterioscopically. So far as Europe is concerned 1903 must be regarded as an uneventful year as regards plague save in respect to the Convention which, as we have already said, was signed in Paris.

Cholera.

During 1903 cholera continued to manifest itself in the East with considerable virulence but fortunately did not establish a footing in Europe. At the beginning of the year the disease was fast disappearing from Egypt, where it had been raging in the latter months of 1902. Less than 100 cases of cholera occurred in Egypt during the early part of 1903, these cases being as it were the expiring embers of the 1902 conflagration which had carried off nearly 35,000 persons in Egypt. Happily, notwithstanding the grave apprehensions entertained by some persons, there was no recrudescence of cholera in Egypt or in the Mahomedan Holy Land during the summer and autumn months of 1903.

But in Syria and Palestine, where cholera had spread from Egypt late in 1902, the disease made considerable ravages and though up to midsummer upwards of 6500 cases had been officially reported this number does not represent by any means the true local incidence of the disease. Resident Europeans have furnished ample evidence of the concealment of cases not only by the natives but by the Turkish officials themselves. Cholera spreading from the south of Palestine gradually extended through the vilayet of Damascus and northwards and westwards to the vilayets of Aleppo, Adana, and Diarbekir, threatening Asia Minor and Mesopotamia. The spread of cholera from Egypt by way of Palestine and Syria to Asia Minor and Mesopotamia is most unusual. It is probable that the construction of railways in Syria and Palestine may have had some effect in determining the direction of the spread of cholera by hitherto unreported routes.

Much consternation was caused in January by the arrival at Malta of a cholera-infected British ship from Alexandria. Altogether nine cases and three deaths occurred during the passage to Malta or after detention at the Maltese quarantine station on Comino Island. After landing the sick and after disinfection had been carried out the ship sailed for the Thames, where after the usual precautions had been taken the vessel was admitted into the London Docks.

In India cholera has, as usual, displayed considerable virulence. The complete records are not yet to hand but in Bengal alone over 143,000 deaths had been certified during the first seven months of the year. Among the Europeans who suffered were 25 men of the 2nd Shropshire Regiment, of whom 17 died. The United Provinces of Agra and Oudh also lost over 30,000 of the population from cholera during the same period. In the autumn of the year Afghanistan was invaded by the disease which became epidemic in Kabul and Kandahar. In French Indo-China cholera was prevalent from March to June. Early in the year there was an outbreak at Bangkok, the capital of Siam. There were also minor outbreaks in the Straits Settlements and the Dutch East Indies. A considerable epidemic occurred in the Philippine islands, over 20,000 cases and about 15,000 deaths being reported up to the middle of September. Specific pollution of public and private water-supplies provided the means for wide and rapid diffusion of the disease. From China, although the sources of information are limited, we learn that cholera was present during 1903 at a number of important seaport towns as well as in the interior—Hong-Kong, Canton, Amoy, Shanghai, Hankow, Chefoo, Tientsin, and Peitang (at the last place it is said that 2000 deaths occurred in two months). In Japan a number of localities were invaded by cholera but no large epidemic appears to have supervened. Among the places from which cases of cholera were reported may be mentioned Nagasaki, Saga, Tokio, Fukuoka, Kobe, and Yokohama. Several cases of cholera occurred on board a Russian man-of-war while in Nagasaki harbour.

Yellow Fever.

The important revolution which has of late years taken place as regards the etiology of yellow fever and the prophylaxis of the disease and which, when fully appreciated, as at Havana, has succeeded in effectually removing the disease from the current records of mortality, gave hope that yellow fever might soon become a comparatively rare disease This hope, however, has not been realised during 1903, for there has been a somewhat severe epidemic in Mexico and other outbreaks have occurred in Brazil, Panama, Costa Rica, Venezuela, and Ecuador. In Mexico a severe outbreak has been in progress since July, the greatest sufferer being the town of Linares, which is situated 55 miles south-east of Monterey, the capital of Nuevo Leon. In this place during August, September, and October at least 1800 cases were reported. At Monterey some 500 cases have also been noted. In Vera Cruz, from June to November, 900 cases came under observation. Two British ships became infected, probably through members of the crew contracting the contagion on shore. At Tampico yellow fever was also epidemic in the autumn months, carrying off 300 persons. An outbreak of yellow fever was reported in October from Laredo, a town of about 4000 inhabitants in the State of Texas, over 1000 attacks being recorded up to the end of November. These cases occurred chiefly among Mexicans residing in the town; an outbreak occurred at Minero and some cases were also recognised at San Antonio, the largest town in Texas, about 250 miles from Galveston, and some also at Cannel. The Central Public Health Department of the United States has made great efforts to get the different republics bordering on the Mexican Gulf to adopt the same policy as to yellow fever as has been adopted at Havana with such success, but the republics in question lag far behind the United States in their public health administration. During 1903 only three cases of yellow fever were reported from Grand Bassam, on the French Ivory Coast, West Africa.

Beri-beri.

This somewhat mysterious disease has continued to excite interest in the minds of observers during 1903 Its occurrence in certain localities and in certain ships has puzzled those who have investigated its causes and there has been considerable doubt as to the nature of the malady. The recent Norwegian Commission, over which Professor UCHERMANN presided and which inquired into the subject owing to the more frequent occurrence of beri-beri on board Norwegian ships as compared with British vessels, defined beri-beri as the oriental name for a multiple neuritis due to toxin poisoning by tainted vegetable or animal food stuffs. The vegetable form more particularly corresponds to the Asiatic variety and is principally brought on by eating bad (damaged or tainted) rice. The animal form corresponds more particularly with the beri-beri of European merchant ships and is chiefly caused by the use of tainted tinned (canned or preserved) provisions.

During January, 1903, there was an epidemic of beri-beri at Panama where, it is stated, previous epidemics have occurred which have been variously attributed (1) to the consumption of certain classes of food; (2) to a specific germ producing a toxin; or (3) to disturbance of the soil and emanations therefrom. It is said that those attacked had been living under deplorable sanitary conditions and that many of the sufferers had previously suffered from malaria. During 1903 some cases of the disease were discovered in Egypt and many cases occurred in China. The Malay Peninsula is notorious for the number of cases of beri-beri which occur there and it is interesting to know that at the present time the etiology of the disease is being scientifically investigated there as well as in India by competent experts. It remains to be mentioned that ship-borne cases of beri-beri came under the notice of several of our English port sanitary authorities during the year.

The suggested relationship of beri-beri to arsenical neuritis has been discussed in its recent final report by the Royal Commission on Arsenical Poisoning but without definite conclusion, the evidence having been insufficient to establish any connexion, although in some instances traces of arsenic were found in preserved fish and other foods supplied to vessels making long voyages. It seems, however, probable that true beri-beri is altogether distinct from arsenical neuritis.

Legislative Forecast.

We venture to hope that in our next Annus Medicus we shall be able to record the promotion of the President of the Local Government Board into a Secretary of State and that the central bureau of public health will have given means (1) to amend and to consolidate the Public Health Acts;

(2) to carry into effect the recommendations of sundry commissions and committees as to the better control of our foods and drinks; and (3) to carry out the recommendations of the report of the Royal Commission on Sewage Disposal.

THE GENERAL MEDICAL COUNCIL.

The work of the General Medical Council during the past year, if we except its regular task of purging the Register of unworthy members of the profession, has centred almost entirely round the question of preliminary scientific education of the student and the attitude of certain corporations with regard to the same. At the first and regular summer session a great deal of time was taken up by penal business, none of which was of particular interest save to the persons involved. It is, however, important that the work of the Council in this direction should not be cramped. We say this because Sir WILLIAM TURNER, from the presidential chair, expressed a doubt whether the amount of money which was represented by the time occupied in the hearing of penal cases was well spent. Sir WILLIAM TURNER is an able and careful president and we do not disagree with his views, or with what are apparently his views, without feeling sure of our ground. But we are clear that nothing must be allowed to curtail the penal work of the General Medical Council, lest the Council should wear the appearance of scamping one of its most important duties or of lightly condemning medical men to professional ruin When the proper threshing out of a penal case requires time, time must be given. It is, however, an unfortunate fact that the pecuniary position of the General Medical Council makes time of particular value. Mr. ALLEN, the registrar, has estimated the expenses of the Council at £650 for a session of two days and £175 for each day that follows. The subdivision of Victoria University will enlarge the *personnel* of the Council and the resolution of the General Medical Council to make regular inspections of the examinations conducted by the various bodies also points towards a rising expenditure. A memorandum of the inadequacy of the income of the General Medical Council is now before the Financial Relations Committee which will, we suppose, soon advise the Council what steps should be taken towards the keeping down of expenses or the raising of income.

The great and serious cost of a special session was brought home to the Council this year. The unavoidable length of time occupied in the May session by the consideration of penal cases left untouched the burning question of the preliminary education of candidates for the medical profession. A special session was accordingly arranged for July 15th, the business being the consideration by the Council of the inspector's and visitor's reports upon the examination in chemistry, physics, and biology of the Conjoint Board of England and the Society of Apothecaries of London. The special meeting lasted two days and upon full debate the points at issue resolved themselves into one—viz, the expediency of exercising the power of the Council conferred upon it by Act of Parliament of reporting to the Privy Council that the course of study and examination required by the two Colleges and by the Society were insufficient. With commendable prudence it was agreed to postpone the decision until the winter session.

The winter session opened on Nov. 24th and its time, like that of the two previous sessions, was mainly occupied with the discussion of the relations of the English corporations to the central educational authority. And although in the interests of peace it is a source of gratification that no definite conclusion has been reached—for delay may mean a harmonious arrangement of difficulties—yet procrastination in this matter cannot be indefinite, for the other business of the Council is being blocked while time is spent in discussion. Undoubtedly the exact position of the General Medical Council, the central authority in medical education, towards the universities and corporations entitled to grant degrees and qualifications for medical registration is a matter of the highest importance. It is a position that ought to be made extremely definite and that is what we think it now is. The question has undergone sufficient deliberation and it is clear to us that the General Medical Council must not be checked in its work of maintaining the standard of medical education. The present position is that the Colleges are considering the subject, with the desire to remedy all defects, so that it is to be hoped that new regulations may be formulated before the meeting of the Council in May, 1904. Open rupture has been averted but the Council has shown its determination to maintain the position it has taken up, a position which we consider is completely justified We repeat this because, although we have not the slightest desire to curtail the privileges of old and dignified corporations, we consider that the position of the General Medical Council as the central authority in medical education must not be jeopardised.

BRITISH MEDICAL ASSOCIATION.

The seventy-first meeting of the British Medical Association was held at Swansea, the meeting commencing on July 28th under the presidency of Dr. THOMAS DRYSLWYN GRIFFITHS, ophthalmic surgeon to the Swansea Hospital and late physician to the Swansea Infirmary. This is the second occasion that the Association has met in Swansea, the first being 50 years ago The President took for the subject of his address the Evolution of Antiseptic Surgery and its Influence upon the Progress and Advancement of Bacteriology and Therapeutics. The Address in Medicine on Infective and Infectious Diseases was delivered by Dr. FREDERICK T. ROBERTS and the Address in Surgery on the Evolution of Abdominal Surgery was delivered by Mr. A. W. MAYO ROBSON. The first general meeting was notable for the election of H R H, the PRINCE of WALES as an honorary member of the Association. The annual dinner of the Association was held on July 30th, among the oversea guests being Professor J. G. ADAMI, Professor H. SENATOR, and Professor T. GLUCK. Although accommodation was somewhat limited owing to Swansea being a small town and to the assizes clashing with the date of meeting the gathering was generally held to be most successful. We make no attempt to summarise the proceedings of the Association because, owing to the facilities courteously offered by the executive to our representatives, we have been able to report the meeting very fully in our columns. The next meeting of the Association is sure to attract a large crowd, for the venue is Oxford, the president-elect being Dr. WILLIAM COLLIER.

VARIOUS HOSPITAL FUNDS.

Owing to the growth of the population on the one hand and the strides which medical science is making on the other, each year shows a growing demand for money to supply the needs of the sick poor and to keep pace with the improved appliances which the best medical treatment demands. It is satisfactory, therefore, to know that

The Metropolitan Hospital Sunday Fund

has succeeded, under the presidency of Sir MARCUS SAMUEL, Bart., the late Lord Mayor of London, in raising the sum of £64,975 12*s.* 3*d.*, the largest amount ever collected since the inception of the Fund in 1872 Of this sum, £49,238 were collected in places of worship, showing an increase of £2907 over last year's figures. It will be remembered that their Majesties the KING and QUEEN with other members of the Royal Family attended at St. Paul's Cathedral on the Sunday preceding Hospital Sunday—namely, on June 7th—when, at the express desire of the KING, the offertory, which in spite of the unpropitious weather amounted to

£5389, was added to the amounts collected at other places of worship on Hospital Sunday. The Rev. Prebendary C. J. RIDGEWAY of Christ Church, Lancaster-gate, sent £1593; the Rev. Canon FLEMING of St. Michael's, Chester-square, £1406; and the Rev. Canon PENNEFATHER of the parish of St. Mary Abbots, Kensington, £1019. The number of contributing congregations was 62 in excess of those of last year. Mr. GEORGE HERRING, for the second time, added a quarter to the amount collected in places of worship and his generous gift amounted to £12,302. Mr. WILLIAM HERRING gave a special donation of £1000 to the collection at St. Paul's Cathedral. Among the large individual donations were one of £500 from Sir SAVILE CROSSLEY who sent a like sum to KING EDWARD'S Fund, one of £500 from "S. L., In Memoriam," and "Delta" sent a twenty-fifth donation of £200. The number of institutions which participated in the awards of the Fund was 209. The success which attended the Metropolitan Hospital Sunday Fund was not so fully shared by

King Edward's Hospital Fund for London,

for at a meeting of the General Council of the Fund held at Marlborough House on Dec. 15th the PRINCE OF WALES announced that the hopes which he had entertained at a similar meeting 12 months ago—namely, that another £10,000 a year would be forthcoming—had not been fulfilled. As, however, the financial year of the Fund has not yet ended it is to be hoped that some further substantial contributions may be announced at the final meeting. In order that the amount available for distribution might equal that of 1902—namely, £100,000—it was decided to draw upon the reserve funds. The amount received up to Dec. 10th was £71,033, to which the League of Mercy has added £10,000, this being £2000 more than it gave last year. The trustees of the London parochial charities have given £1000 for convalescent homes. A great part of the work of the KING'S Fund has been an endeavour to reopen beds which have been closed owing to want of means on the part of the hospitals, and since the Fund was started 443 beds have been made again available for patients. Ten beds have been reopened this year. A sum of £10,500 has been set apart for the purpose of assisting small special hospitals to amalgamate. A list of awards will be found on page 1831 of our present issue. Steady progress has been made by

The Metropolitan Hospital Saturday Fund,

the income to Dec. 12th being £16,628, as compared with £16,412 on the corresponding date of last year. It is interesting to note the progress that the Fund has made since the abolition of the street collection in 1897. In that year £20,138 were collected, including £3330 from street boxes. The authorities state that the Fund has now more than recovered the loss incurred by the abolition of the street collection and has distinctly increased in public favour. The main income of the Fund is derived from the penny-a-week collections in the workshops and places of business in London. This is steadily maintained notwithstanding the many other claims which are made upon the small resources of the workers. A special department has been created for the supply of surgical appliances upon payment by the patients of over 50 per cent. of the net cost. More than 3600 instruments are annually provided by this department under the supervision of a special committee assisted by competent surgeons and fitters. Towards the cost of these appliances the patients contribute over £2000. Special arrangements are also made for sending men, women, and children to convalescent homes when recommended for such benefit by a medical man. Some 1300 patients were so sent during 1902, many on the part-pay system, nearly £650 being paid by the patients or their friends towards the cost of their maintenance. Another special department of the Fund is the ambulance department, by means of which trained to render first aid in cases of accidents in the workshops or in the streets, but mostly in the workshops; and in cases where the employés of the firm subscribe £5 per annum to the Fund and include a man or woman holding a first aid certificate of the St. John Ambulance Association they are supplied on loan with completely fitted ambulance boxes. The awards for 1902 amounted to £20,902 as against £19,244 in 1901. The awards for 1903 will not be decided till Jan. 23rd, 1904.

PUBLIC ASPECTS OF SANITATION.

The Sewers of Bristol.

A considerable amount of argument has arisen from the fact that though the death-rate of Bristol compares favourably with other towns the sewers are stated not to be ventilated. This assertion is so absolutely opposed to all the well-established principles and theories that the facts seemed to call for explanation. Consequently our special sanitary commissioner instituted an inquiry on the spot. The result was a clear demonstration that it is altogether an error to state that the sewers of Bristol are not ventilated. There are certainly no grids opening on the street levels nor are there any ventilating shafts built purposely to let the air out of the sewers, but, apart from the fact that the soil-pipes of many houses have no intercepter traps and serve as sewer ventilators, there is a large amount of accidental ventilation. Twice a day the sewers are water-logged by the incoming tide and if they were airtight they would explode under this great pressure. But apart from rat holes and untrapped soil-pipes, there are great storm overflow openings which perform the function of ventilating shafts. Where such means of escape are not near at hand, then the sewer air can easily force its way through the water seal of such houses as are supplied with soil-pipe intercepter traps. The principal lesson to be derived from the experience acquired at Bristol does not show that there is no need to ventilate sewers. At best it indicates that in many instances where ventilation is purposely provided this is done in so imperfect a manner that mere accidental ventilation, such as exists at Bristol, is apt to be quite as effective.

The Housing Question at Aberdeen.

In regard to the housing controversy—which is always with us—a very interesting account was given of what has occurred on the outskirts of Aberdeen. So far back as 1808 the town council actually built nearly 200 cottages so as to house a colony of fishermen who had to abandon their homes in order to make room for the new jetty and port then being built. These cottages remained communa property till 1870, when the council reversed its policy and sought to induce the tenants to purchase their homes instead of merely renting them. From the sanitary point of view nothing is worse than very small property owners. Fishers'-square, as this district is called, is not drained; there are no closets and no water-supply in the cottages and outside there is no pavement. The insanitary conditions are such that it would be easy to prosecute the householders but this would not improve matters. The inhabitants are thrifty, steady, trustworthy fishermen but they literally have not got the money to pay for any of the alterations and improvements which are necessary to render their cottages healthy. Had the town retained possession of the property it could easily have made the necessary additions and as it is able to borrow money at a very low rate the rents charged need not have been largely increased. As it is matters are at a standstill and this because the city fathers of 1870 were not as wise and as far-seeing as their predecessors of 1808

The Sewers of Cheltenham.

Subsequently our attention was drawn to a very strange state of things still surviving at Cheltenham. Here some of the sewers are private property. They were made for profit and the corporation must not interfere with them, yet if they get out of order the owners say it is not their business to mend them. Many of these sewers were built by private speculators at the commencement of last century when Cheltenham emerged from the condition of a mere village and gradually became a fashionable place of residence. Of course they are now out of date and are worn out and do not harmonise with the general scheme of drainage which is applied where the town council exercises its full rights. These private sewers occasionally burst, inundate cellars, and are a source of constant complaint and nuisance. It is true that Section 40 of a local Act of 1852 empowers the sanitary authority to call upon the owners of the sewers to repair or to reconstruct them and if the owners refuse the authority may do the work. But the authority must recover the cost from the tenants who, in their turn, might take action against the owners. The whole situation was carefully explained and is so complicated that the only practical solution is for the municipality to buy out all the owners of private sewers. Attempts, indeed, have been made to introduce a Bill in Parliament to obtain the right to make such a purchase but various vested interests have succeeded in wrecking this project and Cheltenham remains in an anomalous position. As a health resort its reputation must suffer from this state of affairs and energetic measures should be taken to secure proper drainage.

Ankylostomiasis.

It was in the month of June that we first called attention to the very serious condition of the Westphalian coal mines. In some of these as many as 90 per cent. of the miners had been found to be infected by the ankylostoma duodenale. In the Ruhr coal-fields there were more than 25,000 miners affected. In Belgium also, in the Liège district, there were as many as 70 per cent. of cases among the miners in some of the coal-pits. Subsequently this subject was debated at length by the International Congress of Hygiene and still more recently by the delegates at the annual gathering of the Miners' Federation of Great Britain. Fortunately the disease so far has only been observed in some tin mines of Cornwall; it has not yet reached the coal-fields of England. It seems to have commenced with the piercing of the St. Gothard tunnel and then to have spread to Hungary. After that it reached Belgium and Germany and there have also been cases in France. The cases in Cornwall are said to have come from South Africa and, at all events, the mischief done on the continent is so serious that it behoves us to take every precaution to prevent similar trouble on this side of the Channel.

The Water-supply of Gibraltar.

The original and what must be described as an audacious scheme for placing Gibraltar beyond all risk of a water famine was fully described. Already in 1898 some portion of the rock above the town was shorn of all vegetation and the crevasses were filled in and cemented so as to constitute a smooth catchment ground. Then four great reservoirs were cut into the rock, where 5,000,000 gallons of water could be stored well away from bombs and shells and changes of temperature or the light of day. The nearest point of the reservoir is 50 feet away from the surface of the rock and 340 feet above the sea. The water was found unaltered when analysed after remaining 12 months in one of these reservoirs. It was thought that 5,000,000 gallons held in reserve would amply suffice; but the water is found so useful for industrial purposes, notably for the boilers of steam engines, and can so readily be sold that the necessity arose for another and much larger scheme. This consists of covering a sandy slope with corrugated iron so as to convert it into a gathering ground. But this slope is on the other side of the rock and just above Catalan Bay. To bring the water above the town of Gibraltar it was necessary to pierce a tunnel of 2025 feet through the rock. However, this is no loss, for the tunnel can be used as a reservoir and can be made to hold 17,000,000 gallons. Then, indeed, will Gibraltar be absolutely safe against drought, however extravagantly the inhabitants may use the water. These works were visited and minutely described.

The Water-supply of Granada.

Very different was the story told in regard to the water-supply of Granada. Here in 1885 the cholera caused such havoc that 313 deaths occurred in a single day from this disease. If cholera was proportionately as fatal among the 5 000,000 inhabitants of Greater London this would mean 20,000 deaths in one day. The water-supply of Granada was then contaminated throughout its course. After such a terrible warning it might be expected that the water would have been protected. Nothing whatever has been done. We published reproductions of photographs showing how filth reached the water-supply which is distributed and drunk unfiltered. All these years have elapsed and the water at Granada is to-day as susceptible to contamination as it was at the time of the great epidemic. The statistics show that in the absence of cholera there is a very high general death-rate with a specially high death-rate from intestinal disorders. The inhabitants complain of their poverty but travellers and pleasure seekers are afraid to go to Granada. The few who are bold enough to venture there generally visit the Alhambra and promptly hurry away, deeming themselves lucky if they only suffer from a passing attack of diarrhœa. It would pay to substitute iron pipes for the present open canalisation and porous pottery pipes which are accessible to contamination along their whole course.

The Sandgate Sanatoriums.

Our attention was directed to the little town of Sandgate. Here there are about 2000 inhabitants and some alarm was created by the presence of perhaps as many as 500 patients suffering from tuberculosis. Is it desirable, despite the comparatively slight infectivity of tuberculosis, that so many sick persons should be dumped down in the midst of a small community of healthy people? The larger number, but not all, of the tuberculous patients are lodged in homes organised on a purely commercial basis by a somewhat notorious individual named JOHN JAMES JONES. Here it is professed that outdoor treatment is given but the report which we published showed that there was no space for outdoor treatment, for the houses are in the street and not in the centre of a park or of gardens. The outdoor treatment consists of going into the public street and the inhabitants object to such proximity with patients. Also there was then no resident medical man in charge who was responsible for the treatment and diet of the patients, and such an enterprise ought not to be under the sole control of a person who is not technically qualified and who undertakes the whole affair merely as a money-making business.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

Sir WILLIAM SELBY CHURCH, Bart., K.C.B., was for the fifth time elected President, the practically unanimous vote of the Fellows testifying to their approval of the manner in which he had fulfilled the onerous position of head of the College.

During the year the College considered the position which it held in regard to the General Medical Council, more especially in regard to the examinations. The result of the deliberations, however, in this latter respect has not yet been made public.

A report was received from the committee appointed to consider and to report on the practical safety and prophylactic value of antityphoid inoculations. The committee arrived at the following conclusions: "After careful scrutiny of the statistics from both official and private sources which have been made available we are of opinion that not only is a lessened susceptibility to the disease brought about as a result of the inoculations but that the case mortality is largely reduced. We are further of opinion that with due care the process of inoculation is devoid of direct danger, but that under special circumstances there may possibly be some temporary increase of susceptibility to infection immediately following inoculation, and it is therefore desirable that the preparation of the vaccine and the inoculations should be carried out under specially skilled supervision." The work of preparing a revised edition of the "Nomenclature of Diseases" has been vigorously pushed forwards during the year by the committee appointed for the purpose.

The adjudicators of the Weber-Parkes prize and medal selected the following subject for the next award in 1906, "The Degree of Infectivity of Pulmonary Tuberculosis and the Administrative Measures desirable for the Control and Treatment of the Disease."

A communication was received from a Member of the College offering a sum of money (£500) for the purpose of encouraging investigation into matters connected with tuberculosis, leprosy, plague, and malaria and suggesting that for this purpose a lectureship should be established to be styled "the Dr. Horace Dobell Research Lecture on the Ultimate Origin, the Evolution, and Life-history of Bacilli and other Pathogenic Micro-organisms." The generous offer was accepted by the College and a committee was appointed to carry out the trust.

The following awards were announced: The Gilbert Blane medals, awarded by the College and also by the Royal College of Surgeons of England, to CHRISTOPHER LOUIS WHITE BUNTON, Surgeon R.N., H.M.S. *Forte*, and JOHN FALCONER HALL, Staff Surgeon R.N., Naval Brigade, North China. The Weber-Parkes prize and first medal to Dr. HUGH WALSHAM and the second medal to Dr. WALTER JOBSON HORNE The Council recommended that the Moxon medal should be awarded to Dr. JOHN HUGHLINGS JACKSON, F.R.S., as having pre-eminently distinguished himself by observation and research in clinical medicine. The Council also recommended that the Baly medal should be awarded to Dr. JOHN NEWPORT LANGLEY, D.Sc., F.R.S., of Trinity College, Cambridge, as having especially distinguished himself in the science of physiology. Mr. ARTHUR RICHARDSON, late of Epsom College, was appointed Jenks scholar for the ensuing year.

The official lectures for the year, as we have already said, were delivered by Dr. H. TIMBRELL BULSTRODE, Dr. T. R. GLYNN, Dr. C. E. BEEVOR, Dr. A. S. F. GRÜNBAUM, and Dr. E. F. TREVELYAN. The Harveian orator for the year was Dr. W. H. ALLCHIN who selected as his subject the Study of Structure in Relation to Function.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The past year has, on the whole, been comparatively uneventful. At the elections to the Council in July there was but little contest. Mr. ALFRED WILLETT and Sir FREDERICK TREVES, two of the members of Council whose term had come to an end, did not seek re-election, but the third, Mr. H. T. BUTLIN, and Mr. G. H. MAKINS, Mr. C. T. DENT, and Mr. F. S. EVE were candidates, and of these Mr. BUTLIN, Mr. MAKINS, and Mr. DENT were elected, Mr. BUTLIN heading the poll. Since the date of election Mr. T. R. JESSOP has died and Mr PICKERING PICK has resigned, so that there will be two extra vacancies on the Council to be filled in July, 1904 Two former members of the Council, Mr. WILLIAM CADGE of Norwich and Mr. GEORGE LAWSON, have died. The term of office as President of Sir HENRY G. HOWSE came to an end in July and Mr. JOHN TWEEDY was elected President of the College, Mr. HENRY MORRIS and Sir ALFRED COOPER being appointed Vice-Presidents. An annual meeting of the Fellows was summoned for July 2nd, but only six Fellows were present and these included the President and the two Vice-Presidents. The abstention of the Fellows may be explained by the fact that there were no agenda for the meeting. In consequence of the continued inability to form a quorum at the meetings of Fellows the Council has decided to suspend during 1904 the rule which requires that one such meeting should be called yearly in July. At the annual meeting of the Fellows and Members in November the usual motion was carried claiming for the Members the right to representation on the Council. Another resolution requested the Council to receive a deputation of Members on the same subject. When these resolutions were subsequently discussed by the Council it decided that it was not expedient to reopen the question of the representation of Members on the Council. A motion requesting more information as to the proceedings of the Council was withdrawn when the PRESIDENT explained that the full minutes of the Council were suspended in the hall of the College, and the Council has since resolved to exhibit the minutes of the Council also in the Fellows and Members' common room and in the library. The last motion dealt with the dispute between the Council of the College and the General Medical Council as to the places for instruction in the elementary science subjects, but the motion was not carried.

The John Tomes prize was awarded to Mr. KENNETH WELDON GOADBY. The Jacksonian prize was awarded to Mr T. CRISP ENGLISH, of St. George's Hospital, for his dissertation on Fracture of the Skull, its consequences immediate and remote, including Pathology and Treatment. An honorarium was also awarded to Mr. LOUIS B. RAWLING for the excellence of his essay on the same subject. The subject for the Jacksonian prize in 1904 is the Diagnosis and Treatment of such Affections of the Stomach as are amenable to Direct Surgical Interference.

The Bradshaw lecture was delivered by Mr. HENRY MORRIS, his subject being Cancer and its Origin. The Hunterian oration was delivered by Sir HENRY G. HOWSE. At the Hunterian dinner Lord ROBERTS was admitted to the honorary Fellowship. One member of 20 years' standing was elected Fellow, Sir FRANCIS HENRY LOVELL, C.M.G., Dean of the London School of Tropical Medicine and late Surgeon General of Trinidad.

A replica of the bust of Sir WILLIAM MAC CORMAC, executed by Mr. ALFRED DRURY, A R A., for St. Thomas's Hospital, was presented to the College by the subscribers. The College has purchased a portrait by GEORGE RICHMOND, R A, of the late Mr. HENRY HANCOCK, President of the College in 1872 Professor RETZIUS of Stockholm has presented to the library a valuable set of scientific works. A purchase of some interest is a doctor's signboard dated 1623, which exhibits in different panels the chief operations performed.

The excess of income over expenditure for the financial year was £2004. The College lent some of its valuable pathological specimens to the University of London for the purpose of its examinations, but it has suggested to the University the desirability of conducting its pathological examination at the College in order to prevent that damage to the specimens which is very likely to result from frequent removal to and fro The Council was requested to give its views to the Worshipful Company of Spectacle Makers on the suggested inclusion of sight testing in the examination for the diploma of the company. In its carefully considered reply the Council pointed out the danger of anyone without an efficient medical and surgical training being deemed competent to prescribe a medical or surgical remedy or appliance. The London County Council having asked the College to suggest the names of well-qualified pathologists to make post-mortem examinations and to give evidence in special inquest cases the Council declined to make any nomination and pointed out the inadequacy of the fee of two guineas for the services required from medical men so highly accomplished as skilled pathologists.

THE BENEVOLENT AGENCIES OF THE PROFESSION.

Epsom College, late Royal Medical Benevolent College.

An important event in the history of this institution was the meeting of governors held on Nov. 26th, under the presidency of the Earl of ROSEBERY, when it was decided to change its name to "Epsom College" and to add the following sub-title to all documents issued from the office of the charitable side of the work in London: "Established in 1855 as a Public School with a Royal Medical Foundation." Prominence is thus given to the fact that the college founded by Mr. PROPERT nearly 50 years ago is a public school. The college has extensive playing fields, an excellent swimming bath which has recently been reconstructed at a cost of about £1000, a detached sanatorium, a well-equipped laboratory, a lecture theatre, a lower school capable of accommodating 100 junior boys, fives courts, a biological laboratory, a modern laundry, a carpenter's shop, and a system of drainage which has been carefully arranged under expert advice in recent years at great expense. The fee charged for sons of those not members of the profession, 75 guineas, is a moderate one; sons of medical men obtain a reduction of 10 guineas; there are entrance scholarships of £30 a year and there are "council exhibitions" for the sons of less fortunate members of the profession, which reduce the fee to 35 guineas. Foundation scholarships to the number of 50 are provided for the necessitous sons of medical men, the holders of which are educated, clothed, and maintained free of cost. Owing to the generosity of the hospital authorities there are numerous scholarships at the hospital schools in London ranging in value from 120 guineas to £150, and through the liberality of living and deceased friends of the college there are also a number of scholarships and exhibitions for science and classics from £30 to £60 in value for boys leaving to go to the universities. Provision is also made for 50 pensionerships. At the twenty-ninth festival dinner of the college, which was held at the Hotel Cecil on June 10th, the PRINCE OF WALES, who presided, said that he could hardly imagine that there were any institutions more deserving of public support than those the object of which was to help members of the medical profession and their families who through misfortune or otherwise were brought to reduced circumstances. The foundation scholarships and the pensionerships, however, are far from obtaining a satisfactory measure of support and every medical practitioner ought to subscribe at least 5*s.* a year towards the benevolent side of the institution. No one has worked with greater energy on behalf of the college than Dr. CONSTANTINE HOLMAN, the treasurer, whose services were fittingly acknowledged at a meeting of the council on August 5th when Sir JOSEPH FAYRER presented to Dr HOLMAN, on behalf of the members, an illuminated address and a portrait which now hangs in the council chamber of the college, 37, Soho-square, London, W.

The British Medical Benevolent Fund.

During the year assistance has been given to 160 deserving applicants, to whom sums amounting to £1661 have been voted, payable generally in small monthly instalments. The cases have been, as always, of a most distressing nature, but owing to the falling off in subscriptions many have had to be passed over or postponed and few could be adequately helped. A climax was reached at the October meeting of the committee when with 16 applications on the list there was no available balance and an account at the bank was overdrawn to the amount of £52. A special appeal was therefore decided on and as a result £270 have since been received. To all those who kindly came forward to help the committee asks us to tender most sincere and hearty thanks. In the annuity department the interest on invested capital has yielded an income of £2503, of which £2302 have been distributed amongst 116 annuitants. Legacies amounting to £2860 have been received. Following the rule this amount has been invested and the interest will be devoted to the payment of annuities. The committee earnestly appeals to the profession for assistance and would point out that the working expenses of the charity are only just over 5 per cent. and that the accounts are audited every year by a well-known firm of chartered accountants. Subscriptions and donations may be sent to the treasurer, Dr. Samuel West, 15, Wimpole-street, London, W.

Society for the Relief of Widows and Orphans of Medical Men.

During the year 12 new members have been elected, three having died, and three having resigned. The members number 298. Two widows and six orphans have applied for relief, three widows have died, and one orphan has become ineligible. At the end of the year 53 widows and 15 orphans were in receipt of half-yearly grants. A sum of £3922 10*s.* has been distributed during the year. The expenses have been £246.

THE LANCET *Relief Fund,*

for the purpose of affording immediate pecuniary assistance to medical men or their widows and orphans in cases of distress and emergency by grants of money on loan free of interest or by gifts, has assisted some 37 persons during the past year, involving an expenditure of £432 16*s.* 6*d.* As the accounts are not made up till the end of the year there is a probability that these figures may fall short of the actual totals.

CONTRIBUTIONS FROM THE LANCET LABORATORY.

Several questions of medical interest have occupied attention in THE LANCET Laboratory during the year. In the first number of THE LANCET, published on Jan. 3rd, on p. 71 appeared an article on the Chemistry of the Oyster and Some Remarks with Regard to its Dietetic Value. The results of the inquiry threw some fresh light upon the nutritive value of the oyster and brought forward points of dietetic significance. Amongst other things the amount of liver sugar was found to be much less than that recorded by previous observers. Copper appeared to be a constant constituent of the mineral matter but in minute amount. Experiments on the solubility of the oyster showed that the crushed oyster yields more than one-half of its constituents to cold water, while only a fourth of the solid contents of the uncrushed oyster is dissolved. The cold water extract gave on heating an albuminous coagulum and on concentrating the watery extract a brown liquid was obtained which was indistinguishable as regards taste and smell from well-prepared beef-tea and developed osmazone to a remarkable degree. It is to be hoped that it will soon be possible to declare that the oyster beds of this country are free from any risk of pollution with sewage.

In THE LANCET of Jan. 31st, p. 327, an article from THE LANCET Laboratory was published on the Analysis of the Water from the Holy Well of Zem Zem. The analysis referred to a sample sent to us by Sir HORACE H. PINCHING, K.C.M.G., Director-General of the Sanitary Department of the Ministry of the Interior at Cairo. Evidence was obtained in favour of intense pollution still taking place and in this regard the results were worse than those which were obtained in THE LANCET Laboratory in 1892 but almost identical with those obtained with a sample submitted to us in 1883. Microscopical examination showed the presence of fibres derived from personal clothing, a not very surprising result seeing that the pilgrim retires grateful when he feels that the cloth round his loins is wet.

In THE LANCET of Feb. 14th, p. 465, appeared the results of an *investigation* by our Laboratory Commissioners into a process of cleaning by vacuum. The process is of great sanitary importance as it removes the dust from the carpets, walls, and upholstery of the house very effectually and without any need for disturbing the furniture, whilst causing no nuisance of any kind. We gave an account of the results of an actual trial of the vacuum machine in a ten-roomed house; an analysis was published showing the composition of the dust obtained and the results of a microscopical examination were also detailed. Since our report appeared the process has found a very wide application, as, for example, in removing the spilt grain in a granary or brewery and extracting the dust from the upholstery of railway carriages; in a number *of other ways it has also proved satisfactory.* In the case of theatres the application of the machine has removed close upon 500 pounds of dust lodged in the carpets, the curtains, and the cushioned seats of the auditorium.

The publication of the report of THE LANCET Special Analytical Commission on Brandy in THE LANCET of Nov 29th, 1902, p 1503 drew very considerable attention to the general question of the practice of substitution in the spirit trade. We dealt with this question in regard particularly to the blending of malt spirit with grain spirit in the production of whisky in our issue of Feb 21st, p. 542 This article made a considerable impression upon the public and the trade, especially as we were able to state that chemical analysis afforded a means of differentiating an all-malt spirit from a blended whisky. We urged that some control should be brought to bear upon this enormous practice of substitution. We suggested that it should be insisted that on the labels of the bottles of all spirits there shall be printed a clear statement of the nature of the contents, whether the spirit be an all-malt whisky or partly malt and partly grain spirit or an all-grape brandy or a partly grape and partly grain spirit, and so forth. There can be no objection to the sale of blends so long as they are sold as such, but it is obviously fraudulent to offer a mixture when a pure unmixed spirit is expected or asked for. We pointed out that there is no reason why the Excise authorities should not undertake the control of this labelling and accurate description of spirits, for the Inland Revenue authorities must know exactly the pedigree and the history of all the spirit produced in the United Kingdom.

We dealt again with the increasing practice of substitution in an article in THE LANCET of Oct. 17th, p. 1104, which gave rise to some correspondence in our columns. Our remarks had their origin in a civil action in which the plaintiff sought to recover damages from the defendant for fraudulent misrepresentation in regard to the sale *of boots* We had the *opportunity of inspecting* a specimen of the kind of boot which was supplied in answer to the description of "solid." On ripping up the outer sole strips of cardboard were found inserted between the outer and inner sole. In the same article we gave the results of the examination of a piece of silk taken from the sleeve of a blouse which had caused an acute irritation of the skin. An analysis disclosed that *the* material was loaded with no less than 40 per cent. of mineral matter consisting, as further examination showed, of the oxides of aluminium and tin with distinct traces of arsenic. We appeal again for a system of control over such pernicious practices and for the suppression of the scandal of substitution.

In consequence of certain allegations having been made against pharmacists who were accused of substituting cheap for the more expensive drugs included in a prescription we made a *short practical inquiry into the matter.* We secured samples of medicine made up in response to a test prescription and submitted them to careful analysis The results were decidedly in favour of the integrity of the dispenser and in fact the figures afforded by analysis were in remarkable agreement with those required by the prescription, although the prescription was so made up as easily to admit of the substitution of one drug for another as, for example, *sulphate of quinine for the hydrochloride,* potassium bromide for sodium or ammonium bromide.

In THE LANCET of May 30th, p. 1537, we called attention to the dirty state of the waters of the fountains in Trafalgar-square. We published an analysis of a sample taken by ourselves and the results were very unsatisfactory. Our remarks elicited the fact that for the sake of economy the water pumped from the fountains is used over and over again and we understand that the source of supply is an artesian well which is also used for supplying water to Buckingham *Palace, Marlborough House, the Houses of Parliament,* and the Government offices. We have reason to believe that the authorities concerned have been more vigilant lately in their endeavours to keep the fountains and the pools in Trafalgar-square cleaner.

In THE LANCET of June 20th, p. 1758, were published some interesting facts based upon laboratory experiments regarding the purifying effect upon the air of the heavy rainfall which has been so persistent this year. It was shown that the chief impurity washed out of the air is *ammonia in the form of sulphate, the origin of which, of* course, is the combustion of coal. There were also present common salt, soot, and suspended matters.

In THE LANCET of July 4th, p. 41, we pointed out that the floods occasioned by heavy rain were having a bad effect *upon the drinking water supplied to London by those* companies which draw water for the purpose from the Thames or the Lee A chemical analysis of the New River supply was made in THE LANCET Laboratory and the results obtained were compared with an analysis of the same water made at a normal period. The results showed, as we anticipated, a slight increase in the amount of chlorides, of free ammonia, and of albuminoid ammonia, and a diminution in the degree of hardness and in the amount of nitrate, while instead of being nearly colourless or slightly blue the water exhibited a distinctly yellowish-brown colour.

On the occasion of the inauguration of the new water-supply at Margate on August 6th, one of our *Laboratory* Commissioners made an inquiry into the scheme and his results were published in THE LANCET of August 15th, p 487. Margate now possesses a pure and abundant water-supply taken from the chalk downs lying between the borough and the city of Canterbury.

In summarising the events of the year 1902 we observed that we quite failed to understand why the recommendations of the Departmental Committee on Preservatives and Colouring Matters in Food, which were published in November, 1901, had not been considered and embodied in the statutes. Another year has elapsed and absolutely nothing has been done towards making these recommendations part and parcel of the provisions of an Act. The practice of preserving food, as was pointed out in THE LANCET of Oct. 24th, p. 1180, goes on practically uncontrolled, at any rate, by statute.

The number of *specimens of foods, drugs, and other* articles examined in THE LANCET Laboratory and reported upon in our analytical columns was 113 and the number of analyses thus involved was 505. In connexion with special inquiries the number of single analytical determinations made was 86, bringing the total to a little short of 600

INTERNATIONAL CONGRESSES.

The Fourteenth International Congress of Medicine.

As Professor BROUARDEL truly remarked, the International Medical Congresses find their very existence endangered by their success. The first Congress met in Paris in 1867 and the fact that i was attended by some 300 medical men was then considered very wonderful. The Fourteenth International Congress of Medicine met at Madrid during the last week of April this year and there were some 7000 members present. At best the accommodation at Madrid is limited. The town is not situated on one of the great highroads of international traffic. Then such hotels as exist were already fuller than usual in consequence of the Easter holiday visitors and because the country being in the throes of a general election a large number of politicians went to the capital for instructions. When, in addition to this crowd, 7000 members of the Medical Congress arrived a situation was created that could only be met by the exercise of the genius of organisation sustained by well-trained business faculties. Now these are qualities in which the Spanish people as a race are singularly deficient. Nor is the medical profession as a profession calculated to develop such special capacities. The result was a remarkable state of chaos accompanied in not a few cases by shameful extortion. A false impression was allowed to prevail that the organisers of the Congress were also arranging for the reception and the housing of the members. The latter therefore sent as instructed £2 to the "Service des Logements" and expected to find that rooms had been retained for them. But on arriving at Madrid they found themselves at the mercy of extortionate agents and not in the hands of a committee formed by the organisers of the Congress. They were first of all called upon to pay for ten days' board and lodging in advance, being assured that such coupons given in exchange as were not used would be reimbursed. Then when they got to the lodgings they found them bad or inferior considering the price paid. In answer to complaints the landlords explained that they had to pay heavy commissions to intermediaries and if the visitors had dealt directly they could have had the same accommodation for a much smaller sum. Thereupon many members did deal directly with the landlords and went to the Congress offices to get their coupons reimbursed. This produced a panic similar to a run upon a bank and the office for lodgings had not enough ready cash in hand to reimburse the coupons, so the cashier had to close his office. As an excuse for this a rumour was spread that forged coupons to the extent of 7000 pesetas had been cashed. Now the lodging-house keepers who had accepted coupons in payment were also seized with panic and came clamouring down to the closed door of the cashier's office. Finding they could not get paid some of them refused to accept any further coupons from their lodgers. The latter, who had paid at exorbitant rates in hard cash and in advance for ten days' board and lodging, were in a very awkward position, particularly if they had not enough money in hand to pay twice over for their board. Fortunately this state of affairs did not last long. The cashier ultimately resumed payments, the coupons were honoured, and after a while the pandemonium that had prevailed at the Congress offices subsided.

There has been much disorder at other congresses but the climax was reached at Madrid. As for the scientific work done, that also was somewhat chaotic—there were so many sections and it was so difficult to know when at any one section any one paper would be read. Many members simply wandered about from section to section with the vague hope of hearing something that might interest them. Excursions to Toledo, to the Escurial, and to many institutions, hospitals, asylums, and the like did not fail to prove more attractive than the work of the sections. The latter were therefore remarkably empty in spite of the very large number of members of the Congress actually in Madrid who could, and perhaps in different circumstances would, have attended them. However, if these absentees failed to contribute to the discussions there was a formidable array of papers presented and read. These will constitute ponderous volumes and among the many things recorded there are some of undoubted value. Time will show which of the new suggestions made will permanently survive and meanwhile it will be recognised that this great Congress, with all its confusion and the trouble that arose, was a mighty and a fruitful work. It demonstrated that there was a lack of organising capacity but the very inconveniences thus created afforded to our Spanish hosts innumerable opportunities of displaying the courtesy, the friendliness, and the charm of manner and of bearing for which the nation stands pre-eminent in Europe. From the KING and the QUEEN DOWAGER down to the man at the street corner everyone was ready to help in every way and to befriend and to honour the guests of Spain. This greatly facilitated the smoothing over of the material difficulties that had occurred. Also, the great ceremonies, above all the opening ceremony at the Grand Opera House, were magnificently organised. For pomp and stateliness they were unequalled. The reception in the palace —and it is one of the finest palaces in Europe—and the subsequent garden party in the palace grounds were so impressive and brilliant that they will not be forgotten and all who were present will remember gratefully the hospitality which the representatives of medical science of the world received at the hands of the Royal House of Spain. But others, according to their more modest means, were equally hospitable and whatever the town or institution the members of the Congress visited they were always cordially received and made welcome in every way.

The Eleventh International Congress of Hygiene and Demography.

As a contrast to the International Congress of Medicine the Eleventh International Congress of Hygiene and Demography was one of the most perfectly organised gatherings of the sort ever held. It is true that the task was much easier and also it must be recognised that the science of hygiene embraces within its ranks a far greater number of efficient organisers and business men than does the science of medicine. For instance, hygiene includes sanitary engineering, certain phases of architecture, and various administrative functions, sanitary police, and the like. Hence on the committees of such congresses there are men habituated to the work of administering, of organising, and of providing for the transport of people from place to place and all the business transactions attached thereto. If medical men had to manage hospitals it might help them to acquire such business capacities; but hospitals are generally managed by laymen, so that few medical men have experience how provision should be made for the reception and entertainment of a sudden inrush of several thousand strangers. The case is very different when we have to deal with experienced chiefs of Government departments, such as M. E. BECO, the Secretary-General of the Ministry of Agriculture and General Director of the Public Health Services of Belgium. This gentleman was the president of the International Congress of Hygiene under the honorary presidency of H.R.H. Prince ALBERT. Around him were gathered engineers who had superintended works where hundreds of people were employed and functionaries hardened in the routine of bureaucratic work. Many weeks before the Congress met the members had a list of the hotels with their tariffs and were able to apply directly to the landlords without any intermediary being able to make a commission out of the transaction. The reports which were to be discussed in the seven sections of hygiene and in the division of demography were printed as quickly as they were received. Many of them were distributed weeks before the Congress met. Where there was delay it was the fault of the reporters who had not done their work in time and not the fault of the organisers of the Congress. A daily paper issued in the morning kept the members of the Congress well informed as to what was going on in each section and the reports being read and studied beforehand each interested person knew exactly what part he might be able to take in the discussions. Consequently the sections were crowded, the debates were well sustained throughout, and a really serious week's work was accomplished. There was not a hitch anywhere. Certainly this Congress was much easier to manage than the Medical Congress, first because there were only some 2000 members present and, secondly, because Brussels is situated on one of the most frequented international highways and is far better accustomed to receive travellers of all nationalities. Nevertheless, a congress of 2000 members is quite large enough to degenerate into a mere mob if not carefully organised and in respect to organisation the Belgians certainly distinguished themselves. The general secretary, Dr. PUTZEYS, and the secretary, Dr. VOITURON, were ubiquitous and they had behind them a very efficient staff of clerks. There were the usual banquets, the reception at Court, and the excursions, with the accompaniment of still more banquets. Then there was a gala theatrical performance and, in a word, pleasure was not neglected, though, as the lengthy reports which we published fully demonstrate, much work was done. Nor was this work confined to study and discussion; it has already, in one important respect at least, ripened into action. The proposal made at the Congress by different persons and for different objects, that some sort of permanent international bureau should be established has been adopted. The Congress of Hygiene met at the commencement of September. The International Sanitary Conference met at Paris on Oct. 10th. Here an international agreement was drawn up by the official representatives of the different Powers. Never before has an official conference of this sort been so well attended. The representatives of 25 nationalities were present and 20 out of them were authorised to sign the convention drawn up. This convention contained a clause establishing a permanent international sanitary office which will be located in Paris and where all nationalities will be represented. Doubtless, at first, its task will consist chiefly of facilitating the international exchange of information, but this, in course of time, will tend to encourage international legislation on sanitary matters where such agreements between nations are found to be of mutual benefit. It will be seen, therefore, that the admirably organised International Congress of Hygiene held at Brussels last September has not been long in producing practical results.

THE ORGANISATION OF THE PROFESSION.

This year we carried our investigations into Wales where we found a determined effort had been made at Swansea to establish a medical union. Here the members of friendly societies paid the same sum for medical attendance whether married or single and the medical officer was expected to attend the families of the members. This payment was on an average 5s. 6d. per year—far too little for a family—but 2s. 2d more than single men generally pay. Dr. T. D. GRIFFITHS, however, related that he once had a club at Swansea and all the members paid 5s. a year. He contracted with a local druggist for medicine at an average charge of 6d. per bottle and pills at 2d. per box. As a consequence at the end of the year he found that his drug bill exceeded by £11 the sum which he had received from his club Thus Dr. GRIFFITHS had given his services for nothing and had also spent £11 out of his own pocket, and yet the workmen whom he had attended would have been most indignant if they were told that they were in receipt of charity. Another club of 500 members offered payment which he calculated would be equal to 1½d. per consultation Therefore, and so as to clear ½d per consultation the medicine given should not cost more than 1d. No wonder that at 6d. a bottle such transactions resulted in an actual loss. It is fortunate indeed that the profession has at last risen up against such a state of affairs and we were pleased to record that unanimity prevailed at Swansea and that substantial advantages had been obtained. Much still remains to be done but a step forward has been taken and further progress may be anticipated. The threat of the friendly societies to create a medical institute of their own has not been realised and the members of the Medical Practitioners' Association of Swansea and district have obtained better terms and, what is still more beneficial, have put an end to the former disastrous competition which divided the profession against itself.

Unfortunately, the situation is not nearly so good at Cardiff. In this, the most important town in South Wales, there seems to be a total absence of public spirit among the members of the profession. The subscribers to the clubs pay generally 1d. per week and family clubs are not so prevalent as at Swansea, but there are many abuses and a considerable amount of canvassing. On one occasion a woman canvasser was employed to extol the virtues of the medical officer who attended on all who took out a life insurance policy from a certain company. This lady canvasser presented herself to the patients of various medical men—patients who were in the habit of paying the ordinary fees and could well afford to do so. Nevertheless, she suggested that they should insure their lives and then only a penny per week would be charged for medical attendance.

At Aberdare there is a colliery surgeons' society and in many places it has succeeded in carrying out what is called the "poundage" system. This is certainly the fairest of all systems. The miners pay 3d. in the £1 for medical attendance out of the wages which they receive. Thus an increase of wages means an increase of pay for medical attendance and where the pay is poor it is because the patients themselves are really poor. The difficulty here, if any, is rather among the medical men themselves and not so much in regard to their dealings with patients. The question at issue is whether the contract work, which is much better paid under the poundage system, should be divided between many practitioners or concentrated in the hands of one or two of the highest standing who employ qualified assistants. It is argued that several practitioners each receiving but a small sum cannot be equipped with operating tables, surgical instruments, and other necessaries on the same lavish scale as where the medical services are centralised. We pointed out hat there is here an interesting scientific, practical, and economical problem. Shall the work and responsibility be concentrated? Shall two leading practitioners employ on the wages system, order, and direct six qualified assistants? Or else, shall eight independent practitioners, each with his own individual practice and his small income, carry out the work? The rival principles of collectivism and individualism have thus manifested themselves even in regard to the methods of attending colliers and this is one of the several ways in which the economic évolution affects medical practice as it affects all other economic conditions of modern civilisation.

At Pontypridd some ten years ago a Medico-Ethical Society was founded. Its influence has been exercised mainly over colliery surgeons. The object and policy of this organisation have been ethical rather than economic. This is doubtless due to the fact that the society was founded before the present movement in favour of medical unions had been started. As a consequence, at a pit in the smaller of the two Rhondda valleys the excellent poundage system of payment has been abolished by the miners and they have employed a medical man at a fixed salary. A lay committee is now exploiting its medical servant. The Medico-Ethical Society should have fought against this but not being organised as a medical union it was unable to do so.

At Cheltenham, on the other hand, there is quite a young society, founded in 1901, and it at once was engaged in an economic struggle Here the Oddfellows and members of other benefit societies only paid 3s. a year for medical attendance and the members of the medical profession decided that they would not accept less than 4s. a year and 10s. for the whole family. At first these terms were granted. Later, however, a dispute arose in regard to the political clubs. These also have sick benefits but as they only seek to organise voters they do not enrol women members. This, from the medical point of view, is preferable to the practice prevailing among the Oddfellows and friendly societies generally which, on the contrary, have often sought to establish female lodges. Now one of the medical officers, having expressed this opinion perhaps too freely, was accused of persuading the members of a friendly society to join a political club. As the members of the friendly society were for the most part Radicals and their medical officer was also medical officer of the Conservative club, politics were mixed up with the question at issue. This ultimately resulted in the founding of a medical institute and the importation of a medical man to reside at the institute and to act as the attendant on all the members of the federation of various societies which had come together for this purpose. It is not certain, however, whether this venture will pay its way.

The case of Dr. LACHLAN GRANT, whose right to practise in the district of the Ballachulish slate quarries has now been restored to him by the directors of the company working the mines, attracted the attention during the year of all those interested in the maintenance of the rights of the medical profession. In the proper section the legal position of the case is alluded to, and the fact is mentioned that Dr. GRANT'S interdiction was declared by more than one court to be legal. There can be no doubt, however, that the directors have acted with justice as well as prudence in yielding to the quarriers' wishes. The details of the case are familiar to all our readers.

HONOURS TO MEDICAL MEN.

It is a pleasant task in making our chronicle of the year's events to record the names of those members of the profession who have received public recognition of their services. For the last two or three years we have been able to close our list of honours with the names of members of our profession who have won the coveted distinction of the Victoria Cross but this year the country has fortunately had no large military operations on hand and consequently there has been little opportunity for medical men to distinguish themselves on the field. The following plucky deed, however, will rank with those for which the cross with the motto "For Valour" is awarded.

The Albert Medal.

At the levée held in March His Majesty the KING presented Captain HERBERT CUMMING FRENCH, R.A.M.C., with the decoration of the Albert Medal, second class. On Nov. 17th, 1902, H.M. Transport *Wakool* was steaming through the Straits of Malacca at a rate of about 12 knots per hour when a native fireman jumped overboard. Captain FRENCH, who was a passenger, immediately dived into the sea from the promenade deck, a height of about 36 feet, and swam to the place where the fireman had been last seen. When, however, he reached the spot the man had sunk and Captain FRENCH, becoming exhausted by the weight of his clothing, had to make for a life-buoy. Both men were eventually rescued by the life-boat. A strong current runs at the place and Captain FRENCH incurred great risk of being caught by the ship's screw; in addition to this danger sharks are frequent in the Straits of Malacca.

Birthday Honours.

His Majesty the KING having decided that the celebration of his birthday should take place in this country during the summer and at foreign stations on the actual date of his birth—namely, Nov. 9th—there have been issued in consequence two lists of Birthday Honours. The first list included the names of Mr. ALFRED DOWNING FRIPP, C.B., C.V.O., Dr. STEPHEN MACKENZIE, Dr. EDWIN COOPER PERRY, and Dr. PATRICK HERON WATSON, each of whom received the honour of knighthood. Sir ALFRED FRIPP did excellent work in South Africa during the war and since his return home has supplemented that work first as a member of Mr. BRODRICK'S committee for the reorganisation of the Army Medical Services and subsequently as a member of the Advisory Board in connexion with the medical department of the army. Sir STEPHEN MACKENZIE is well known as a physician of very wide attainments. Sir EDWIN PERRY, like Sir ALFRED FRIPP, is a member of the Advisory Board for the Army Medical Services, and Sir P. HERON WATSON, honorary surgeon to HIS MAJESTY in Scotland, is the representative of the Royal College of Surgeons of Edinburgh upon the General Medical Council and is an ex-President of the College which he represents. In the same list occur the names of Dr. PATRICK MANSON, C.M.G., who was promoted to be a Knight Commander of the Order of St. Michael and St. George, Surgeon-General COLVIN SMITH, C.B., I.M.S., and Surgeon-General JOHN BY COLE READE, C.B., A.M.S., who were made Knight Commanders of the Bath, and Surgeon-General GEORGE JOSEPH HAMILTON EVATT, A.M.S., and Surgeon-General ADAM SCOTT REID, I.M.S., who received Companionships of the Bath. Sir PATRICK MANSON, the medical adviser to the Colonial Office, received his promotion from Companion to Knight Commander of the Order of St. Michael and St. George for special services in connexion with tropical diseases, and Sir COLVIN SMITH and Sir JOHN READE were elevated to the higher grade of their Order for military services.

The November list of honours included the names of Dr. A. R. MANBY, M.V.O., who was made a Knight; Captain T. H. M. CLARKE, R.A.M.C., D.S.O., who received a Companionship of the Order of St. Michael and St. George for services in Crete; and Dr. ROBERT BELL, acting director of the Department of Geological Survey, Canada, who was appointed a Companion of the Imperial Service Order. Sir A. R. MANBY is surgeon-apothecary to the KING and to the PRINCE of WALES.

Honours in connexion with the King's Visit to Ireland.

In connexion with the Royal visit to Ireland Dr. ARTHUR VERNON MACAN and Mr. LAMBERT HEPENSTAL ORMSBY received knighthoods. Sir ARTHUR MACAN is President of the Royal College of Physicians of Ireland and Sir LAMBERT ORMSBY is President of the Royal College of Surgeons in Ireland. Dr. CHARLES B. BALL received the honour of knighthood at the hands of the Lord Lieutenant of Ireland. Sir CHARLES BALL represents the Royal College of Surgeons in Ireland on the General Medical Council.

The Durbar Honours.

Among the recipients of the Durbar honours were Dr. GEORGE WATT, C.I.E., who was made a Knight; Surgeon-General WILLIAM ROE HOOPER, who was appointed a Knight Commander of the Star of India; and Surgeon-General BENJAMIN FRANKLIN, who was appointed a Knight Commander of the Order of the Indian Empire. Sir GEORGE WATT is officer in charge of the Economic and Art Section of the Indian Museum, Calcutta; Sir WILLIAM HOOPER is President of the Medical Board at the India Office; and Sir BENJAMIN FRANKLIN is Director-General of the Indian Medical Service. Lieutenant-Colonel GERALD BOMFORD, I.M.S., Principal of the Medical College, Calcutta, and Major ALFRED WILLIAM ALCOCK, F.R.S., I.M.S., superintendent of the Indian Museum, were appointed Companions of the Order of the Indian Empire. Lieutenant-Colonel ROBERT WILLIAM STEELE LYONS, I.M.S., superintendent of Dharwar Lunatic Asylum, and Major DAVID SEMPLE, R.A.M.C., director of the Pasteur Institute, Kasauli, received the Kaisar-I-Hind medal.

Kano Sokoto Expedition

In recognition of his services in connexion with the Kano-Sokoto expedition Mr. WILLIAM HENRY LANGLEY, deputy principal medical officer, Protectorate of Northern Nigeria, was appointed a Companion of the Order of St. Michael and St. George.

Foreign Orders.

President LOUBET, on the occasion of his visit to this country in July, pinned on the breast of Mr. EDMUND OWEN, F.R.C.S., the ribbon of the Chevalier of the Legion of Honour. Dr. PERCY ATHELSTAN NIGHTINGALE has had conferred upon him the Insignia of the Fourth Class of the Royal Siamese Order of the White Elephant in recognition of valuable services rendered to the Government of Siam when acting as Siamese delegate to the International Medical Conference at Brussels; and Dr. F. M. SANDWITH has received the Insignia of the Third Class of the Order of the Osmanieh, which has been conferred upon him by his Highness the KHEDIVE of EGYPT in recognition of valuable services rendered.

Honours for Ambulance Work

Dr. JOHN JOHNSTON and Dr. J. HILTON THOMPSON received the special medal for meritorious services during the South African war.

OBITUARY.

The close of another year gives us cause once more to tell the tale of those members of our profession who have passed from this life. Some have reached the utmost limit of human existence and some have fallen almost at the opening of their career. But all, young or old, have done their best in the fight with disease and death and their memories remain for an example to their fellows. In accordance with our usual custom we have made a classification of those deceased as follows.

Royal Navy Medical Service.

On Feb. 10th there died in his eightieth year NARCISSUS COLLINS HATHERLY, M.D. Aberd., M.R.C.S. Eng., staff surgeon R.N. (retired). Dr. HATHERLY was for ten years (1852–62) senior assistant surgeon at the Royal Naval Hospital, Plymouth. For many years he resided in South Molton and was identified with nearly all the works of philanthropy of that town. GILBERT KIRKER, M.D., M.Ch. R.U.I., M.R.C.S. Eng., Fleet Surgeon R.N., died at Haslar on Nov. 24th. His death was due to septicæmia following a wound of his finger received during an operation. He graduated as M.D. of the Royal University of Ireland in 1878 and in the following year was admitted a Member of the Royal College of Surgeons of England. After serving with the Turks in the Russo-Turkish war he returned to England and entered the Royal Navy Medical Service in 1879. He served through the Egyptian war of 1882 and afterwards was assistant professor at Haslar until in 1891 he was appointed staff surgeon. He was next placed in charge of the Royal Naval Hospital at Esquimalt. He was well known throughout the British navy and also in foreign navies for his invention of an ambulance sleigh for transporting wounded on board ship.

Army Medical Service and Indian Medical Service

EDWARD EUSTACE, M.D. Durh., L.R.C.P. Edin., L.R.C.S. Irel., Surgeon-Lieutenant-Colonel A.M.D., died at Cheltenham on Feb. 16th, aged 62 years. He qualified in 1863 and shortly afterwards entered the Army Medical Department, being in charge of the Women and Children's Hospital at Netley in 1873–74. He then served in India and in 1834 was superintendent of the Military Hospital at Devonport. He retired from the service soon after with the honorary rank of surgeon-lieutenant-colonel and settled down to practice in Weston-super-Mare. JOHN BRAKE, M.R.C.S. Eng., L.S.A., Surgeon-General, Indian Medical Service (retired), died on Feb. 8th at Southsea. He was educated at the City of London School and St. Thomas's Hospital. In 1854 he entered after competition the medical service of the Honourable East India Company. He served for 31 years in India commencing with the Mutiny and afterwards doing work in Simla, the Central Provinces, and Bombay. In September, 1886, he retired with the rank of surgeon-general and lived for some time at Brighton and Winchester. WILLIAM HENRY NEILSON, M.B., C.M. Aberd., Lieutenant-Colonel, I.M.S., died at Indore, Central India, on March 23rd. He became an assistant surgeon in the Indian Medical Service in 1882 and in 1894 was promoted to be surgeon-major with the honorary rank of lieutenant-colonel. JOHN IVOR MURRAY, M.D., F.R.C.S., M.R.C.P. Edin., who died in London on July 24th, saw much foreign service both in war and peace. Born in 1824 he was educated in France and at the University of Edinburgh and gained in 1844 a commission as assistant surgeon in the army. There was, however, no vacancy and he proceeded to China, where he was in charge of the Canton Hospital during the anti-foreign outbreak of 1846. On the commencement of the Crimean war he went to Sebastopol, serving at Balaclava. He next served as colonial surgeon at Hong-Kong but in 1872 returned to England and settled at Scarborough. JOHN HENRY SYLVESTER, Deputy Surgeon-General I.M.S., who died in London on Nov. 29th in the seventy-fourth year of his age, went to India in 1854 under the India Office. He served for a while in Persia, then in India through the mutiny, and, finally, at the Jamjetsee Jeejeebhoy Hospital as professor of physiology. He left India in 1875.

Hospital Physicians and Surgeons.

ALEXANDER THOMSON, M.D., L.F.P.S. Glasg., who died on Jan. 18th, aged 70 years, was educated at the University of Glasgow and in 1861 settled in Dumfries. Ten years later he was appointed visiting physician to the Dumfries and Galloway Infirmary, resigning this post in 1874 to fill a vacancy on the surgical staff, a post which he held to within two years of his death. He was the first country surgeon in Scotland to operate for ovarian tumour, successfully removing one in 1865. Besides holding his hospital post he was for 33 years medical officer of health of the burgh of Dumfries. JAMES PRIESTLEY, M.D. R.U.I., who died on March 31st at the age of 38 years, studied medicine in Belfast, graduated M.D. in 1897, having previously obtained the Diploma of Public Health of the Royal Colleges of Physicians of London and Surgeons of England in 1893. He did much public health work for the then vestry of Paddington and was for three years senior medical officer of the North Eastern Hospital, Tottenham. He died from septicæmia contracted in the discharge of his duties as a private practitioner at Lee-on-the-Solent, where he settled in 1888. SOLOMON CHARLES SMITH, M.D. Durh., M.R.C.P. Lond., M.R.C.S. Eng., who died at Walton-on-Thames on April 5th, was educated at Birmingham, Guy's Hospital, and Paris, qualifying as M.R.C.S. Eng. in 1863. In 1868 he was elected one of the surgeons to the Halifax Infirmary, but removed to London in 1890. It was mainly owing to his efforts that the Royal Halifax Infirmary was built and opened by the Prince and Princess of Wales in 1896. WILLIAM CADGE, F.R.C.S. Eng., who died in Norwich on June 25th, aged 81 years, needs no further notice here to keep his name in remembrance. His generous benefactions in the cause of charity and his admirable professional work have been already set forth at length in the obituary notice published in THE LANCET of July 4th. JOHN WOODMAN, M.D. St. And., F.R.C.S. Eng., L.S.A., died on June 28th at Exeter. He was in his sixty-seventh year and received his medical education at Guy's Hospital, whence he qualified as M.R.C.S. in 1860. In 1870 he was made a Fellow of the

Royal College of Surgeons of England and graduated as M.D. in the University of St. Andrews in 1882 He settled at Exeter and was on the staff of the Exeter Dispensary as well as being medical officer of health of the city. ROBERT HALL WOODHOUSE, M.R.C.S. Eng., L.S.A., L.D.S., who died in July at the age of 52 years, received his medical education at the Middlesex Hospital. After obtaining the diploma of M.R.C.S. he studied dentistry at the Dental Hospital of London and later was elected surgeon to that institution. He did much in a quiet way to raise the status of the dental profession. FRANCIS HARRISON WALMSLEY, M.R.C.S. Eng., L.S.A., who died on July 16th in his seventy-fifth year, was educated at the Pine street School of Medicine, Manchester, and qualified in 1849. In 1855 he was appointed an honorary surgeon to the Salford Royal Hospital. In 1864 he was elected a member of the Salford town council and did admirable sanitary work, being specially interested in the question of river pollution. SAMUEL FARRANT, M.R.C.S. Eng., L.S.A., who died at Pitminster on July 18th in his sixty-sixth year, was a pupil of the late Mr. C. H. CORNISH, a medical practitioner of Taunton. Mr. FARRANT was for many years an honorary surgeon to the Taunton and Somerset Hospital. He took great interest in municipal matters and was at one time mayor of Taunton. JOSEPH GRIFFITHS SWAYNE, M.D. Lond., M.R.C.S. Eng., L.S.A., who died at Clifton on August 1st in his eighty-fifth year, received his medical education at the Bristol Medical School and at Guy's Hospital. He qualified in 1841 and settled down to practise in Clifton. For 20 years he was physician accoucheur to the Bristol General Hospital. He was also for some time professor of midwifery at University College, Bristol, and a teacher at the Bristol Medical School for 50 years. He took great interest in Church matters and was a member of the building committee of All Saints' Church, Clifton. WILLIAM ALPHONSO HENDERSON, L.R.C.P. & S. Edin., who died in Florence during August, qualified in 1869 and proceeded to China. He was for some time medical officer to the Imperial Maritime Customs at Chefoo and Ningpo, and also medical officer to the Church of England and Presbyterian Hospitals. The names of the three practitioners who come next on the list of those departed—namely, GEORGE WILLIAM BALFOUR of Edinburgh, WILLIAM SMOULT PLAYFAIR of London, and JOHN TATHAM—are so well known in the medical world and the careers of these physicians have been so fully set forth in THE LANCET of August 22nd that we need not here recapitulate the details HENRY GRAY CROLY, F.R.C.S., M.R.C.P. Irel., who died on August 28th at Rathfarnham, was for more than 25 years surgeon to the Royal City of Dublin Hospital. JOHN EDWARD BOYTON, M.R.C.S. Eng., L.A.H. Dub., who died on Sept. 4th at Watlington, had attained the great age of 87 years. He qualified in 1838 and commenced practice in Watlington where he was for many years on the staff of the Watlington Cottage Hospital. WILLIAM EDMUND IMAGE, F.R.C.S. Eng., who died in October at Mildenhall, was born in 1807 and was thus 96 years of age at the time of his death. He was educated at Guy's and St. Thomas's medical schools and settled in Bury St. Edmunds. In 1844, being consulting surgeon to the West Suffolk Hospital, Bury St. Edmunds, he was elected one of the first honorary Fellows of the Royal College of Surgeons of England About 20 years later he retired from practice. WILLIAM JOHNSON WALSHAM, M.B., C.M. Aberd., F.R.C.S. Eng., who died at his residence in London on Oct. 5th, received his medical education at St. Bartholomew's Hospital and in due course of time was elected surgeon to that institution. An able surgeon and a kindly and skilful teacher, his death is a heavy blow to the ancient foundation of which he was so devoted a member. THOMAS JAMES PICKBURN, M.D., C.M. Aberd., M.R.C.S. Eng., L.S.A., who died in Sydney in the month of October in his fifty-seventh year, received his medical education at St. Bartholomew's Hospital. He commenced practice some 35 years ago in New South Wales and had practised in Sydney for 25 years. For some years he was one of the physicians to the St. Vincent's and the Sydney Hospitals. ROBERT JOHN GARDEN, M.D. Aberd., who died on Oct. 23rd, received his medical education at the University of Aberdeen and also studied at Berlin, Würzburg, and Vienna. In 1874 he started practice in Aberdeen and soon became a member of the staff of the Royal Infirmary. Three years before his death he retired from his office which was then that of senior surgeon. Sir GEORGE FREDERICK DUFFEY, M.D. Dub., F.R.C.P. Irel., who died in Dublin on Oct. 13th, was educated at the University of Dublin and entered the Army Medical Service in 1867. After serving for nine years he resigned his commission and settled down to practise in Dublin. In 1876 he was appointed physician to Mercer's Hospital, resigning this post in 1882 to become physician to the Royal City of Dublin Hospital. In 1896 he was appointed President of the Royal College of Physicians of Ireland and in 1897 received the honour of knighthood. GEORGE LAWSON, F.R.C.S. Eng., who died on Oct. 12th in his seventy-third year, was consulting surgeon to the Middlesex Hospital and to the Royal London Ophthalmic Hospital, Moorfields, and surgeon oculist to Queen Victoria. His career has been so fully set forth in our issue of Oct. 24th that there is no need to recapitulate the details here. PHILIP BROOKES MASON, M.R.C.S. Eng., L.S.A., who died on Nov. 6th, was educated in Glasgow, in his father's surgery at Burton-on-Trent, and at University College, London. He qualified in 1864 and after holding various appointments in London he was recalled to Burton by the sudden death of his father whose practice he took over. From 1870 to the time of his death he was surgeon to the Burton Infirmary. Sir ROBERT MARTIN CRAVEN, Kt., F.R.C.S. Eng. and Edin., J.P., who died on Nov. 15th, was, like his grandfather and father before him, a prominent practitioner in Hull. He was surgeon to the Hull General Infirmary, was justice of the peace for the East Riding, and was sheriff of Hull. WILLIAM NEWMAN, M.D. Lond., F.R.C.S. Eng., who died on Dec. 3rd, aged 70 years, received his medical training at St. Bartholomew's Hospital. In 1863 he settled in Stamford and was soon appointed surgeon to the Stamford and Rutland Infirmary, an office which he held for 30 years, being then made consulting surgeon. Besides his purely professional work he was very well read, was a good draughtsman, and a great authority upon education.

State and Municipal Officials.

WILLIAM HENRY CROSSE, M.D. Durh., M.R.C.S. Eng. L.F.P.S. Glasg., L.S.A., who died in London on Feb. 24th, will long be remembered for the excellent work which he did in the service of the empire as principal medical officer to the Royal Niger Company. His death was due to disease contracted in the discharge of his duty and his valuable researches upon blackwater fever, many of which were published in our columns, are notable additions to our knowledge of a scourge which so terribly afflicts many parts of the world. WILLIAM HENRY CORFIELD, M.D. Oxon., F.R.C.P. Lond., who died at Marstrand, Sweden, on August 26th, was born in 1843 at Shrewsbury. He went to Cheltenham Grammar School and afterwards obtained a Demyship at Magdalen College, Oxford. He next obtained a Sheppard Medical Fellowship at Pembroke College and won the Radcliffe Travelling Fellowship in 1867. He studied at Paris and Lyons and at various other places on the continent, and in 1869 was appointed the first professor of hygiene and public health at University College, London. His valuable work in the department of public health is well known and for more than 28 years he was medical officer of health of the parish of St. George's, Hanover-square. Sir Charles Nicholson, Bart., M.D., D.C.L., LL D., who died at the beginning of November within a few days of his ninety-fifth birthday, was born in Yorkshire. He studied medicine at the University of Edinburgh, where he graduated M.D. in 1833. In the following year he settled in Sydney and was one of the founders of Sydney University. In 1843 he gave up practice and entered Parliament as a member of the first Legislative Council of the colony. On three occasions he was elected Speaker and was knighted in 1854, receiving the further honour of a baronetcy in 1859. About 1864 he left Australia and settled in London. Oxford gave him the honorary degree of D.C.L. and Cambridge and Edinburgh that of LL.D.

Other Practitioners.

Among the many other medical men who have ended their life work we may mention the following:—Paul Quick Karkeek, M.R.C.S. Eng., L.S.A., who died on Dec. 27th, 1902, at Torquay in his sixtieth year was a well-known medical man in the west of England. He received his medical education at St. Bartholomew's Hospital, qualifying in 1865, and was shortly afterwards appointed assistant surgeon to the Seamen's Hospital, Greenwich. He next studied medicine on the continent and finally settled down at Torquay, where in 1878 he was elected medical officer of health, a post which he held until his death. It was mainly owing to his efforts that the water-supply of Torquay is so efficient. Richard Chandler Alexander Prior, M.D. Oxon, F.R.C.P. Lond., F.L S., who died on Dec. 5th, 1902, having nearly reached the completion of his ninety-fourth year, was educated at the Charterhouse School, Wadham College, Oxford, and St. George's Hospital. Subsequently to graduating in medicine at Oxford he practised in Bath but his health failing he abandoned active work and devoted himself to the study of botany. John Webb Watkins, M.D. Edin., M.R.C S Eng., was a well-known practitioner in the north of England. He was educated at University College, London, and at the University of Edinburgh and he was the first human subject other than himself upon whom Simpson tried the anæsthetic properties of chloroform. He died on Jan. 30th. John Orton, M.R C.S Eng, L.S A, who died during the month of February, practised in north Warwickshire and took an active interest in political questions. William Saul, M.D. St. And., M R C S. Eng., L.S.A., who died suddenly on March 11th, practised for many years at Boscombe, near Bournemouth. He was greatly interested in parochial affairs and for the last five years of his life served the office of churchwarden to the Church of St. John, Bournemouth. Thomas John Maclagan, M.D. Edin., M.R.C.P. Lond., who died on March 20th, was for many years a well-known practitioner in Chelsea He is best known to the medical profession by his work on rheumatic fever and as being the introducer, or rather the renewer, of the use of salicin in the treatment of that disease. Edward Wilmshurst Tait, who died on March 31st, was for over 40 years a well-known practitioner in the north of London. Edward Monro Spooner, M.D. St. And., M.R.C.S Eng., L.S.A., who died at Blandford on April 7th, was born in 1840 and was educated at Epsom College and the London Hospital. He qualified in 1864 and succeeded to his father's practice at Blandford. Besides holding other posts he was surgeon to the Blandford Cottage Hospital. Henry James Moxon, L.D.S. R C.S. Eng. and Irel., died on June 3rd after an operation for appendicitis. He was the first dentist to be appointed to a Poor-law institution—namely, the North Surrey District Schools, Anerley. Alfred Haviland, M R.C.S. Eng, who died at Frimley Green on May 30th, received his medical education at University College Hospital, London. He practised in partnership with his father for a short time in Bridgwater, but having contracted septicæmia during an operation he had to resign active work and thenceforward took up the study by which he contributed such valuable results to medical knowledge—namely, researches into medical geography. Before having to give up professional work he was on the staff of the Bridgwater Infirmary. John Birkbeck Nevins, M.D. Lond., M.R.C.S. Eng., who died in June, aged 84 years, was for a long period one of the best-known practitioners of the city of Liverpool. John Alexander Cooksey, M R C.P. Edin., M R C S Eng., who died on July 19th, practised first at Chipping Camden and afterwards at Malvern. He was a sufferer from that danger to which all the members of our profession are exposed —namely, of having charges of a grave nature brought against him, but in one case the prosecuting counsel withdrew the case and in the other the jury acquitted him without hearing all the witnesses for the defence. William Burns Macdonald, M.A., M B., C.M Edin., who died on August 2nd from the remote effects of a bicycle accident, practised at first in Spain and afterwards at Lossiemouth and Dunbar. He was widely read, a good linguist, and had travelled much. *Frederic Norton* Manning, M.D St. And., M.R.C S. Eng., who died in Australia on June 18th, originally served in the Royal Navy, but his life's work lay in the great reforms which he was the means of introducing in the treatment of the insane in Australia. Of other practitioners we may mention Walter Sumpter, M D. St. And., L S A, who died on Sept. 9th and was for many years a prominent practitioner in Norfolk; David Illtyd Jones, L.R C P., L R C.S.Edin., L.M, L.F.P.S. Glasg., who died on Sept 25th, a well-known member of the profession in South Wales; William Berry Kellock, M.D St And., F.R.C.S Eng., who died at the age of 82 years and who practised for many years in Stoke Newington; William Dingley, M.R C S Eng, L S.A, who died on Nov. 17th, and who commenced his medical studies at the age of 16 years in the year 1844 by serving as an apprentice to a surgeon in Sherborne. He practised after qualifying for over 50 years in the north of London; and Samuel Woodcock, M.D. Brux, L R.C.P. and L.R.C.S. Edin, who died at the age of 63 years on Dec. 12th, and who was for many years a prominent figure in Manchester medical and political circles. He was at one time president of the Lancashire and Cheshire Branch of the British Medical Association. In 1892 he was made a magistrate for the city of Manchester.

Distinguished Foreign Medical Men.

Amongst eminent foreign medical men whose deaths have been noted in our pages we may again refer to the brilliant Italian surgeon Enrico Bottini, professor of surgery in the University of Pavia. He died from cerebral hæmorrhage on March 11th. He received his medical education at the University of Turin, whence he graduated in 1860. Five years later he was appointed surgeon-in-chief to the Ospedale Maggiore at Novara and in 1877 was elected to the chair of surgery in the University of Pavia. His name is perhaps most familiar to medical men from his work in connexion with the treatment of disease by means of the galvano-cautery. Italian medicine suffered another grievous loss this year in the death from an accident of Francesco Colzi who died in Florence on April 4th. Colzi was educated at the University of Pisa and at Florence, where in 1879 he was appointed to the post of assistant surgeon at the Hospital of Santa Maria Novella. In 1892 he was elected extraordinary professor of surgery in the University of Modena but returned to Florence in the same year and finally succeeded his old chief Corradi as professor of clinical surgery. On March 25th he was at a pigeon-shooting match when his gun exploded and inflicted a grievous wound of his right axilla and humerus. Immediate death was averted by his own skill and pluck and hopes were entertained of recovery as collateral circulation apparently became established. Later, however, the arm had to be removed and tetanus bacilli were discovered in the fluids which oozed from the wound before operation. Despite injections of antitetanic serum he died on April 4th fortified by the last rites of the Church. Edmond Isidore Etienne Nocard, who died in his fifty-fourth year during the month of September while holding the post of director of the Veterinary School at Alfort, did valuable work which is known all over the world on the subjects of epidemic diseases amongst animals, some of which, as tuberculosis, are also common to man. He was a favourite pupil of Pasteur and 17 years previously to his death was elected a member of the Academy of Medicine of Paris. Professor Proust, who died on Nov. 26th from a paralytic seizure, was inspector-general of the French sanitary service and rendered his country invaluable aid as regards public health and preventive medicine.

So with the close of another year we end the list of those members of our profession who have passed away. May those of us who remain leave as good a record behind us when our time comes to go also. Their labours here are over and may they rest in peace.

Annotations.

"Ne quid nimis."

THE CHEMISTRY OF CHRISTMAS PUDDING.

Mr. Edwy G. Clayton, F.I.C., F.C.S., writes:—More than once, in medical journals and elsewhere, the suggestion has been made that chemical analyses showing the composition and food value of the national dish, world famous as Christmas pudding, would be of interest; and although at first sight the subject may seem trivial it is not so in reality. In a few days millions of people, children and adults, will be consuming this triumph of the culinary craft, which for several days at all events must form no small part of the diet of the empire in the most diverse circumstances and in every latitude. Palace, cottage, poor house, ship, and barrack, each has its Noël fare; and few, indeed, are the Christmas feasts at which plum-pudding does not fill an important place. Two puddings, made at different times but from the same recipe used in one household for more than 20 years, have been submitted to analysis and the results are stated below:—

	A.	B.	Mean of the two analyses.
Water	33·35	37·82	35·58
Nitrogenous substances	3·75	4·75	4·25
Fat	5·03	5·38	5·20
Sugar (glucose)	26·00	21·78	23·89
Dextrin	14·41	11·45	12·93
Starch	13·03	9·25	11·14
Cellulose	3·29	7·34	5·31
Acetic acid	—	0·23	—
Tartaric acid	—	0·88	—
Soluble ash	0·89	0·96	0·92
Insoluble ash	0·25	0·16	0·20
	100·00	100·00	—
Alkalinity of ash, as potash	0·08	—	—
Phosphoric acid (combined):—			
Total	0·25	0·20	0·225
Soluble	—	0·15	—
Insoluble	—	0·05	—

Summary.

Water and volatile matter (loss at 100° C.)		33·35	38·05	35·70
Solid matter		66·65	61·95	64·30
Organic constituents		65·51	60·60	3·0
Inorganic components		1·14	1·12	1·1
In the original substance.	Nitrogenous matters	3·75	4·75	4·25
	Non-nitrogenous organic components	56·73	50·93	53·83
	Fat	5·03	5·38	5·20
In the dried substance.	Nitrogen	0·89	1·21	1·05
	Nitrogenous substances	5·63	7·66	6·64
	Non-nitrogenous constituents	85·12	82·21	83·66
	Fat	7·55	8·65	8·10
Nutrient ratio*		1 17⅓	1·11½	1·14½
Nutrient value †		68·8	69·6	64·2

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* Ratio of nitrogenous components to carbohydrates, excluding cellulose but including fat calculated into its starch equivalent.

† The sum of the percentages of nitrogenous substances, sugar, dextrin, starch, and fat, calculated into its starch equivalent.

The proteids were practically entirely soluble in water. Alcohol was present in each case but in traces only. The cellulose was higher in B than in A, probably because the seeds had not been so carefully removed from the raisins. It appears that, although most agreeable as an article of food, plum-pudding is not quite so concentrated a form of diet as has been supposed and conjectures that it yields as much sustenance as beefsteak are certainly not supported by its chemical composition. The amount of nitrogenous matter is only moderate and it must be remembered that in calculating the nutrient ratio and value all the nitrogen has been assumed to be albuminoid. Probably the true albuminoids, and consequently the food value, are slightly lower than would appear from the results. Also, the percentage of water is rather large and the quantities of the remaining components are proportionately lessened. It is not easy to compare precisely other articles of diet with plum-pudding as regards nutrient value but probably dried figs and dates approximate to it somewhat closely.

BIRTHS IN WORKHOUSES.

The zeal of boards of guardians does not always take satisfactory directions but an agitation now in progress which has for its object the removal from pauper children of the disability which publication of the fact of their having been born in a workhouse entails seems deserving of support. Some months ago the Coventry guardians suggested to the Registrar-General that births in their workhouse should be recorded as taking place at "6, London-road," but it was objected that such a proceeding would introduce difficulties in the compilation of statistics as to births in workhouses. The idea was not, however, allowed to drop and as other boards, for instance, those of Hampstead and Leicester, made similar requests further consideration has been given to the matter. On Nov. 20th the Registrar-General received a deputation from the Coventry board and expressed sympathy with the arguments laid before him. Still more recently, on Dec. 2nd, a more thoroughly representative deputation, consisting of a vice-president and several members of the council of the Poor-law Unions' Association, including Mr. Crooks, M.P., interviewed the Registrar General who said that he joined in the desire of the boards to remove the stigma of workhouse birth in the same way as had been done in the case of births in prisons. It would be necessary to obtain the leave of the Local Government Board and as there was no legal difficulty in the way he would endeavour to obtain such leave if he found on further consideration that the matter could be carried out. He added that the subject had been mooted at an opportune moment as he was now engaged in revising the regulations issued to the registrars. Objection has b taken to the proposed change on the ground that it would tend to increase the number of women who go to the workhouse for their confinements. This is possibly the case but even so it does not militate against the scheme to any serious extent. There can be no doubt that the present mode of registration may materially prejudice the interests of workhouse children in later life. A "birth certificate" is in constant demand as proof of age and if it calls attention to the fact that the holder was born in a workhouse may raise obstacles in the way of obtaining employment or may even constitute among the thoughtless a social drawback, involving much injustice. It is idle to expect to eradicate without years of education the vulgar snobbishness which cannot recognise that "the man's the gowd" but it may be possible to avoid stimulating its display and the suggested change in the mode of registering births will help to that end.

CONFLICTING MEDICAL EVIDENCE.

THE *South African Medical Record* for November contained an outspoken and not altogether uncalled-for article upon the unsatisfactory conditions under which medical practitioners are called upon to give evidence in courts of law, conditions which are characterised as in the highest degree humiliating and even demoralising to the medical profession. The *South African Medical Record* refers to an unusually large number of actions for damages arising out of alleged negligence recently instituted in the Supreme Court of Cape Colony, but the subject is one which needs no special occasion to render it of importance. Actions such as those referred to, actions relating to life assurance, actions in which physical or mental capacity is in dispute, and charges of murder and of other crimes, are familiar to us all in which judges and juries have before them witnesses of high standing in the medical profession. In such cases it is not uncommon to find the witnesses upon the one side giving, with more or less confidence evidence directly opposed to that which is sworn to on the other. It must be observed that the conflict of testimony thus produced is not confined to the medical evidence but is observable in that of eye-witnesses [illegible] professed eye-witnesses of the facts in dispute who, so far as their circumstances are concerned, might be expected to be no less free from prejudice or from liability to error than medical men. The medical witness is, for the most part, an expert giving evidence of opinion which his training enables him to do, and if two men may differ upon the causes and details of an accident which both of them had seen two other men may at least as excusably differ with regard to the effect and duration of the injuries which the accident is alleged to have caused. The solicitor on the one side or the other naturally avails himself of such opinions as he may find to coincide with the interests of his client. The undesirable feature to which the *South African Medical Record* draws particular attention arises, however, not from the conflicts which to a large extent appear to be unavoidable, but from the fact that the task of deciding between two contradictory opinions is intrusted to a jury of laymen under the direction of a judge who has had no more medical training than those whom he has to guide to a verdict. The remedy suggested by the *South African Medical Record* would seem to lie in the appointing of medical assessors to advise the judge and mention is made in this connexion of the recent selection of a pathologist by the London County Council and to its desire that London coroners should employ him for the performance of post-mortem examinations in cases of doubt or difficulty. This, however, is hardly to be regarded as an instance of what has been or might be done in the direction indicated. The pathologist who makes a necropsy for the purpose of an inquest is merely a witness; he does not advise the coroner who is very often himself a medical man, and at inquests the opportunity for contradictory medical testimony seldom arises. An instance in England of the medical assessor might rather be found in the medical referees appointed under the Workmen's Compensation Acts where the damages awarded are measured by the period of disablement. An example of aid afforded to judges of the High Court in an easily determined class of case where technical knowledge is required is afforded by the Trinity Masters who sit as assessors in the Admiralty Division. In some foreign countries there is provision for medical assessors or for official medical witnesses and the practical working of the systems in vogue can therefore be studied. It must be remembered, however, that there are reasons to be urged against, as well as in favour of, employing a medical man or medical men to decide where their professional brethren disagree. The witnesses who differ are frequently men of the highest qualifications and of the strictest integrity, who hold honestly divergent opinions and the task of distinguishing between them would often be both difficult and invidious. The jury system is by no means a faultless one but to speak generally the 12 citizens in the box enjoy the confidence of the suitors and although judges sometimes express their disapproval of the verdicts given few judges would care to have cast upon them the onus of coming to a conclusion of fact in all cases without the jury's aid. The question is one, however, of admitted importance and interest in the settlement of which the me[illegible] and the legal professions will perhaps some day be able usefully to coöperate.

THE NEEDS OF THE MODERN HEALTH RESORT.

UNDER the above title Dr. Leonard Williams delivered an interesting address on Dec. 15th to the members of the East Sussex Medico-Chirurgical Society. Dr. Williams laid it down as a canon that a health resort, besides possessing mineral or sea water, should also possess a definite climate, whether bracing, relaxing, or intermediate. He also, we are glad to see, mentioned that climate from a medical point of view did not merely mean meteorological conditions but effects upon human beings. There is no doubt that the words "bracing" and "relaxing" have very different meanings for different people. It is Miss Braddon, we think, who says in one of her novels that the first thing that the serpent told Eve was that the Garden of Eden was very relaxing and many people if they are ill, or bored, or worried, or have eaten too much, at once say that the place in which they are is relaxing. Some, again, consider a climate like that of the eastern coast of Yorkshire in the spring bracing, while others find that a combination of bright sun and an east wind that cuts like a razor renders them miserable. Such people find a South Devon place a paradise, in which, however, members of the former class would sigh for fresh air. Dr. Williams further said that the modern health resort cannot rely upon climatic conditions alone. Rational amusements should be provided, sanitation, not only of the town as a whole but of all the private houses, should be rigorously enforced, and the bathing establishments, whether sea or mineral water, should afford every facility for obtaining modern treatment. With these remarks we are quite in accord and Dr. Williams might have added that any health resort to be worthy of the name should prohibit street shouting, German bands, and piano organs from making life unbearable. Dr. Williams concluded his address with some wise remarks to practitioners in health resorts. They should, he said, speak with no uncertain voice upon the regimen to be followed by visitors, and especially upon the diet. This, we consider, is excellent advice. No one could eat the same style of food at

Strathpeffer as at Bournemouth but no definite rules have been laid down upon the subject. Altogether the address should prove of use to those who heard it if they only take its advice to heart.

THE REGIUS PROFESSORSHIP OF MEDICINE AT OXFORD.

Sir John Burdon Sanderson, who has been Regius Professor of Medicine in the University of Oxford since the retirement of Sir Henry Acland in 1895, has intimated his intention of resigning the post on account of his advancing years. Sir John Burdon Sanderson had always intended to resign on reaching the age of 75 years and within a few weeks he will have attained the age in question. The retiring Regius Professor, before his election to the post which he is now resigning, was well known as a physiologist and as an authority on public health. In his early days he was one of the medical inspectors of the Local Government Board. He was Professor of Physiology at University College, London, from 1874 to 1882, and from 1882 to 1895 he was Waynflete Professor of Physiology in the University of Oxford. In 1883 he served on the Royal Commission on Hospitals and in 1900 on that appointed to inquire into the question of tuberculosis. Since his tenure of the Regius Professorship the Oxford school of medicine has greatly increased in importance. The holder of the professorship has now anything but a sinecure and whoever be elected to the post will have no easy task before him. To follow in the steps of two such able men as Acland and Burdon Sanderson calls for talents of no mean order while the increasing demands and influence of the Oxford medical school require not merely one with a grasp of modern medicine but also one who can take a broad and statesman-like view of the principles and influence of the medical sciences. While wishing Sir John Burdon Sanderson many years' enjoyment of a well-earned rest we may also hope that a successor may be found worthy to follow those who have preceded him in the honourable office of Regius Professor of Medicine in the University of Oxford.

HÆMOGLOBINURIC FEVER.

WE have received a pamphlet entitled "Hæmoglobinuric Fever, its Distribution and Etiology," by Mr. J. Wallace Collett, medical officer, Southern Nigeria. During recent years much light has been thrown upon the etiology of malaria and other tropical diseases but comparatively little is known concerning the causation of hæmoglobinuric or blackwater fever In this brochure Mr. Collett reminds his readers that at the present time two theories are propounded as to the etiology of this disease, one being that there is a relationship between blackwater fever and malaria, and the other, initiated by Veretas and Tomaselli and revived by Koch, that blackwater fever is nothing more nor less than poisoning by quinine. Mr. Collett gives his reasons for believing that neither of these theories satisfies the demands of science "sufficiently to be placed upon the category of probable facts or even plausible speculations." He considers, however, that there are several occurrences, both clinical and within the pale of bacteriological research, which would appear to encourage the idea that blackwater fever, if not a disease *sui generis*, is at least intimately connected with a class of diseases due to the infection of the system by a poison probably of a protozoal nature Mr. Collett then proceeds to make some remarks on the probable nature of the toxin in this disease. He draws attention to the action of hæmolysins and naturally suggests that with a view of discovering the cause of hæmoglobinuric fever it becomes necessary to look for a lysin which can produce the symptoms of the disease and which is not found in other pathological conditions. This is the proper course to pursue when searching for a pathogenic organism as a causal factor in any particular malady. Mr. Collett then refers to the bacillus megatherium which was first discovered in a fermenting infusion of cooked cabbage leaves and afterwards in samples of papain and infusions of hay, grass, and other vegetable matters. This bacillus has been proved to possess distinct hæmolytic powers. In alkaline broth, grown at a temperature of 99° F., this property is strongly developed and it has now been shown to be due mainly to an extrabacillary elaboration termed distinctively megatherio-lysin. Mr. Collett very rightly points out that the occurrence of the bacillus megatherium in decaying vegetable matter is a fact full of significance for West Africa where vegetation is so rankly luxurious. This organism has generally been considered as non-pathogenic but it has now been proved to be capable of elaborating products which, in susceptible animals, possess the power of bringing about such profound blood changes as *hæmoglobinuria*. *His suggestion, therefore, that there may* be a causal relationship between this bacillus and hæmoglobinuric fever is a plausible one but further investigation is, of course, necessary before any definite assertions can be made.

THE FIRST INTERNATIONAL CONGRESS OF SCHOOL HYGIENE.

THE First International Congress of School Hygiene will be held at Nuremberg from April 4th to 9th, 1904, and communications have already been announced from many well known authorities on the education and sanitary up-bringing of children. Professor Cohn (Breslau) will discuss, What has Ophthalmology done for School Hygiene and what has it still to do? Professor Axel Johannesen (Christiania) will describe the State of School Hygiene in Norway; Dr. Le Gendre (Paris), President of the "League of Physicians and Families," will discourse on the Hygiene and the Personal Diseases of Teachers; Dr. Sickinger, Ph D., chief inspector of the board schools of Mannheim, will take as his subject the Organisation of Elementary Schools based upon the Natural Capabilities of the Children; Professor Liebermann (Budapest) will define the Duties and Training of Medical Officers of Schools; Professor Hueppe (Prague) will read a paper on the Prophylaxis of Infectious Diseases in Schools; and Professor Eulenburg (Berlin) has chosen a rather gruesome theme, the Suicides of Scholars. Communications from all interested should be addressed to Herr Max Versen, editor in chief of the *Fränkischer Kurier*, Nuremberg.

A HISTORICO-MEDICAL EXHIBITION.

Mr. Henry S. Wellcome informs us that in commemoration of the fact that a quarter of a century has elapsed since the firm of which he is the head was founded he has decided to hold in London an exhibition in connexion with medicine, chemistry, pharmacy, and the allied sciences. "The exhibition," he says, "will be strictly professional and scientific in character. It will be my aim to bring together a collection of historical objects illustrating the development of the art and science of healing throughout the ages." Mr. Wellcome recognises that the success of the undertaking will largely depend upon the coöperation of those who are interested in these subjects. He is therefore issuing a circular which indicates the range of the intended exhibition. It is proposed to collect and to display all sorts of rare and curious objects relating to medicine, chemistry, pharmacy, and the allied sciences. The exhibits will be classified under seven sections :—

Section I.—Paintings, drawings, engravings, photographs, medallions, and sculptures of historical interest of—(A) distinguished physicians, surgeons, alchemists, apothecaries, chemists, nurses, &c.; (B) ancient

British and foreign medical, chemical, and pharmaceutical in- [illegible] records of experiments, diplomas, [illegible] other personal relics of medical, [illegible] rest; apparatus associated with [illegible], chemistry, and pharmacy. In Section 4, under the style "Curiosities of Medicine,' will be shown: (A) Materia medica of all ages (specimens of ancient medicines in all forms); (B) formulæ of all ages; (C) ancient and modern medicine chests—civil, military, and naval; (D) votive offerings for health, ancient and modern amulets, medals, seals, emblems, charms, and talismans; medical relics of savage and primitive peoples; (E) corporate insignia and diplomas of British and foreign colleges of physicians; (F) rare and curious memorials of medical practice; (G) memorials of medication by animal substances; and (H) memorials of the influence of astrology on medicine. Section 5 will be for curiosities of surgery—(A) relics of ancient and mediæval surgery, dentistry, and veterinary surgery; (B) ancient and mediæval hospital equipment; (C) curious anatomical models; (D) historical surgical instruments, appliances, [illegible] diplomas of British and foreign [illegible] be for curiosities of pharmacy— [illegible] ts and price lists; (G) [illegible] vertisements; (H) ancient pharmacy signs, early shop fittings, and appliances; (I) early pharmaceutical specialities and specimens of obsolete and curious medical combinations; and (J) old travellers' advice books, curious orders, &c. Section 7 will be for curiosities of allied sciences: (A) ancient herbaria, abnormal plant forms; (B) curious magnetic and electrical appl[illegible] (D) historical chem[illegible] pological exhibit; [illegible] (I) biological exhib[illegible] exhibit.

If any of our readers possess any of the articles mentioned Mr. Wellcome hopes that he may count upon their assistance by lending them to him. His letter to us concludes: "I need hardly say that great care will be taken of all objects sent on loan and they will be insured. If desired, I will also insure specially valuable articles while in transit. Packing and carriage, both ways, will be paid by me. Hints and suggestions in connexion with the exhibition will be much appreciated." Such an exhibition can hardly fail to be of great interest to all medical men.

DEATH REGISTRATION IN THE UNITED STATES OF AMERICA.

BY a recent mail we have received from America a series of Government pamphlets issued by the United States Census Office with the object of promoting uniformity in the medical certification and classification of causes of deaths throughout the republic. From the preface to a "manual of classification" included in this series we learn that although civil registration of deaths has been already organised in many of the American States there are still a considerable number in which this provision—which in England we regard as essential to public safety—has not yet been established. It must, however, be recognised that in a republic consisting of many autonomous and practically independent States there are serious difficulties in the way of securing the necessary uniformity of law as well as of practice. Another difficulty which it will take some years to remove consists in the unsettled state of medical education and qualification which at present prevails in many parts of America. In Washington and in some other Transatlantic cities we believe that medical qualification, not less than medical practice, is satisfactorily regulated by law; but, unless we are misinformed, this is by no means the case in many other parts of America. Not until it becomes illegal, or at any rate discreditable, for an unauthorised person to assume the title and function of physician or surgeon will it be possible to provide for the due organisation of the medical profession throughout the United States and for the protection of the people against quackery and imposture. An important forward step has, however, been made and we heartily congratulate the census authorities of Washington on the energy and public spirit which they have shown in dealing with a complex but most necessary project for the welfare of the American people. The system of classification which has been adopted by the census authorities appears to be a modified form of the classification of Dr. Bertillon of Paris. It remains to be seen whether or not that system will be found to need revision from time to time. For our own part we should have thought that in a country in which the attempt is being made to establish for the first time a uniform record of vital statistics a shorter and far simpler list of diseases would have been more appropriate. In addition to the "manual of classification" of causes of death the series of census publications to which we have referred contains the following: (1) practical suggestions concerning a "standard certificate of death," with directions for its use and for the compilation therefrom of permanent records of mortality; (2) remarks on "the relations of physicians to mortality statistics"; (3) suggestions as to the statistical treatment of causes of death; and (4) details of legislative requirements for the registration of vital statistics. We have not space to notice these pamphlets severally in detail but from the rapid survey of them which alone has been possible we think that they are well calculated to further the objects which the census authorities have in view. In conclusion, we may express a hope that in course of time the national registration of causes of death in America will be accomplished with an accuracy approximating to that which has already been attained in many of the countries of Europe.

THE *Deutsche Medicinische Wochenschrift* has issued a festival number on the occasion of Professor Koch's sixtieth birthday, to which such leading bacteriologists have contributed as, among others, Professor Löffler, Professor Metchnikoff, Professor Roux, Professor Ronald Ross, and Professor A. Celli. Lord Lister has written a letter to the editor expressing his high appreciation of Professor Koch's scientific work and his regret that the state of his health will not permit him to make a longer communication to the festival number.

THE secretary of King's College Hospital has received a communication from the trustees of the Annie Zunz fund intimating their willingness to contribute £10,000 towards the removal fund "on the usual conditions of the bequest." The trustees imply that further contributions will be forthcoming towards the equipment and maintenance of the "Annie Zunz Ward."

THE authorities of Christ's Hospital have, it is stated, decided to sell the whole of the remainder of their site to the Post Office This scheme if carried through will obviously prevent any local extension of St. Bartholomew's Hospital except in the direction of the sky, as suggested by Mr. J. Y. W. MacAlister.

HIS MAJESTY THE KING has been graciously pleased to permit Dr James Donelan to accept and to wear the insignia of a Chevalier of the Order of the Crown of Italy, recently conferred on him by the King of Italy in recognition of his services as one of the physicians to the Italian Hospital.

A TELEGRAM from the Acting Governor of the Mauritius received at the Colonial Office on Dec. 18th states that for the week ending Dec. 17th there were 83 cases of bubonic plague and 49 deaths from the disease.

THE plans for the erection of the Royal Army Medical College on the Thames Embankment at Millbank have, we understand, now been formally approved.

THE Local Government Board for Scotland intimates that during the period from Dec. 1st to 15th inclusive 96 cases of small pox have been reported.

THE RESEMBLANCES BETWEEN THE CELLS OF MALIGNANT GROWTHS IN MAN AND THOSE OF NORMAL REPRODUCTIVE TISSUES.

Professor J. B. Farmer, F.R.S., Mr. J. E. S. Moore, F.L.S., and Mr. C. E. Walker communicated a paper to the Royal Society on Dec. 10th in which they gave the results of their joint investigations into the nature of malignant growths occurring in man. The account of what the authors have observed will be considerably elucidated by a brief recapitulation of the different ways in which the cells of an organism proliferate, as the value of the deductions from their observations depends to a great extent upon the differences between the manner in which the somatic cells—that is, the cells forming the ordinary tissues of the body—and those which are destined to form reproductive tissue divide. To emphasise the similarity existing between malignant tissue and the normal tissues of the sexual reproductive glands the authors propose to introduce the term "gametoid" to express the former and "gametogenic" the latter. When the egg of an animal or plant segments so as to give rise to an organism the nuclei of all the cells are found, when dividing, to contain a definite number of rod-like bodies known as chromosomes, this number remaining constant throughout subsequent divisions. Besides remaining constant in number, however, the chromosomes pass through a very definite series of evolutionary changes. At first the material out of which the chromosomes originate appears as granules of stainable substance (chromatin). Then, after certain characteristic stages, this substance takes the form of chromosomes, of which the number proper to each animal or plant is constant. During the process of division each of these chromosomes splits longitudinally into two daughter chromosomes which at this period are arranged in a very definite manner upon the spindle, frequently appearing as V's with the apices towards its axis (Fig. 1). The daughter nuclei are formed by the distribution to either pole of the spindle of the respective halves of each original chromosome. The nuclei thus formed may now enter upon a period of rest. Whenever new *somatic* cells are formed in the body the nuclei pass through identically similar phases. But in every individual there are certain cells which eventually give rise to the gametogenic elements, not to the specialised somatic tissues. Such cells, whether they appear early in embryonic life, or later during the life of the individual, always present very marked difference in their mode of division and in their subsequent history. These differences first become apparent as the cell commences its preparation for division. Those cells which are about to produce the gametogenic elements present a highly peculiar appearance, and at a definite stage in the multiplication pass through a cycle of changes wholly different from that passed through by the cells of the surrounding tissue and also from the changes occurring in those cells from which they themselves have sprung.

FIG. 1.

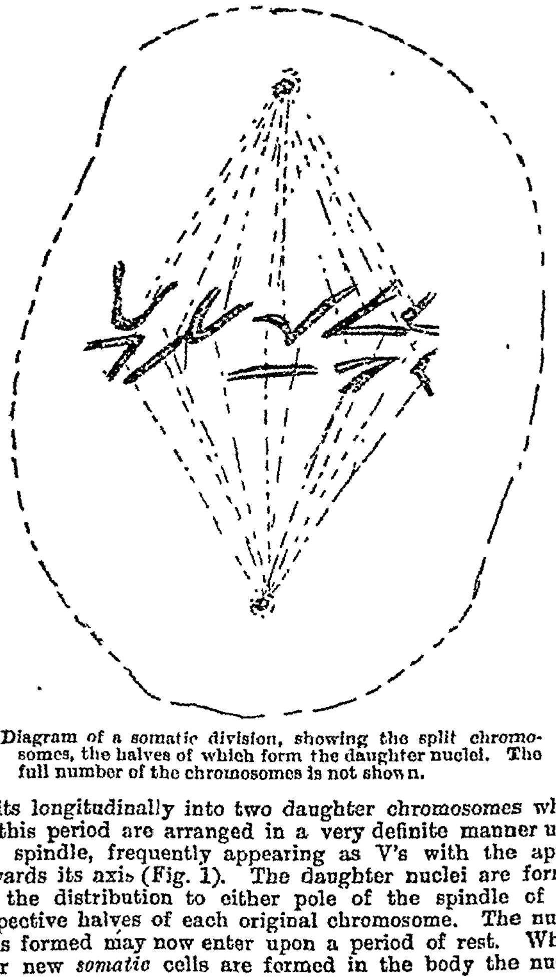

Diagram of a somatic division, showing the split chromosomes, the halves of which form the daughter nuclei. The full number of the chromosomes is not shown.

To the particular form of division (mitosis) associated with this metamorphosis the term "heterotype" has been applied and it is a characteristic and interpolated stage in the reproductive cycle of all sexually propagating animals and plants. Cells from which the heterotypically dividing elements will finally emerge can often be distinguished from those which will produce somatic tissues. In the testis of a mammal or in the sporogenous tissue of a stamen the existence of these cells may be recognised with ease and certainty. They continue to multiply and though differing from the adjacent cells in many respects resemble them in their mode of division until they pass severally into that peculiar state of growth that ushers in the heterotype division. The essential features in which this heterotype mitosis differs from the somatic mitosis (that of the cells forming the soma or body of the plant or animal), as well as from those in the cell generations of the reproductive tissues that have preceded it, are as follows: 1. A period of rest and growth. 2. The chromosomes when they are formed from the resting nucleus are present in only half the number of those occurring in the rest of the dividing nuclei of the organism. 3. The forms exhibited by the chromosomes are strikingly different from those of other nuclei. They present figures resembling loops, rings, aggregations of four beads, and so on. 4. They are arranged longitudinally upon the spindle. Their division on the spindle is apparently always transverse and not longitudinal, for even in examples where the separation might be interpreted as longitudinal fission the process as actually passed through differs markedly from the ordinary longitudinal fission exhibited by the chromosomes of every other mitosis. It will thus be seen that the heterotype mitosis is an easily recognisable phase in the history of the development of the gametogenic cells (Fig. 2).

It is a fact of the highest importance that when once heterotype division has supervened all the descendants of that cell in normal cases retain the reduced number of chromosomes, the cycle closing with the formation of the definite sexual cells. It is on the fusion of two of these cells (ovum and spermatozoon) that the double number of chromosomes is restored, and this number is characteristic of the fertilised egg and of all the cells to which it gives rise until the heterotype mitosis again supervenes in the gametogenic tissues. After the intervention of the heterotype division the cell in which it has occurred may, after one further division, give rise to four sexual cells, as in the higher animals. On the other hand, in the majority of plants a varying number of cell generations with the reduced number of chromosomes may be intercalated before the final differentiation into the sexual elements. The organism thus arising is very commonly parasitic in character, invading the somatic tissue of the plant.

A systematic investigation of the cytological features of malignant growths in man, conducted by the authors, has revealed the existence of a surprising degree of similarity between the phases that characteristically recur in these growths and the transformations from somatic into reproductive cells as just described. Thus in a typical example of epithelioma they found that in the early stages of proliferation of the Malpighian layer the cells of the invading tissue at first pass through a cycle of somatic divisions, exactly as occurs during the early stages of the formation of normal gametogenic tissue. As cell multiplication proceeds, however, a change passes over the cells themselves. The protoplasmic continuity, to which their "prickly" character is due, becomes obliterated and the cells assume that appearance of *indifferent* germ tissue so well known as a feature of the elements of which malignant growths are largely made up. Besides this a varying number of cells were observed, ten situated in an ill-defined zone behind the growing lge of the advancing neoplasm, which had attained mewhat large dimensions. Each contained a nucleus hich had grown to a considerable size. In those which d entered upon a prophase of division it was

FIG. 2.

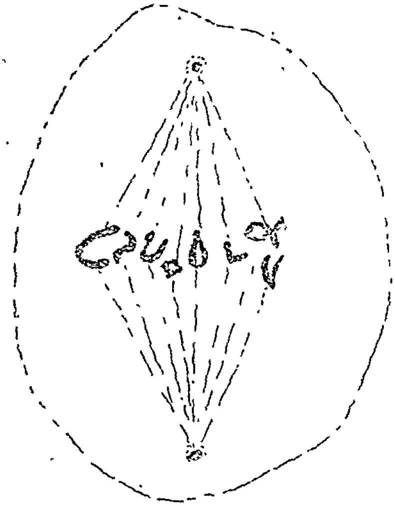

Diagram of a heterotypical division, showing the characteristic rings and loops which split transversely to form the daughter elements. As in the former figure the full number of chromosomes is not shown.

ognised that the chromosomes instead of appearing as licate thin rods or V's split longitudinally, presented the earance of short, thickened loops or rings, closely re- bling the later prophase stages of the heterotype mitosis the normal gametogenic tissues. Still more significant the fact that in these cells the number of the omosomes was obviously less than in the normal somatic ls or the surrounding tissues. In many cases it was ermined that the numbers were approximately halved; l furthermore, it was clear that the loops and rings racteristic of this stage of the cellular development malignant growths were arranged lengthways on the ndle and so were ultimately divided transversely, exactly in the corresponding heterotype mitosis of the repro- ctive elements. Subsequent divisions appeared to re- ble the somatic form but retained the reduced number chromosomes (homotype division). The authors par- ularly emphasise the fact that the cells that they cribe are in *no sense embryonic in character,* though y have so frequently been described as such in the past. bryonic cells have the potentiality of the full normal nber of chromosomes and exhibit them when in process livision.

rregularities of various kinds are mentioned. Amitosis is l to be of frequent occurrence, as it is also, for instance, he normal testis of a young monkey. The number of the omosomes in the cells which had continued to divide otically frequently exhibited irregularities. The authors, vever, claim that these facts do not seriously affect their ition, for in many other cases similar irregularities occur post-heterotype cells when these fail to give rise to ual sexual reproductive elements. They state that this cription of cellular and nuclear changes applies not only epithelioma but also in all important details to other cinomata and to sarcomata. They explain that when ing the process of development a considerable amount of natic tissue is formed in a malignant tumour it is obvious t a corresponding proportion of the cells have never lergone heterotypical division. Thus in such tumours scirrhus of the breast, cells showing heterotype figures more difficult to find than is the case in rapidly growing nours where but little somatic tissue is produced.

It is thus *pointed out* that in a most important respect the various malignant tumours present certain common features, and that these features are similar to those observed in the *normal process* of differentiation of reproductive cells. The authors feel themselves justified in deliberately correlating the appearance of these malignant growths with the result of a stimulus which has changed the course of somatic cell development into that characteristic of gametogenic tissue. They look upon this transformation as representing the immediate cause of the malignancy of the growths in which they are found. The remote causes [illegible] physiological stimuli—[illegible] tion—known to favour [illegible] nsider that malignant growths are definitely distinguishable from benign tumours, for in the latter they have not succeeded in discovering anything resembling the very characteristic nuclear changes described above.

Such questions as the probable transmission of the disease and its prevalence in certain localities were merely touched upon. The authors, however, deemed it probable that actual contact may in some cases transmit the disease and it seems likely that this happens where living cells from the growth are transplanted to another part of the same individual or to another individual under very peculiar conditions which allow of the continuous application of a suitable stimulus and the continuous introduction of cells [illegible] where malignant growths are apparently prevalent—e.g., cancer houses—the phenomenon is directly comparable to the occurrence of abnormal cellular developments under suitable stimuli which have already been referred to.

In conclusion, the authors point out that the various [illegible] cells are always rapid and [illegible] approaching death of the [illegible] ssues are treated in such a manner as to fix and to preserve the cells some time before death supervenes the nuclei will be found either in a state of rest or more or less disintegrated. They emphasise this fact because in the ordinary pathological methods of preparing specimens it has hitherto not always been thought necessary to make the proper provision for the preservation and fixation of the cells, either with regard to time or suitable reagents. Such preparations, though of course admirably suited for ordinary histological investigation, are not suitable for the elucidation of the finer cytological characters of the individual cells.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

THE following is a list of the grants and donations made by King Edward's Hospital Fund for London for the year 1903, with the comments of the distribution committee:—

Alexander Hospital for Children, £500; Belgrave Hospital, £750 to building, Blackheath and Charlton Cottage *Hospital, £60* to equipment of operating room, Bolingbroke Hospital, £1000—£500 to improvements; British Lying-in Hospital, £250; Cancer Hospital, Fulham-road, £200 Central Londc [illegible] Central London Throat and Ear [illegible] by this Fund; Hospital for Women, Soho-square, W., £1000 annual to maintain beds reopened by this Fund; Hospital of St. John and St. Elizabeth St. John's Wood, £500 annual to maintain beds reopened by this Fund; [illegible] annual to maintain beds reopened by this Fun [illegible] and Children's Hospital, W. (not eligible as a [illegible] ation); King's College Hospital, £6500 and £1000 annual to meet deficiency, £1500 for general maintenance, £5000 to the fund for removal of the hospital to South London which the committee view with great satisfaction; London Fever Hospital, Islington, N., £600; London Homœopathic Hospital, £200; London Hospital, £2000 and £5000 annual to meet expenditure out of capital made necessary by improvements in the wards; London Lock Hospital (Female), £600; London Temperance Hospital, £500 for out-patient department, conditional on the work being put in hand during 1904; London Throat Hospital, £50; Medical Mission Hospital (formerly entered as Cottage Hospital, Canning-town), Plaistow, £550—£250 to building; Memorial Cottage Hospital, Mildmay-park, N., £50; Metropolitan Hospital, £2000 and £500 annual to maintain beds reopened by this fund; Middlesex Hospital, £1500 and £1000 annual to meet deficiency (the committee note with satisfaction abolition of the practice of keeping butter in the lockers by beds); Mildmay Mission Hospital, £250; Miller Hospital, £1000 to building; Mount Vernon Hospital for Consumption (formerly entered as North London Hospital for Consumption), £500 and £1000 annual to support beds reopened by this Fund; National Dental Hospital, £50; National Hospital for Diseases of the Heart, £50 towards x-ray apparatus; National Hospital for the Paralysed and Epileptic £750 and £750 annual to meet deficiency, £500 to improvements; National Orthopædic Hospital, £400 (committee view with satisfaction the amalgamation with the Royal Orthopædic Hospital); New Hospital for Women, £300; North-Eastern Hospital for Children, £1000 and £500 annual towards maintenance, £1000 for building; North-West London Hospital, £750 (committee urge the rebuilding of this hospital); Norwood Cottage Hospital, £50; Paddington-green Children's Hospital, £400; Passmore Edwards's Acton Cottage Hospital (committee are glad to say that it does not require help from the Fund this year); Passmore Edwards's Hospital, East Ham, £50; Passmore Edwards's Hospital for Willesden (committee are glad to say that it does not require help from the Fund this year); Passmore Edwards's Cottage Hospital, Wood-green, N., £50; Poplar Hospital, £500 annual to help to open closed beds; Queen Charlotte's Lying-in Hospital, £500; Queen's Jubilee Hospital, Richmond-road, S.W., £200 to building fund (committee consider a new hospital urgently required in this district); Royal Dental Hospital of London, £300 to debt on building; Royal Eye Hospital, £250; Royal Free Hospital, £2000 and £750 annual to meet deficiency, £1500 towards improvements; Royal Hospital for Children and Women, £1000 for building; Royal Hospital for Diseases of the Chest, £500 towards the open-air sanatorium; Royal London Ophthalmic Hospital, £2000 annual, £2500 donation to help to maintain the beds opened by this Fund (committee consider this hospital should receive more support from the public); Royal Orthopædic Hospital, £200 (committee view with satisfaction the amalgamation with the National Orthopædic Hospital; Royal Westminster Ophthalmic Hospital, £400 to debt; St. George's Hospital, £2000; St. John's Hospital for Diseases of the Skin, £50 to Shepherd's Bush Branch; St. John's Hospital, Lewisham, S.E., £100; St. Mark's Hospital, £100; St. Mary's Children's Hospital, Plaistow, E., £600; St. Mary's Hospital, Praed-street, £1000 and £1000 annual to meet deficiency; St. Monica's Hospital, £50; St. Peter's Hospital for Stone, £100; St. Saviour's Hospital, Regent's park, N.W., £100; St. Thomas's Hospital, £1800 to maintain the beds reopened; Salvation Army Maternity Hospital, £50, Samaritan Free Hospital £200 and £500 annual towards maintenance, £200 to new out-patient department; Santa Claus Home, Highgate, N., £50 in consideration of the fact that curable cases are admitted; South Wimbledon and Merton Cottage Hospital, £50 for operative appliances; Tottenham Hospital, £2000 and £1000 annual to maintain beds reopened by this Fund, £2000 to building; University College Hospital, £2000 and £1000 annual to support beds reopened by this Fund; Victoria Hospital for Sick Children, £800; West-End Hospital for Diseases of the Nervous System, £150 towards isolation ward; Western Ophthalmic Hospital, Marylebone-road, no grant (to be reconsidered when proper progress had been made towards collecting the rebuilding fund), West Ham Hospital, £2000 and £300 annual towards maintenance, £2000 building; West London Hospital, £1000 and £1500 annual to maintain beds reopened by this Fund, £1000 conditional on the bath-rooms, &c., on east side being put in hand at once; Westminster Hospital, £1000 and £750 annual towards deficiency; and Woolwich and Plumstead Cottage Hospital, Shooter's Hill, Kent, £50.

A special grant of £10 500 has been set aside to be drawn on as required for the amalgamation of hospitals.

The awards recommended for convalescent homes are as follows:—

Alexandra Hospital, Painswick, £50, Charing Cross Hospital, Limpsfield, Surrey, £50; East London Hospital for Children, Bognor, £100; King's College Hospital, Hemel Hempstead, £100; Mary Wardell Home, Stanmore, Middlesex, £50; Metropolitan Hospital, Cranbrook, £25; Metropolitan Convalescent Institution, Piccadilly, W., £200; Middlesex Hospital, Clacton on-Sea, £100; Mrs. Kitto's Home, Reigate, £25; [illegible] e Paralysed and Epileptic, East Finchley, £50; [illegible] ildren's Hospital Slough, £50; Queen Char[illegible], Kilburn, £50, St. George's Hospital and Atkinson Morley's Convalescent Hospital, Wimbledon, £50; St. Mary's Hospital, for Sick Children, Southend-on Sea, £50; and Victoria Hospital Broadstairs, £50.

ASYLUM REPORTS.

London County Asylum, Banstead (Report for the year ended March 31st, 1903).—The average number of patients resident during the year was 2453, comprising 1076 males and 1377 females. The admissions during the year amounted to 503—viz., 271 males and 232 females. Of these 440 were first admissions. Dr. D. Johnston Jones, the medical superintendent, states in his report that as to the mental disorder of those admitted there were more cases of melancholia than in former years, 32 per cent. of the males and 40 per cent. of the females belonging to this class. Regarding causation alcoholic intemperance was the predisposing or exciting cause in 20 per cent. of the males and 12 per cent. of the females. The number of patients discharged as recovered during the year amounted to 210, or 8 5 per cent. of the average number resident. The deaths during the year amounted to 252, or 10·2 per cent. as calculated on the same basis. Of the deaths five were due to renal disease, seven to cancer 14 each to pneumonia and senile decay, 15 to epilepsy, 44 to pulmonary tuberculosis, 68 to general paralysis of the insane, and the rest to other causes. Among the minor casualties were six cases of simple fracture and two dislocations, all due to falls, and all were successfully treated. The general health of the institution has been satisfactory. Small-pox broke out in May and 12 patients were attacked. Two of these died and the rest recovered. "The disease was apparently introduced by a visitor to a sick patient in Ward A2 who had come from an infected district." "All cases of phthisis are now notified and kept as far as possible in one ward." The Commissioners in Lunacy state in their report that the general appearance of the patients was satisfactory, that the day-rooms were bright and cheerful, that the dormitories and bedding were clean and in good condition, and that the medical case-books and records were very carefully kept. The committee of management states in its report that the farm and field crops have all been good and that the total profit from the farm for the year has been £314. The amount expended on ordinary repairs executed at the asylum was £8080 and on additions, alterations, and improvements £388

Egyptian Hospital for the Insane, Cairo (Annual Report for 1902).—The report just published of the Egyptian Government Hospital for the Insane, Cairo, for the year 1902 states that the number of cases of insanity treated in the institution during the year amounted to 859 Owing to the increasing number of insane patients requiring admission Dr. John Warnock, the medical superintendent, states that the construction of a new asylum will be necessary. Owing to limited accommodation at present many unrecovered patients have to be discharged to make room for patients urgently needing admission, a condition which, coupled with the increasing numbers of the insane, is, says Dr. Warnock, "a menace to public security." "Many of the patients who are discharged while still insane proceed to beget *families*, ... thus swelling the ranks of paupers and transmitting their insanity to their children." Insanity in Egypt is regarded as a reason for marriage. "When a young man becomes insane one of the first steps often taken is to marry him to some woman who often becomes pregnant before her husband's insanity necessitates his confinement in the asylum." The Cairo Asylum is now lighted with electric light while its water-supply and ventilation are found to be both efficient and modern. Many useful handicrafts are taught in the institution such as cloth, basket, and mat making, while the more tranquil patients are employed in farming and gardening. Owing to the absence of special legislation for lunatics in Egypt the questions of care and treatment and of lunacy procedure rest on no certain basis and Dr. Warnock recommends that some legislation modelled on the line of the English Lunacy Act of 1890 should be introduced. The number of patients discharged as recovered during the year amounted to 120. The deaths during the year amounted to 67. Of the forms of insanity in the cases admitted the following occurred in descending order of frequency, viz.: acute mania (133 cases), insanity from hasheesh, chronic mania, pellagrous insanity, and melancholia (29 cases) out of a total number of 408 admissions. Among the more potent causes of insanity in the admissions Dr. Warnock enumerates hasheesh, hereditary predisposition, pellagra, syphilis, and alcohol.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Deputy Inspector-Generals: Howard Todd to Haslar Hospital (dated Dec. 5th, 1903) and W. E. Breton to Bermuda ospital (dated Dec. 16th, 1903). Fleet Surgeons: J. J. innis to the Royal Marine Infirmary, Deal (dated ec. 28th, 1903) and R. Miller to the *President*, additional ated Dec. 16th, 1903). Surgeons: W. H. O. Garde to aulbowline Hospital, G. Ross to the *Albion*, and J. A. iompson to the *Drake* (dated Dec. 11th, 1903); D. W. ewitt, lent for service at the Admiralty (dated Dec. 14th, 03); T. D. Halahan, lent to Royal Naval Engineering [illegible]; G C. C. Ross to [illegible]. Chapman to the [illegible] he *Speedwell*, R [illegible] nnedy to the *Hebe*, and J. H L. Page to the *Spanker*, lent (dated Dec. 16th, 1903). Civil Practitioner J ffin to be Surgeon and Agent at Stokes Bay (dated c. 15th, 1903).

Deputy Inspector-General of Hospitals and Fleets Charles ne Godding has been promoted to the rank of Inspector-neral of Hospitals and Fleets in His Majesty's Fleet ited Dec. 5th, 1903), Fleet Surgeon Howard Todd has en promoted to the rank of Deputy Inspector-General Hospitals and Fleets in His Majesty's Fleet (dated c. 5th, 1903).

ROYAL NAVAL VOLUNTEER RESERVE.

The undermentioned have been appointed Surgeons:—Mr. lliam James Tivy and Mr. Walter Kenneth Wills.

ROYAL ARMY MEDICAL CORPS.

Brevet.

The undermentioned Lieutenant-Colonel to be Colonel:— rid Bruce, F.R.S., R.A.M.C., in recognition of his vices in investigating the cause of the "sleeping kness" in Uganda, as well as in consideration of the inction already attained by him in researches connected h Malta fever and tsetse-fly disease (dated Dec. 10th, 3).

Captain T. H. M. Clarke, C.M.G., D.S.O., from the onded List, to be Captain (dated Nov. 30th, 1903). onel J. F. Supple, C.B., is placed on retired pay (dated c. 14th, 1903). Lieutenant C. H. Robertson resigns his mission (dated Dec. 19th, 1903).

ROYAL ARMY MEDICAL CORPS (MILITIA).

Home District (late Middlesex) Company: Supernumerary itenant (Honorary Lieutenant in the Army) G. J. D. *ies to be Captain (dated Dec. 19th, 1903).*

ARMY MEDICAL RESERVE OF OFFICERS.

urgeon-Lieutenant A. Mackenzie, 3rd Volunteer Battalion Prince of Wales's Own (West Yorkshire Regiment), to Surgeon-Lieutenant (dated Dec. 16th, 1903); Surgeon-tain J. Shaw, having resigned his commission in the unteers, ceases to be an officer in the Army Medical erve of Officers.

VOLUNTEER CORPS.

oyal Garrison Artillery (Volunteers): 1st Banff: geon-Major W. Fergusson to be Surgeon-Lieutenant-onel (dated Dec. 19th, 1903).

ifle: 2nd Volunteer Battalion the Royal Warwickshire iment: Brigade-Surgeon-Lieutenant Colonel C. Dukes, ior Medical Officer, Worcester and Warwick Volunteer ntry Brigade, resigns his commission and is granted the orary rank of Surgeon Colonel, with permission to wear prescribed uniform on retirement (dated Dec. 19th, 3). 3rd (Cambridgeshire) Volunteer Battalion the Suffolk iment: Surgeon-Lieutenant A. W. Clark resigns his commission (dated Dec. 19th, 1903). 4th (Perthshire) Volunteer alion the Blac [illegible] rgeon-itenant W. Haig [illegible] 19th, 3). 1st Volunte [illegible] Vales's yal Berkshire [illegible] officer gns his commi [illegible] asman ed Dec. 19th, 1903).

VOLUNTEER INFANTRY BRIGADES

ampshire: Surgeon-Major E. J. Hunter, 3rd Volunteer talion the Han [illegible] itenant-Colonel [illegible] lical Officer to [illegible]

YAL ARMY MEDICAL CORPS (VOLUNTEERS) (GLASGOW COMPANIES) ANNUAL.

he third number of this annual is in point of excellence way behind its two predecessors. It deals with subjects interest not only to the particular corps from which annual takes its name but to Volunteer medical corps generally. In addition to the more weighty contributions, including papers on the Glasgow Division R.A.M.C. (V.) under Mobilisation, the Camp of the Transport Section at Aldershot, and the Camp at Netley, there are several articles and illustrations of a humorous nature. Among the illustrations are reproductions of photographs of Surgeon-General Sir William Taylor, K.C.B., Director-General of the Army Medical Service; Lieutenant Colonel W. Babtie, V.C., C.M.G., Assistant Director-General; and Lieutenant-Colonel E. M. Wilson, C.B., C.M.G., D.S.O., Deputy Assistant Director General. The price of the annual is 3*d*. and the publishers are Messrs. John Horn, Limited, 34, Howard-street, Glasgow.

Correspondence.

"Audi alteram partem."

THE TREATMENT OF CERTAIN FORMS OF OBSTINATE CONSTIPATION BY ENTERO-COLOSTOMY.

To the Editors of THE LANCET.

SIRS,—With reference to your note on Mr. W. Arbuthnot Lane's case in which he effected "a lateral anastomosis between the end of the ileum and the first piece of the rectum" and thereby relieved a patient who was habitually constipated owing to intraperitoneal adhesions, may I point out that an operation of this kind might reasonably be tried in certain cases of chronic constipation in which no adhesions or other mechanical obstruction existed?

In the summer of 1901 I suggested an anastomosis between the lower end of the ileum and the sigmoid flexure in a case then under the care of Dr. Daniel Lehane of South Kensington as well as of Dr. W Bezly Thorne. The patient, a tall, well-made young man, wished me to perform on one of his legs an operation which I knew would be futile and which was unnecessary. He was evidently suffering from neurasthenia and hypochondriasis and in danger of gliding into something worse. One feature of his case was most obstinate constipation. He was not willing to adopt commonplace and often effectual measures against that trouble and he was not only willing, but anxious, to have *some* operation performed. I suggested to him, without pressing, that I should short-circuit his intestine by uniting the lower end of his ileum to his sigmoid flexure. I thought this proceeding, by removing his constipation in a radical manner, would cause him to see life in a more roseate colour and dispose him to look less closely into his real or supposed bodily ailments. However, he found an eminent surgeon who operated for some small varicose veins. Of his ultimate state I have heard nothing.

I cannot help thinking that this mode of treatment should be seriously considered in the cases of many persons who combine obstinate constipation with the following conditions: (1) hypochondriasis and neurasthania, especially when, as in Dr. Lehane's and Dr. Bezly Thorne's patient, it borders on even a worse mental state and imperils the patient's position in his profession; and (2) some of those cases of chronic gastric trouble in young women in which intractable constipation is a marked sign and in which the presence of peptic ulcer is very doubtful. I am of opinion that in a few of these ca [illegible] than a gastro enterostom [illegible] only case of gastro-ent [illegible] have yet lost belonged [illegible]

It is better to unite the ileum to the sigmoid flexure than to the rectum for the following reasons: (1) the sigmoid can usually be brought outside the abdomen and the operation of intestinal anastomosis is thereby made quicker, easier, and safer; and (2) if the junction is with the rectum occasions may occur when the patient will find it objectionable to have the liquid contents of the small intestine flowing into the rectum straight above the anus. The latter is, of course, an *a priori* consideration and experience might prove it erroneous, but of the advantage of delivering the intestine externally before suturing it there can be no question. There remains the question of lateral *versus* "end-to-side" anastomosis. That could be settled finally by experience only, but "end-to-side" would prevent fæcal

In Calcutta the new plague administration has recognised the value of inoculation and has publicly announced facilities for taking advantage of its benefits. The apathy of the people is so extraordinary that inoculation is not expected to be carried out on a large scale but convenient opportunities of being inoculated are to be provided, and that is a considerable advancement on previous policy.

The smoke nuisance has of late years become almost as great in Calcutta as in some of the manufacturing towns of England and an expert has recently submitted a report concerning its abatement. The excessive smoke in Calcutta is mainly due to the mills and the factories and it is estimated that 3·2 tons of solid carbon are emitted every 24 hours within a radius of five miles from Government House. There seems to be no remedy except by legislation and rules are suggested with regard to the various furnaces, fires, and chimneys. As the corporation is an offender equally with the factories it is probable that the Government will be compelled to take the matter in hand. The evil is increasing and is at present absolutely uncontrolled.

Nov. 27th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Disqualification of a Medical City Councillor.

Dr. C. A. Hill, who was elected a member of the city council for Abercromby Ward at the recent November elections, was subsequently disqualified owing to an unfortunate technicality. Dr. Hill held the appointment of lecturer on hygiene to the pupil teachers in the service of the late Liverpool school board, the functions of which had been taken over by the education committee of the city council. The fact of his being ineligible (by reason of his holding that office) as a candidate for civic honours did not occur to him until after the result of the election. He has since formally resigned his seat and it is not expected that he will be opposed on again seeking the suffrages of the electors of the ward. He has also resigned his lectureship.

Jottings from the Health Committee.

The health committee of the city council has recently sustained a severe loss by the death of Alderman Herbert Campbell, which occurred suddenly on Dec. 8th while engaged in a visit of street inspection.—Alderman Dr. Thomas Clarke has resigned the chairmanship of the port sanitary and hospitals committee, a post which he has filled with much credit to himself and advantage to the city for the past eight years. Pressure of professional duties led to his resignation.—The health of the city continues good. The deaths from zymotic diseases during the week ending Dec. 12th show the lowest rate of mortality from this class of disease during any one week for the last ten years. The prevalence of small-pox in Smyrna has during the last few months been a source of much anxiety to the port sanitary authority, five vessels in succession bringing cases of small-pox from that port. At the present time the city remains free from the disease, a suspected case being isolated.—A change in the *personnel* of the housing and insanitary property committee has recently taken place, the chairman and deputy chairman having resigned their positions.

Birkenhead and Wirral Children's Hospital.

Owing to the recent extension of this hospital the committee announces that funds are earnestly needed. The hospital is doing a most useful work and deserves support. In 1902 the number of in-patients was 540 and the out patients numbered 6234 The expenditure last year was £1625, as against £1325 in 1884 when the number of in-patients was only 286.

Dec. 21st.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Epidemic of Small-pox.

THE counties of Northumberland and Durham are at the present time suffering from a rather serious epidemic of small-pox. Most of the cases have been traced to tramps coming from other districts, pointing to the necessity not only of the registration of tramps, but also of some restrictions to the admission of unvaccinated tramps common lodging houses and workhouses. During current year there have been well over 100 cases in the of Newcastle, while the number of cases in the country tricts of Northumberland has greatly exceeded this fi In Gateshead the epidemic seems rather to be in than diminishing, because the number of cases at prese the Sheriff Hill Hospital is about 40 and fresh case being admitted almost every day.

Newcastle City Hospital for Infectious Diseases.

Owing to the rapid growth of the city of Newcastle the present hospital at Walker Gate was built the council has now under consideration a scheme fo enlargement of this hospital, not only to meet pr requirements but also to be prepared with sufficient ac modation in case of any sudden emergency. It is pro to spend the sum of £53,000 on these extensions, whicl include increased accommodation for both free and p patients and a separate block for the reception and disc of patients.

Annual Dinner of the Past and Present Students o College of Medicine, Newcastle-on-Tyne.

The above annual dinner is arranged to take place a County Hotel, Newcastle-on-Tyne, on Friday, Jan. 1904, at 7.15 P.M. Professor F. Page will occupy the while the warden of the University of Durham Kitchin) and other eminent guests are expected present. It is hoped that as many past and p students of the college as possible will endeavour to a

Dec. 21st.

WALES AND WESTERN COUNTIES NO

(FROM OUR OWN CORRESPONDENTS.)

Increased Cost of Cardiff Paupers.

Mr. F. T. Bircham, the Poor-law inspector for Wales, more than a year ago animadverted upon the ing increase in the expenditure of the Cardiff boa guardians, with especial reference to the cost of relievi outdoor poor. In ten years the population of the unic increased by about 25 per cent., but the number of o paupers had increased nearly 60 per cent. and the diture had gone up from £14,706 to £26,175, equal to crease of about 90 per cent. From the remarks whicl made by the same inspector to the members of the (board on Dec. 5th last it would appear that the ex ture in the union is still much higher than it shou for while the amount of pauperism has decreased extent of 4 per cent. in South Wales and Monmou there has been an actual increase of 14 per cent. in where also the expenditure has increased 66 per cent pared with an increase in the larger area of only 10 pe Mr. Bircham advised the board to equalise the size relief districts and to see that there is a sufficient nu officers to carry out the work properly, for every should have time to investigate all his cases. He t that scores of people would be found in the Cardif receiving relief who should not receive it and he re the board that the more strict it was with the unde cases the more money it would have for the deserving

Bristol Corporation and Winsley Sanatorium.

When the scheme for the establishment of the Sanatorium was projected the corporation of Bristol responsible for a proportion of the cost by contrib capital sum of £1000 and by undertaking to pay a furt of £260 annually. For these payments four beds a reserved for Bristol patients, but it was considered time when the arrangement was made that this would be utterly inadequate to the needs of the (there was a disposition on the part of several pr members of the health committee to establish torium exclusively for Bristol patients. In Jan this year the medical officer of health, Dr. D. S. submitted a report on the subject in which he that the cost of erecting a sanatorium varie £200 to £300 per bed and that the weekly maintenance for each patient would be from 35s. to 4 cost therefore of erecting a sanatorium for 50 patie maximum number Dr. Davies considered desirable in one building—would be from £13,000 to £15,0 hese sums if borrowed and repaid in 30 years would entail n annual expenditure of about £700 and £800 respectively. he annual cost of maintenance would amount to about 4000. A subcommittee very carefully considered this eport but eventually recommended the corporation to contribute a further capital sum of £4000 and an annual sum f £1040 to the Winsley sanatorium on the understanding hat 20 beds should be allotted to the city of Bristol. The orporation has adopted this recommendation but with the ight to transfer its interest in the institution if it so desires.

Superannuation of Dr. H. T. Pringle.

The committee of visitors of the Glamorganshire County [illegible] H. T. Pringle's superannuation [illegible] num. Dr. Pringle has been con- [illegible] asylums for more than 37 years, [illegible] of which period he has been edical superintendent.

Swansea and the Spitting By-law.

The Swansea corporation has adopted the spitting by-law the terms which the Home Office is now prepared to anction: "No person shall spit on the floor, side, or wall f any public carriage, or of any public hall, public waiting- om or place of public entertainment whether admission ereto be obtained upon payment or not."

University College, Bristol.

A year ago there was a debt of £5000 in connexion with [illegible] en entirely [illegible] the Bishop [illegible] University [illegible] Bart., and ir Frederick Wills, Bart., M.P., each contributed £1000 wards the amount required. A further sum of £500 has ow been received from the managers of the Exhibition of elsh Industries recently held in Bristol, so that it is sible to complete the University buildings without increasing to any great extent the indebtedness of the overnors.

University College, Aberystwyth.

Mr. R. H. Yapp, M.A., of Cambridge, has been appointed ofessor of botany to the Aberystwyth College of the University of Wales in succession to Professor J. H. Salter, D.Sc. ofessor Yapp accompanied the Cambridge University ientific exploring expedition to the Siamese-Malay States the year 1899

Herefordshire General Hospital.

The late Mr. Attwood Matthews, who was the founder of [illegible] ft £5000 to the funds of the Hereford- [illegible] to be paid on the death of his widow. [illegible] ollection of a penny each month from actically every cottage in the county has resulted in the cumulation during the past nine months of a sum of nearly 650 which is to be handed over to the managers of the stitution.

Bacteriological Examinations.

The Wigmore (Herefordshire) rural district council, on e recommendation of the medical officer of health (Mr. A. T. Cartwright), recently asked the Herefordshire county uncil to follow the excellent example of the neighbouring unty councils of Worcestershire and Shropshire and to ake arrangements for bacteriological examinations to be rried out in cases of doubtful diphtheria, &c The council, owever, decided that there was not "sufficient warrant to commend the expenditure of county funds in the way ggested."

Dec. 21st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Small-pox in Glasgow.

Dr. A. K. Chalmers, the medical officer of health of the ty of Glasgow, in his report for the fortnight ending ov. 28th, states:—"45 cases of small-pox were removed to ospital during the fortnight in place of 19 during the preious one. Ten of these cases were removed from formerly fected models and three others had been in models when fection occurred. Among the number were five children nder ten years of age, in none of whom were vaccination arks discoverable. For comparative purposes it is desirable to group the distribution of the cases now occurring according to the old sanitary districts and this shows that of the total occurring during the fortnight 14 were in the eastern district, 12 in the central, nine in the south and south-suburban, seven in the north, and three in the west. Reference was made in the report for last fortnight to the difficulty in obtaining any extension of revaccination beyond the immediate neighbourhood of infected houses, but in view of the recurring excess (31 per cent) of cases in the eastern district the inspectors were, after consultation with the chairman, distributed, whenever the demands of their own districts had been satisfied, throughout this district with directions to make a house-to-house visitation and offer revaccination wherever it was required. This effort so far has only been attended by a moderate degree of success; indeed, as our past experience shows, until something akin to apprehension takes possession of the public mind the numbers who will resort to revaccination from purely prudential motives are comparatively few. Everything at the moment points to a period of considerable anxiety during the ensuing months. The engineers of Tweedsmuir Waterworks, near Broughton, were good enough to inform me during the past week of the occurrence of small-pox among the navvies employed there and they also added that some 40 or so of the men had left their addresses unknown although they anticipated that some of them might reach lodging houses in Glasgow. Subsequently, three of these men presented themselves at one of the lodging houses and on being told that admission could only be had on condition that they would be revaccinated they left, refusing to give any address. The part played by this portion of the population in disseminating small-pox has frequently been under review and it would be to the public advantage if some legislative method of following or controlling their movements existed Similar powers already exist in connexion with contacts with sea-borne infection of a certain type and it would only be an extension of an already recognised principle to apply similar powers to small-pox contacts under the circumstances alluded to."

The late Mr. Samuel Lawrence, M.D. St. And., L.R.C.S. Edin.

The death occurred at his residence, in John-street, Montrose, on the morning of Dec 18th, of Dr. Samuel Lawrence at the advanced age of 88 years. The deceased gentleman was the oldest medical practitioner in Forfarshire, having retired from practice only a year or two ago. After serving for a period under a qualified medical man he proceeded in 1832 to Glasgow and went through a course of three sessions at the University there. On completing his studies he, in 1834, went on a voyage to the Arctic seas as surgeon on a whaling ship and in 1834-35 contemplated another voyage which, however, he abandoned in favour of an appointment as an assistant in South Shields. Three months later the Edinburgh College of Surgeons conferred upon him its licence, after which he and a fellow student purchased their principal's practice and entered into partnership. Dr. Lawrence at that time was barely 20 years of age. Six years were thus passed, after which he went to Montrose in 1841, and for a period of 55 years was engaged in active practice. He was for a long time medical officer of the burgh of Montrose and a justice of the peace of the county of Forfar.

Dec. 21st

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Cosmetics.

Professor Spiegler recently read before the College of Physicians a paper relating to the scientific principles of cosmetics The following is a summary of his remarks. How widespread and how ancient is the desire to beautify the outward appearance can be seen by the fact that even cannibals paint their bodies with bright colours, that the highly cultivated nations of antiquity have embodied explicit cosmetic prescriptions in their literature, and that even to-day the province of cosmetics represents a playground for that charlatanism to which human vanity is constantly offering up new victims In the way of cosmetics surgeons and orthopædists can do a good deal. Under the head of dermatology are included a number of external diseases the majority of which depend upon anomalies of constitution and which therefore need a general treatment. Among these diseases acne vulgaris is most frequent Patients suffering from this complaint invariably have a seborrhœic skin and many of them are somewhat anæmic. Constipation, too, is an etiological factor and there are many cases in which acne improves after massage of the abdomen or after internal medication with pulvis glycyrrhizæ compositus. It is well known that English women patronise sulphur on account of its complexion-improving qualities. The removal and prevention of intestinal decomposition are indispensable and therefore an abundant diet of fresh meat should be avoided. Strongly spiced dishes should likewise be forbidden. Local treatment is based upon the treatment of seborrhœa because dirt, dust, and the ubiquitous staphylococci adhere to the oily skin and are apt to produce an infection of the sebaceous glands. Large acne pustules should be opened. Acne rosacea is an illness of a more mature age than acne vulgaris; it is not always brought about by immoderate consumption of alcohol but frequently by disturbances of the digestion or at the climacteric. Hot fomentations for the purpose of restoring the tone of the blood-vessels should be employed locally. Anæmic young women and girls often have reddish or bluish-red noses which are moist and cool but on a change of temperature from cold to hot become hot and deep red; the same change is seen after meals and alcohol. Often the symptoms are due to slight congelations caused by wearing veils. The symptoms are based upon a local asphyxia caused by pareses of blood-vessels. The best remedy in this case is on the one hand prophylaxis (abolishing the veil), and on the other hand strengthening of the cardiac function and improvement of the anæmic state. The same state is observable in some young people in the fingers and the hands. Medical help is often required for pigmentations either on a physiological basis (pregnancy) or on a pathological basis. The increased pigmentation of the nipple diminishes in a short time in nursing women. Professor Spiegler reported the case of a lady who recognised her pregnancy before menstruation ceased through the increasing pigmentation of a nævus. Diseases of the female genitalia cause similar pigmentations. Some abnormal pigmentations are combined with liver complaints (cholelithiasis). Professor Spiegler has seen a patient with a characteristic pigment spot on the face which regularly disappeared after a course of treatment at Carlsbad and reappeared during the winter. The application of diluted acids, chlorine water (in severe cases), peroxide of hydrogen, or ointments of white precipitate is of use. The best prophylaxis against freckles is the wearing of red or reddish-yellow veils. Diseases of the hair and nails very often are in close connexion with internal complaints. Matsuura in Recklinghausen's Institute showed that in tuberculous or wasting diseases or in disorders of nutrition the hair gets thinner and later falls out. Likewise seborrhœa often causes the hair to fall out. The treatment of seborrhœa may in some cases improve and prevent the hair from falling out, but the seborrhœa remains improved only so long as the patient is under treatment. The great expectations which have been aroused for the treatment of hypertrichosis with Roentgen rays unfortunately have not been fulfilled and for the present the troublesome electrolytic treatment must be used for this purpose.

Dec. 21st.

CANADA.

(From our own Correspondent.)

The Montreal League for the Prevention of Tuberculosis.

An active campaign against tuberculosis is being conducted by the Montreal League for the prevention of that disease. Recently the establishment of a dispensary in the city has been under consideration and it is proposed also that the league should have a sanatorium erected on Trembling Mountain which is contiguous to the city. A suitable site has been selected consisting of 450 acres and overtures are being made to the provincial Government, the owners thereof, who are being asked to set apart this tract of land for the purposes indicated. Since May 15th last the league has dealt with 103 cases and during the month of November about 79 cases were being supervised. The league is fathering a by-law before the city council regarding the prohibition of the spitting nuisance in the streets and in theatres, halls, and places of public worship. It is expected that this by-law will pass through the council by majority.

The Ottawa Medico-Chirurgical Society.

The Ottawa Medical Society and the Ottawa Society have become consolidated and the result Ottawa Medico-Chirurgical Society which held regular meeting on the evening of Nov. 5th. Sir Grant, M.D., is the honorary president and Dr. H. Small is the president. The first evening's program largely given over to the presidential address deli Dr. Small. This consisted of a series of biographical of Bytown's pioneer physicians, Bytown being the the capital of the Dominion of Canada prior to the Government being established there in 1867 and th changed to Ottawa. The address also dealt with the outbreaks of epidemics and the histories of the d hospitals. The society meets on the first and third Th of each month. The following are the officers in to those already mentioned: Vice-Presidents: Dr. Dewar and Dr. R. E. Webster. Secretary: Dr. Brown. Treasurer: Dr. H. S. Kirby. Curator: Dr. Royce. Librarian: Dr. James Seager. Council: Dr. Dr. R. S. Minnes, Dr. Troy, Dr. Echlin, Dr. Chabot, Basken.

A Bureau of Health for the Dominion of Canad

The Canadian medical profession through the medi their national medical organisation are anxious tha Canadian Government should create a separate depar of public health under the authority of one of the ex Ministers. The matter was first launched at the Mo meeting of the Canadian Medical Association in Septe 1902, when a resolution favouring the proposal unanimously passed by that association. As health m now stand orders are issued from several departments as Inland Revenue, Marine, Agriculture, &c. This i sidered anomalous and it were far better that all several branches should be grouped under the authorit competent head. The Canadian Medical Association special committee, consisting of Dr. R W. Powell of and Dr. T. G. Roddick, M.P., and Dr. E. P. Lachap Montreal, looking after the matter. It is understood th Hon. Minister of Agriculture, under whose authori Director-General of Public Health now acts, is very f able to the creation of this very important department

Changes in the Quebec Medical Laws.

If the will of the College of Physicians and Surge the province of Quebec can prevail with the Quebec lature then the medical course in that province will tended to five years. The College will also recommen British licences will hereafter not be recognised as equi to passing the examinations of the College. It will a recommended to the legislature that a B.A. degree *cours classique complet* should be adopted for matricul to apply, however, only to those studying in the F universities. The students of McGill University will particularly affected by this change.

Better Hospital Facilities required for Medical Edu in Toronto.

Now that the two leading medical colleges of the pr have become united in the city of Toronto and constitu medical department of the Provincial or Toronto Univ the faculty is seeking better hospital facilities for cl instruction. Towards this end a special committee c faculty has been visiting the hospitals of leading Am cities, such as Boston, New York, Philadelphia, Balt and Chicago, inquiring particularly into the conduct outdoor departments. The committee in charge o matter recently met the boards of the Toronto G and St. Michael's Hospitals, at which meeting Dr. Bradford, of University College, London, England, present, and addressed the assembled gentlemen. hospital work in London. As a result of the requireme the committee the house staffs will be better regul clinical, outdoor, and pathological work will be put u better basis, and better records will be kept than here All that the committee asks for has been in vogue in the Children's Hospital for some time.

The Birth-rate in Ontario.

The report of vital statistics for the province of O for 1902 has recently been issued. It shows that ther 47 796 births during that year as compared with 46, 1901, or an increase of 1735. The number of mari was 18,072, an increase of 37 over the previous year. number of deaths during the year was 27,864, while in the figures totalled 29,608, showing the substantial ase of 1744 Figured according to population the rate 1000 of births was 21·1 in 1901 and 21·7 in 1902; of iages in 1901, 8·2, and in 1902, 8 2; and of deaths in 13·6, and in 1902, 12·6. Dr. P. H. Bryce, secretary of Ontario board of health, attributes the increased birth- to the crusade instituted by the press of the country and ministers of all denominations against race suicide.

k. 7th.

Obituary.

BERTRAM THOMAS READ, M.R C.S. ENG., L.R.C P. LOND.

HE death occurred on Dec. 12th of Mr. B. T. Read had been for the last five years in practice at Odiham, Winchfield, in Hants, and was much respected in neighbourhood. After leaving St. George's Hospital, re he received his medical training, he acted as surgeon the Royal Mail line for some time and eventually settled Odiham, where he was rapidly making a good practice held several appointments. On Monday, Dec. 7th, he ended the funeral of a patient and after doing his morn- round on the next day complained of acute abdominal n. Peritonitis was diagnosed. His father, Mr. T. L. ad, saw him on Thursday with Dr. H. D. Rolleston and it s seen that an operation was the only chance. Late that ht Mr. A. W. Mayo Robson performed the operation when ration of the appendix and perforation were found. e case was from the first a very severe one and in spite of that skill and care could do the end came on Saturday ning, Dec. 12th. Mr. Read will be deeply missed by all knew him and Odiham has lost a kind and skilful man always placed his patients' welfare before all else.

DONALD J. A. McLEOD, L.R.C.S. EDIN.

ON Dec. 5th there passed away, at the age of 77 years, at [illegible] this well-known and versatile practi- [illegible] s. Mr. McLeod became L.R.C.S. [illegible] in Hawick, whither he was racted by a severe cholera epidemic and where he ceeded to the practice of Dr. Wangler. He held the ices of medical officer of the burgh and to the workhouse many years. He was a certifying factory surgeon, geon to the police, parochial medical officer and ccinating officer to several parishes, and held several other pointments in the town. His jubilee of medical practice Hawick was celebrated in October, 1899, and he was then resented at a public banquet with a cheque and a silver a service subscribed for by over 400 friends and also ith a clock by his *confrères* in the medical profession. He ame originally from the Hebrides of Scotland, his mother eing one of the Campbells of Harris. He leaves a widow d a family of two who are grown up.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At aminations held in December the following candidates assed in the subjects indicated :—

Surgery.—A. A. Angelis (Sections I. and II.), Athens; E. M. Cox, College of Physicians and Surgeons, New York; G. C. M Davies (Sections I. and III.), Oxford and Charing-cross Hospital; A. H. Falkner (Section II.), Cambridge and St. Mary's Hospital; H J. [illegible] Guy's Hospital; A. C. George (Section [illegible] eds; T. Robinson [illegible] Section I.), Cardiff [illegible] on II.), Royal Free [illegible] ester. [illegible] ee Hospital; E M. [illegible] York; G Dewick, (Sections I. and II.), St. Thomas's Hospital; A. C George (Section II.), Manchester; G. R. Hannon, King's College Hospital; W. *Lovell* (Sections I. and II.), St. Mary's Hospital; S. Northwood (Sections I. and II), Birmingham; H. G. Peel (Sections I. and II.), Leeds; R. Reynalds (Sections I. and II), Bristol; S. H. Ryan (Section II.), Manchester; D. A. Stepney (Sections I. and II.), [illegible] A. C. Story (Sections I. and II.), St Mary's [illegible] Free Hospital. [illegible] E M. Cox, College [illegible] Hannon and J. A. [illegible] II, St. Mary's Hospital; R. Reynalds, Bristol; R. H. Jugoy, Leeds; L. C A. Savatard, [illegible] Royal Free Hospital; and A. C. Story, [illegible] ital; A. E. Bird, Man- [illegible] nd Surgeons, New York; [illegible] lospital; J. C. Johnson, [illegible] and L. C. A Savatard, Manchester. [illegible] L. C. A. Savatard, and D. A. Stepney.

UNIVERSITY OF OXFORD —At examinations for the degree of Bachelor of Medicine held in Michaelmas term the following candidates were successful :—

FIRST EXAMINATION.

Organic Chemistry.—Frederick James Aldridge, Magdalen College; Charles Newton Binney, Corpus Christi College; Robert Francis *Bridges, University College; Harry Greenwood Butterfield,* Wadham College; Richard Evans, M.A., Jesus College; Patrick Harvey Clive Lowell, St. John's College; George Herbert Hunt, Christ Church; John Frederick Penson, non collegiate; Ernest Arthur Ramsden, New College; Owen Lambert Vaughan Simpkinson, *Corpus Christi College,* Herbert George Flaxman *Spurrell,* B A., Merton College; and Bertram Alfred Wood Stone, B A., Brasenose College.

Materia Medica and Pharmacy.—Owen Alfred Rowland Berkeley Hill, B.A., Trinity College; Stuart Seguin Strahan, Keble *College; Wilfrid Wood Wells,* Merton *College; and* Charles [illegible] Christ Church.

H [illegible] Johnson, [illegible] n, Christ [illegible] ; *Henry* [illegible] ng, B A., [illegible] son, B.A., Queen's College.

* Offers human anatomy only, being exempt from examination in human physiology.

SECOND EXAMINATION.

Pathology.—George Basil Doyne Adams, B A., Christ Church; Charles Harrison Ba [illegible] Harold Abbott Barnes, B A., Keble [illegible] A., Trinity College; Frederick I [illegible] Frederick Hertz, B.A., Magdal [illegible] man, B A., Wadham College; [illegible] A., Keble College, and Eric MacLeod Smith B A., Queen's College.

[illegible] edicine, and Public [illegible] A., Christ Church; [illegible] e; Edward Frederick [illegible] n Edward Blackall, [illegible] ibson, B A., Christ [illegible] alen College; Conrad [illegible] College; Frederick [illegible] Paul Norman Blake [illegible] eginald Pike, B A., [illegible] , University College

UNIVERSITY OF CAMBRIDGE.—At the examinations for medical and surgical degrees held in Michaelmas term the following candidates were successful :—

FIRST EXAMINATION.

Part I., Chemistry and Physics—A. Abrahams, Emmanuel; F. S. Adams, Christ's; J. [illegible] W. G. Angus, Christ's, R. [illegible] H. L. Attwater, Pembroke [illegible] g and C. J. Blaikie, Caius, [illegible] er and F. G. Cawston, Cai [illegible] ombs, Emmanuel, F C. D [illegible] wning; L. A. Exham, H. Selwyn [illegible] ussex; G. Gamlin, Pembroke, W. Gill [illegible] Hick Christ's, R. F. Higgin, Caius; [illegible] Hodges, Queen's, C C. Holm [illegible] Sussex; M. Lea and R. J. B. Le [illegible] *J. C Marklove, Caius;* J. L H. Mogg, B A., Trinity; H. G. Monteith, Pembroke; V. H. Mottram, Trinity; H. M. D. Nicoll, Caius; L. B. Perry, Queen's; C. Raymond, Caius; H. G. Rice, St. John's; I. Singh, Pembroke; A. L. H. Smith, Caius; F. R. Thornton, Trinity; H. A. Treadgold, Downing; L. B. C. Trotter, Clare; R. J. Vernon, Caius; J. N. Wheeler, Christ's; and E. T. [illegible]

P [illegible] Abrahams, Emmanuel; R. R. [illegible] Caius; C. L. Boulenger, King's; [illegible] Clark, King's; F. C. Davies, [illegible] J. R. Dick, Downing; E. A. [illegible] ing; *J. T. Fox, Sidney Sussex;* H A. Hett, Trinity; W. C Hodges, Trinity Hall; C. C Holman, Caius; L. R King, Pembroke; *M. Lea, Caius; E W. Nelson,* Christ's; H F. Percival, Trinity; *L B Perry, Queen's; A. J. Rao,* B A., and A. C. Rayner, Caius; H. G. Rice, St. John's; L. M. Routh, Caius; H. W Scott and R. D. Taylor, Clare; F. R. Thornton, Trinity; H. A. Treadgold, Downing; *H. M. Vick,* Jesus; and E. P. W. Weld, Caius.

THIRD EXAMINATION.

Part I., Pharmacology and General Pathology.—E. D. Anderson, B.A., *Pembroke;* F. O. Arnold, Trinity; L. J. Austin, B A., Sidney Sussex; I. G. Back, B.A, Trinity Hall; G. F. S. Bailey, B.A., Caius; A. L. Bailey, B A., Emmanuel; A. E. Barclay, M.A., Christ's; S. Barradell Smith, B A., St. John's; J. R. Beale, B.A.

Clare; J. H. Board, B.A., Pembroke; J. R. Briscoe, B A., H. Selwyn; F. M. Bulley, M.A., Emmanuel; A. S. Burgess, B.A., Caius; C. Cassidy, B.A., Sidney Sussex; A. de C C. Charles, B A., Magdalene; H. J. Clarke, B.A., and C. St. A. Coles, B.A., Trinity; G. H. Colt, B.A., Sidney Sussex; G. L. Cox, B.A., and A. P. Day, B.A., Christ's; T. R. Elliott, M.A., Trinity; J. N. F. Fergusson, B.A., St. John's; H. R. Fisher, B.A., Emmanuel; R. D. French, B A., King's; N. H. Gandhi, B.A., Caius; M. F. Grant, B.A., H. T. Gray, B.A., and C. R. F. Hall, B.A., Trinity; R. F. V. Hodge, B.A., [illegible] Honeybourne, B.A., [illegible] W. Hutt, B.A., [illegible] P. P. Laidlaw, B.A., and J. W. Linnell, B A., St. John's; W Lowe, B.A., Caius; A. H. Miller, B.A., Trinity; W. P. Morgan, M.A., Clare; H. E. H. Oakeley, B.A., St John's; F W. M. Palmer, B.A., Jesus; W. E. Paramore, B.A., and J. E. Pellow, B.A., St. John's; M. C. M. Pitkin, B.A., non-collegiate; C. W. Ponder, B.A., Emmanuel; D. W. Roy, B.A., and C. T. Scott, M.A., Sidney Sussex; K. S. Singh, B A., and P. H Smith, B.A., Pembroke; E C. Sparrow, B A., Trinity; C. Stanley-Clarke, B.A., Caius; C. M. Stevenson, St. John's; B. H. Stewart, B.A., Jesus; R. Wade, B.A., Christ's; G. H. H. Waylon, B.A., King's; G. L. Webb, B.A., Caius; J. K. Willis, B.A., Queen's; H L Wilson, B.A., H. Selwyn; N. Wilson, B.A., Pembroke; A. F. R. Wollaston, B.A., and V. J. Woolley, M A., King's; F. Worthington, B.A., St John's; E. A. Wright, B.A., H. Selwyn; A. Wylie, B.A., Pembroke; and S. L. O. Young, M.A., Christ's.

Part II. Surgery, Midwifery and Medicine.—E. Bigg, M.A., Caius; H. S. D. Browne, B.A., Trinity; C. Burrows, B.A., Emmanuel; N. C Carver, B A., King's; H. H. Clarke, M.A., Trinity; J. S. Cooper, M A., Jesus; G. E Davidson, B.A., Caius; G. B. Davis, M.A., Corpus Christi; S. Dodd, B A., and J. B. Donnell, B.A., Caius; T. L. Drapes, B A., and J. B Dunlop, M.A., Sidney Sussex; H. R. Fisher, B.A., Emmanuel; W. S. Fox, M.A., Trinity; E. Gardner, B A., Caius; C. B. Goulden, B.A., non-collegiate; C. F. Hardie, B.A., Queen's; P. Hardy, B.A., Trinity House; R. N Hart, B.A., Sidney Sussex; G. S Haynes, King's; F. A. Hepworth, B.A., St. John's; E. Higson, B.A., Magdalene; W. H. Hills, B A., Pembroke; H. D. Hoffman, B.A., and H. M. Joseph, B.A., Trinity; P. A. Lloyd-Jones, B.A., St. John's; C. M. Murray, M.A., Pembroke; S. H Nathan, M.A., and C L. Nedwill B.A., Trinity; B. H. Pain, B.A., Emmanuel; J. E. Pellow, B.A., St. John's; D. Pennington, B.A., Caius; H. J. Robinson B.A., St. John's; H. C. Sidgwick, B A., and J. G. Slade, M.A., Clare; S. J Steward, Downing; W. B. Swete-Evans, M.A. Clare; E. J. D. Taylor B.A. Caius; E. Ward, M.A., Clare; T. H. E. Watts-Silvester, M.A., Caius; A. F. R. Wollaston, B.A., King's; E. A. Wright, B.A., H. Selwyn; A. Wylie, B.A., Pembroke; and S. L. O. Young, M.A., Christ's.

TRINITY COLLEGE, DUBLIN.—At examinations held in Michaelmas term the following candidates were successful:—

Final in Medicine.—Frederick F. C. Willington, Charles E. Moore, Harry R. Nelson, Richard C. Hallowes, Thomas C. A. Sweetnam, Thomas J. Crean, Herbert Stone, and Cecil J. Wyatt.

Section B.—Wright Mitchell, Henry M. Crawford, Arthur A. M'Neight, Wilfrid Thunder, Hugh Stewart, William J. M'Iver, Robertson S Smyth, Edward G. Scroope, Thomas Wilson, and John Chambré.

PRESENTATION TO A MEDICAL MAN.—Mr. R. Hamilton Ramsay, M.D., C M. Glasg., on attaining his eightieth birthday recently, was presented with an inscribed rose bowl by the committee and playing members of the Torquay Athletic Football Club, of which he has been president for 30 years, and with a framed photograph of the committee of the Sick Gardeners' Relief Fund, of which he is also president.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—During the year 12 new members were elected, three died, and three resigned, the number of members being 298 Two widows and six orphans applied for relief, three widows died, and one orphan became ineligible. At the end of the year 53 widows and 15 orphans were in receipt of half-yearly grants. A sum of £3299 10*s*. was distributed during the year and the expenses were £246. At Christmas a present was made to the widows and orphans amounting to £583.

DONATIONS AND BEQUESTS.—The Bolton Infirmary and Dispensary will benefit by the sum of £500 under the will of Miss A. Mason of Horwich, Lancaster.—By the will of Miss M. W. Nash of Cork £300 are bequeathed to the Home for Protestant Incurables at Cork and £200 to the Victoria Hospital for Women and Children at Cork.—Miss E. A. T. James of Edgbaston has under her will bequeathed £1000 to the General Hospital and a like sum to the Queen's Hospital, the Eye Hospital, the Blind Asylum, and the Deaf and Dumb Asylum, Birmingham. The Bayswater Hospital for Consumption, the Cancer Hospital, London, and the Putney Hospital for Incurables also each receive £1000 The Leamington Hospital for Incurables will receive £500—At the monthly meeting of the committee of the Plymouth Royal Eye Infirmary held on Dec 2nd it was reported that an anonymous donor had given £1000 to the infirmary.—The Middlesex Hospital has received a further donation of £125 from Mr. Charles Davis and also a further donation of £60 to the Cancer Fund from Miss Fanny M. Marriage.

ROYAL INSTITUTE OF PUBLIC HEALTH.—Congress of the Royal Institute of Public Health to at Folkestone, July 22nd to 27th, next year, ther a section for Child Study and School Hygiene. D Carpenter has been appointed London secretary Percy G. Lewis local secretary. Gentlemen de contributing papers should communicate with t secretary. Those wishing to attend the Congress, not members of the institute, can do so by t delegate's ticket, price £1 1*s*.

BEQUEST TO JOHNS HOPKINS UNIVE William Wyman, who died recently, has willed h valued at more than $500,000 (£100,000) to Johns University upon the death of his daughter. Mr. a year ago gave an estate in Baltimore to the sity, beginning the movement which resulted in ing a new institution and in the raising of $1 (£200,000) endowment fund The land then g Mr. Wyman was worth $250,000 (£50,000). Ther institution in America which is more deserving of than Johns Hopkins University. As a scientific is almost the equal of any in the world. The m which rich Americans give money for the advanc scientific research is an object lesson to Englis should result in lifting the United States to a v position in this line of work.

THE annual dinner of the Royal Fre pital and London School of Medicine for Women was Dec. 15th at the Hotel Cecil, Mrs. Garrett Anderson the chair. 300 persons sat down to the dinner an the guests were Sir William and Lady Broadbent, S Roberts, Sir Thomas Smith, Professor Tilden, Westlake, and Mrs. Henry Fawcett. After the Roy had been honoured Mrs. Anderson proposed as t of the evening "The Success of the School and t Free Hospital." She spoke of the movement higher education of women, of which medical e was only a part, and contrasted the gathe influential friends present at the dinner with h isolation 40 years ago when she was allowed in h student days to go to the Middlesex Hospital, part nurse, partly as a student, and to learn what she She had, she said, to meet the strong unspoken disa of almost everyone there, from the senior members staff to the scrubbing maids, and though in a she was able to understand the feeling of t the contempt of the scrubbing maids was hard Having then described her difficulty in finding an edu body to examine her for a degree or a diplom Anderson pointed to the quality of the work which being done by medical women in England who owed debt of gratitude to the Royal Free Hospital, which tion was in urgent need of financial assistance. M Barrow, senior surgeon to the hospital, and Mr. Stank senior lecturer to the school, responded to the toa Raymond Crawfurd then proposed the health o Guests," coupling with the toast the names of Sir Broadbent and Sir Thomas Smith. The secretaries dinner, Miss Douie, M.B., and Miss Crosfield, M.D., congratulated on the excellence of all their arrangem

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Appointments.

Successful applicants for Vacancies, Secretaries of Public In and others possessing information suitable for this co invited to forward to THE LANCET *Office, directed to Editor, not later than 9 o'clock on the Thursday mornin week, such information for gratuitous publication.*

ADAMS, EVELYN GEORGE BEADON, M.B., L.R.C.P. Lond., F.R. has been appointed Medical Examiner of Recruits for Somerset Imperial Yeomanry.

ALCOCK, N. H., M.D. Dub., Demonstrator of Physiology at versity of London, has been appointed Lecturer on Phy St. Mary's Hospital Medical School.

CROSSE, R. E., M.R.C.S., L.R.C.P. Lond., has been appointed Officer to the Mitford and Launditch Board of Guardians.

PAINE, GEORGE REUBEN ROBINS, M.R.C.S., L.S.A., h appointed Medical Officer and Public Vaccinator for Ly Devon.

ASE, JAMES J. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Newton Abbot Workhouse.

GE, ERNEST G., M.R.C.S., L.R.C.P. Lond., has been appointed ent and Dental Departments Hospital, Plymouth.

s been appointed Assistant

Vacancies.

ther information regarding each vacancy reference should be made to the advertisement (see Index).

W HOSPITAL, Manchester.—Resident House Surgeon. Salary

oucheur. Salary £100 per annum and fees. Also District geon.

L FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton. esident House Physicians for six months *Honorarium of*

, COUNTY OF, MIDDLE WARD ISOLATION HOSPITAL.—Resident sician. Salary £140 per annum with board, &c.

OL DISPENSARIES.—Assistant Surgeon, unmarried. Salary £100 annum, with board and apartments.

OL STANLEY HOSPITAL.—Honorary Physician.

THROAT HOSPITAL,

ad, Bethnal *Department.* ry £50 per annum, with lunch. *Also Pathologist and* eriologist Salary £50 per annum, with lunch.

—Assistant House at rate of £80 per

DISEASES OF THE

W.—Demonstrator

bone-road, N.W.—

Greenwich, S.E.— per annum, with d, residence, and washing.

DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—House geon. Salary £100, with board, residence, and washing.

RDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House geon. *Salary £80 per annum, with board, lodging, and* hing.

COUNTY HOSPITAL, Brighton.—Third House Surgeon, unried. Salary £60 per annum, with board and residence

ROMWICH DISTRICT HOSPITAL.—Resident Junior House Surgeon. ry £50 per annum, with board, lodgings, washing, and

alth road, W.—Pathologist. Salary

—House Surgeon. Terms £70 per

ases.

THE COLLEGE (DEPARTMENT OF MEDICINE), Leeds.—Junior onstrator of Pathology. Salary £120 per annum.

Births, Marriages, and Deaths.

BIRTHS.

N.—On Dec. 17th, at Heath End, Blackheath, S.E., the wife of Harvey Bateman, M.A., M.B., C.M., of a son.

.—*On Dec.* 19th, at Queen's gate-terrace, S.W., the wife of nd Danvers Brinton, M.D., M.R.C.P., of a daughter.

MARRIAGE.

DEATHS.

.—On Dec. 15th, at 37, Warwick road, Maida Vale, W., Dr. H. r Lincoln Pittway, aged 37 years, suddenly, of heart failure of Stansted, Essex.

IN MEMORIAM.

ON.—On Dec. 23rd, 1902, at Maldon, Essex, suddenly, from onary apoplexy, Thomas Tomlinson, M.R.C.S., L.S.A., aged ars.

—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE LIGHT CURE AND ELECTRO-THERAPEUTIC INSTITUTE, LIMITED.

To the Editors of THE LANCET.

SIRS,—In justice to myself I am sure you will *accord me a little of* your valuable space in order to answer, as far at all events as I am concerned, *your severe criticism re* the above.

As the "brave man" referred to in your article on the subject, may *I explain that the original idea of the directors was to open an institute* where light baths especially could be obtained by the middle-classes at a fee commensurate with their purses and that I, having made a somewhat special study of this branch of electric therapy, was proposed as the medical officer of the institute. It was afterwards decided that other forms of electric therapy should be added to the work of the institute, but it was distinctly understood—and there is nothing in the prospectus to warrant any other construction—that no treatment was to be given without a prior consultation with the medical officer or unless the patient brought a prescription from his own medical attendant—that is to say, with the exception only of really healthy people who would take light baths as a luxury instead of the Turkish bath, the former of course being such a distinct advance on the latter. May I inform you.—

1. That before committing myself to the post I consulted a solicitor to one of the "defence unions" and that he was perfectly satisfied that there was no contravention of medical ethics in the matter.

2. I also consulted a well-known gentleman, one who is especially connected with questions of medical ethics. His reply was: "I see nothing unprofessional in the prospectus and wish that all these institutes were under medical supervision."

3. I failed myself to see anything "unprofessional" in my position any more than in the case where a medical man has an appointment to a hydropathic establishment, and, as you are aware, there are scores of medical men holding such appointments throughout the country.

strict medical control.

5. However, to be on the safe side I sent in my notice of withdrawal from the company before, by the bye, your issue of the 12th, and this because in order to make doubly sure my position I had also asked the advice of eminent and honoured friends in the profession, and most of these advised me in my own interest to resign as it was their opinion that such a position would not enhance my social or professional status. At the same time most of them admitted that the Medical Council would not cavil at the situation any more than in the case of the hydropathic practitioners mentioned.

6 *I even wrote to the Medical Council on the matter, though* naturally they could not give an opinion or even advise.

What could I have possibly done further? May I say, in conclusion, that to mention even the name of Mr. Ward in connexion with "quackery" is ungenerous to say the least. He bears an honoured *name, he is chairman—or has been—of the Harrogate Baths Committee,* he is a well-known *public* man, besides being an able and scientific electrician, and you can have but little knowledge of him, or of myself, or I am sure you would not have made such scathing criticisms as all my actions in the matter have been above board; further, because *I detest anonymity at all times, I beg to subscribe myself in* full,

Yours faithfully,

J. STENSON HOOKER, M.D. Durh., &c.

44, Gloucester place, W.

⁂ We publish Dr. Stenson Hooker's letter with pleasure. Personal knowledge of Dr. Hooker would not have assisted us in writing the article, for we had not the slightest conception of the identity of the medical man stated in the prospectus to have accepted office. We congratulate Dr. Hooker on his wise decision to retire from an *undertaking* connexion with which might have entailed trouble upon him. We do not say that it would have done so, any more than we have stigmatised the impending institution as fraudulent, or the late chairman of the Harrogate Baths Committee as a quack. We have said none of these things. We have criticised the prospectus *of the Light Cure* and Electro-Therapeutic Institute, believing that the undertaking might, for all that document showed to the contrary, be an undesirable one from a medical point of view. There was no guarantee in it that patients would *only* be treated upon medical recommendation. Dr. Hooker's view as to the necessity of such a *limitation being* set to the medical work of the institute is, we are glad to say, clearly the same as our own.—ED. L.

ANONYMOUS SLANDER.

A PERSON who signs himself "Minister of the Gospel" has addressed to the *Daily News* from Ramsgate a story of a local *surgeon* who operated for cataract upon an elderly female subject causing her great suffering and producing no good result. According to the reverend gentleman's story the surgeon said to him, "She will never recover her sight and I never thought she would, but I operated upon her just for a bit of practice." He asks, and appears to expect a negative reply, "Need I add a word to expose the brutality of the man?" The answer, of course, is that he certainly needs to add a word—in fact, several words. He needs to give the name and address of the surgeon in question. Our impression is that a "Minister of the Gospel" is an anonymous slanderer and we regret that this statement concerning him is deprived of the effect that it might otherwise possess by our being unable to look beneath his decent clerical veil.

THE VAGINAL DOUCHE.

To the Editors of The Lancet.

Sirs,—Even in making a general statement I should be sorry to be inaccurate. I have consulted a bulky and well-illustrated price list dated 1900, with a supplement dated 1901. The terminal opening in about half of the sketches is distinct, in three others there is, possibly, no opening, and the remainder are too indistinctly drawn to say anything about them. I refer to Messrs. Down Brothers' price list—one of the best, I presume. I have inquired at several chemists and at one large "stores." The one article sold is Higginson's, with gum-elastic pipe with small holes, *one at the apex.* Further inquiry elicited, twice, several odd pipes of different patterns, one or two closed at the point, but generally one of the several openings was in the centre We have, then, an instrument of faulty construction in general use, and we are told on authority that the fault has been recognised for many years, yet neither patient, nor medical man, nor retailer knew that a better make was to be had.

A very ingenious instrument was described and figured by Mr. Haydn Brown in The Lancet of Feb. 28th, 1903, p. 595 He rightly takes objection to the number of small openings which is usual. I hope medical men when prescribing lotions for vaginal use will take some trouble to advise their patients regarding the kind of instrument to get and the way to use it—that is if they believe with me that some untoward results *post* syringing are occasionally *propter* syringing.

I am, Sirs, yours faithfully,

Dec. 19th, 1903. G. Crichton.

THE THRIFT OF THE SALVATION ARMY.

To the Editors of The Lancet.

Sirs,—Mr. Griffin Wilkes has drawn attention in your columns, under this title, to one of the greatest evils in the work of the Salvation Army. While many of their "officers" travel first-class, and while some go on tour round the world or to America in luxury, the half-fed anæmic girls who carry articles for sale from door to door receive a miserable pittance, their local speakers frequently have a struggle to make ends meet, their typists and shorthand writers receive about half of what they would get elsewhere, and their maternity nurses are paid, I am told, £10 per annum.

Why should Mr. Coombs wish to know full particulars of the uterine functions of the female candidates for enlistment in the army? I should have thought it sufficient that the candidates were "strong and able for their work," without any particulars being given regarding their different organs. Inclosing my card,

I am, Sirs, yours faithfully,

Dec. 19th, 1903. M.D.

⁂ Mr. Coombs not being a medical man is not in a position to form a medical opinion as to the physique of young women from reading obstetric details concerning them. This sort of information might well be withheld from him.—Ed. L.

THE CORONER, THE PATHOLOGIST, AND THE GENERAL PRACTITIONER.

Mr. T. Launcelot Archer of Vincent-square, Westminster, was summoned by the police on Dec. 15th to see a woman found dead in her chair. Mr. Archer later (probably the next day but the letter is undated) received a communication from Mr. Troutbeck asking to have the circumstances bearing on the cause of death communicated to him. Mr. Archer very properly replied that if Mr. Troutbeck wanted his evidence he had ample legal powers to obtain it. On Dec. 17th Mr. Troutbeck replied that he could not understand Mr. Archer's letter, which he considered to be "founded on the misconception that information given to the coroner in preparation for an inquest is evidence. At the present moment I have no information whatever as to whether if a guinea is paid to you out of the rates for evidence you are in a position to give any information to justify that expense. Gentlemen who claim payment for giving expert evidence must first show that they have expert evidence to give." This, of course, is not the law, but Mr. Troutbeck's reading of the law, and Mr. Archer very properly replied that no information could be required from a medical man except expert evidence. Mr. Archer promptly repudiated the uncourteous and unfortunate suggestion that he was only looking for a fee. We understand that the inquest was held on Monday morning last, when Dr. Freyberger performed a post-mortem examination and found an enlarged heart and a full stomach. The case hardly seems to have been of such pathological rarity as to necessitate the withdrawal of the post-mortem examination from the medical man last in attendance.

A POINT IN SANITARY LEGISLATION IN INDIA.

To the Editors of The Lancet.

Sirs,—I have a patient in a family living in a suburb ten mi Bombay. In the immediate vicinity of their bungalow is a plot used for cultivation, yielding a certain annual revenue to C., besides being the means of subsistence to the owner himsel purposes of cultivation manure has to be employed, consisti large quantity of fish, of fat, and other refuse matters whic thrown on the soil give off a sickening odour, creating a n to the neighbours who seriously apprehend injury to their thereby. As this is a question affecting the public I am curious to know, Sirs, whether the aggrieved could secure any redress in court which to their satisfaction amount to nothing less than a complete prohibition by the cour cultivation of the adjacent plot of land. It would be interes learn if the court would really press such an order which effect would deprive an agriculturist of his only means of livelih himself and his family, to say nothing of the loss of a definite land revenue to Government, which counts a great deal agricultural country like India.

I should be so grateful, Sirs, if any of your readers intere sanitary law would oblige me with the necessary informatio for. I am, Sirs, yours faithful

Dec. 4th, 1903.

⁂ The matter is one for the opinion of a lawyer in India. In E such abuses can generally be abated by legal process.—Ed. L.

THE ACTION OF SULPHONAL.

To the Editors of The Lancet.

Sirs,—I should be glad to know from any of your readers observations have been made regarding the action of sulphonal mucous membrane of the gastro-intestinal tract.

I am, Sirs, yours faithfully,

Dec. 19th, 1903. B. B

A QUESTION OF FEES AT A CORONER'S INQUEST.

"Vexatus" writes:—

> "I should be obliged for your opinion on the following house surgeon at a small hospital and gives chloroform B, an honorary surgeon, operates on a child. The chil under the anæsthetic and as a result of it. The coroner to attend the post-mortem (on the heart only) and to give ev at the inquest, saying he leaves it open to B to refuse if he r A says he will be much obliged if B will be present a mortem and inquest. B is accordingly present at both. conclusion of the inquest the coroner gives B a cheque fo guineas, saying he leaves it to him to give A anything B thinks he (A) may deserve. Supposing B had been subp would he have been entitled to two guineas in fees? *If so,* s he give anything to A? As honorary surgeon should he di a coroner's fee. Should the coroner's evident wish carry private wish as to the disposal of public money."

We do not quite follow this story. There is no B should disclaim a coroner's fee as honorary surgeon and remark that he is lucky to get a fee at all for giving respect to a death that occurred in a public institution. coroner here exercises his discretion very properly and his indicated wish should carry weight.

MOTOR-CARS FOR MEDICAL MEN.

To the Editors of The Lancet.

Sirs,—Should any of your readers contemplate purchasing a car, I would strongly recommend that they should obtain a *Automobile Club Journal* of Dec. 17th. I think they will is no pneumatic tyre in the market which is not calculated t largely to the worries and anxieties of professional life.

I am, Sirs, yours faithfully,

Stratford-on-Avon, Dec. 19th, 1903. Harry Lu

THE TREATMENT OF PEDICULI CAPITIS.

"E." asks for the advice of his brother practitioners in a case wh pediculi having been removed by the usual treatment the nits with unusual obstinacy. Methylated spirits, ether, and in quassia have all been used without any result.

◆

Italia.—The Pharmaceutical Society and the Society of Ap of London hold examinations for the qualification of di Lady dispensers are subject to the same tests.

L R.C.P.—If our correspondent can prove a clear engagement sue for his fee in the county court. If he has anything in w may assist him in proving his case.

Lieut. W. S. Patton, I.M.S.—Our correspondent might apply St. John Ambulance Association, St. John's Gate, Clerk London, E.C.

Recently Qualified.—We do not understand the purport of the le

Delta.—We do not know of any such general hospitals.

Communications not noticed in our present issue will receive at in our next.

ETEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 23rd, 1903.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Remarks at 8.30 A.M.
7	29·74	S.E.	...	49	47	41	42	44	Foggy
8	29 79	S.E.	...	48	46	42	42	43	Foggy
9	29 89	S.E.	0 01	46	44	42	42	43	Overcast
0	30 03	S.E.	0 01	45	43	38	41	42	Overcast
1	30·23	E.	...	50	49	38	41	42	Foggy
2	30 23	S.W.	...	59	51	42	47	49	Overcast
3	30 04	S.	...	47	45	44	43	44	Overcast

ledical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

AY (28th).—London (2 P.M.), St Bartholomew's (1.30 P.M.), St. omas's (3 30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.) iddlesex [illegible] M.), Chelsea (2 P.M.) [illegible]

P.M.).

ESDAY (30th).—[illegible] P.M.), Royal Free [illegible] P M.), St. Thoms [illegible] P M.), St. Georg [illegible] Samaritan [illegible]

[illegible] St. Thomas's [illegible]

[illegible]

roat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat olden-square (9 30 A.M.), City Orthopædic (2.30 P.M.), Soho-square P.M.).

RDAY (2nd).—Royal Free (9 A.M.), London (2 P.M.), Middlesex 30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), aring Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), roat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

[illegible]

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tres, original articles, and reports should be written on ne side of the paper only, AND WHEN ACCOMPANIED Y BLOCKS IT IS REQUESTED THAT THE NAME OF THE UTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD E WRITTEN ON THE BLOCKS TO *FACILITATE IDENTI*-ICATION.

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THE Index and Title-page to Vol. II. of 1903, which is completed with the issue of to-day, will be given in the next number of THE LANCET.

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